2025 – 2026 Graduate Calendar

Effective date of information, unless otherwise noted:
July 1, 2025.

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The publication of information in the Calendar does not bind the University to the provision of courses, programs, services, or facilities as listed herein.

Students are responsible for informing themselves of the University's procedures and policies and the specific requirements associated with the degree, diploma or certificate sought.

Students are responsible for informing themselves of the risks associated with field and laboratory studies. By participating in such studies they shall be deemed to have accepted personal responsibility for all such risks (including, without limitation, all risks identified by course instructors/supervisors and in literature that has been published by the University or that has otherwise been made available to students), to have agreed to abide by the safety rules and procedures established by their instructors/supervisors for such activities, and to have waived the liability of the University of Northern British Columbia and its instructors/supervisors in respect of such activities.

Students are responsible for informing themselves of the details of international travel programs and whether the program offered to them is a UNBC-sponsored academic program.

EVERY STUDENT ACCEPTED FOR REGISTRATION WITH THE UNIVERSITY OF NORTHERN BRITISH COLUMBIA SHALL BE DEEMED TO HAVE AGREED TO BE BOUND BY THE REGULATIONS AND POLICIES OF THE UNIVERSITY AND OF THE PROGRAM IN WHICH THAT STUDENT IS ENROLLED.

The University of Northern British Columbia specifically reserves the right to exercise its sole, absolute, and unfettered discretion in admitting individuals to the University, its programs, and courses.

The University of Northern British Columbia shall incur no liability for loss or damage suffered or incurred by any student or third party as a result of delay, alteration, or termination of services, courses, programs, tuition, or fees, by reason of acts of God, fire, strikes, lock-outs, damage to University property, inability to procure or produce materials, civil unrest or disobedience, financial exigency, or any other cause of any kind.

The University of Northern British Columbia is a smoke-free institution. Smoking may be permitted in designated areas only.

The 2025-2026 *University of Northern British Columbia Graduate Calendar* was prepared by the Office of the Registrar.

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Faculty

Adesanya, Theresa, Assistant Professor, Natural Resources and Environmental Studies—BAgrSc (Obafemi Awolowo) MSc PhD (Manitoba)

Agboji, Aderonke, Assistant Professor, Nursing—Dipl. Nurs. (Lagos) BSc Hons (Waterford) MSc (RCSI) MSc (Stirling) PhD (Northern British Columbia)

Ali, Faran, Senior Lab Instructor, Natural Resources and Environmental Studies—BSc (UET Lahore) MSc (IHE Delft) PhD (Saskatchewan)

Anderson, Margaret, Professor Emerita, First Nations Studies—BA MA PhD (Michigan)

Aravindakshan, Nikhil, Adjunct Professor, Chemistry—MSc (Hyderabad Central) PhD (Regina)

Avoumatsodo, Komla, Assistant Professor, Economics—BSc (Lomé) MA (ENSEA) PhD (Québec à Montréal)

Babicz, Walter, Adjunct Professor, Political Science—BEd (British Columbia) Juris Doctor (Victoria)

Baerwald, Erin, Associate Professor, Natural Resources and Environmental Studies—BSc (Alberta) MSc PhD (Calgary)

Banack, Hartley, Assistant Professor, Education—BSc (Trent) BEd MA PhD (Simon Fraser)

Banner-Lukaris, Davina, Professor, Nursing—BSN (Wales) PhD (West England)

Bartels, Samuel, Assistant Professor, Natural Resources and Environmental Studies—MSc PhD (Lakehead)

Barton, Sylvia, Professor Emerita, Nursing—BScN (British Columbia) MSc (N) (Portland) PhD (Alberta)

Beaumont, Sherry, Professor, Psychology—BA Hons (St. Thomas) MA PhD (Waterloo)

Beeler, Karin, Professor Emerita, English—BA Hons (British Columbia) MA PhD (Alberta)

Beeler, Stan, Professor Emeritus, English—BA Hons MA (Dalhousie) PhD (Alberta)

Bellefeuille, Gerard, Adjunct Professor, Social Work—BSW MA PhD (Victoria)

Benoit, Shendah, Assistant Professor, Education—BA (Simon Fraser) MA (Toronto) MEd EdD (Western)

Bernier, Jean-Sebastian, Associate Professor, Physics—BEng (École Polytechnique de Montréal) MSc PhD (Toronto)

Bidgood, Bruce, Associate Professor, Social Work—BA (Brock) MA PhD (Wilfrid Laurier)

Binnema, Theodore, Professor Emeritus, History—BA (Calvin College) MA PhD (Alberta)

Bird, Ranjana, Professor, Health Sciences—BSc (Waterloo) MSc PhD (Guelph)

Blatchford, Barrie, Assistant Professor, History—BA Hons MA (British Columbia) MPhil PhD (Columbia)

Bleiker, Katherine, Adjunct Professor, Natural Resources and Environmental Studies—BSc (Victoria) MSc (Northern British Columbia) PhD (Montana)

Booth, Annie, Professor, Natural Resources and Environmental Studies—BA (Victoria) MES Arts and Planning (York) PhD (Wisconsin) MCIP

Bordun, Troy, Assistant Professor, English—PhD (Trent)

Bouchard, Michel, Professor, Anthropology and Interdisciplinary Studies—BA (Toronto) MA (Laval) PhD (Alberta)

Bowles, Paul, Professor Emeritus, Business Administration, Development Economics, International Studies—BSc Hons (Southampton) MA (Sussex) PhD (London School of Economics)

Brown, Darren, Assistant Professor, Business Administration—MBA PhD (National Cheng Kung) PhD (Australian National)

Bryan, Heather, Associate Professor, Natural Resources and Environmental Studies, and Ian McTaggart Cowan Muskwa-Kechika Research Professor—PhD (Calgary)

Budde, Robert, Professor, English—BEd BA MA (Manitoba) PhD (Calgary)

Burke, Susan, Associate Professor, Social Work—BA (Trinity) MSW PhD (Northern British Columbia)

Burton, Carla, Adjunct Professor, Natural Resources and Environmental Studies—BEd (British Columbia) MSc PhD (Victoria)

Burton, Philip, Professor, Natural Resources and Environmental Studies—BSc Hons (Saskatchewan) MS (Hawaii) PhD (Illinois)

Cade-Menun, Barbara, Adjunct Professor, Natural Resources and Environmental Studies—BSc Hons (Queen's) MSc PhD (British Columbia)

Cale, Jonathan, Assistant Professor, Natural Resources and Environmental Studies—BS (Paul Smith's College) PhD (State University of New York)

Callaghan, Russell, Professor, Northern Medical Program and Adjunct Professor, Health Sciences—BA MA (British Columbia) PhD (Toronto)

Camp II, Ronald, Professor, Business Administration—BA (Whitworth) MA (Willamette) PhD (British Columbia)

Campana, Christine, Assistant Professor, English—BA MA (Carleton) PhD (Western)

Casperson, David, Associate Professor, Computer Science, Mathematics—BSc Hons (Simon Fraser) MA PhD (Waterloo)

Chaudhury, Tasnuva, Lecturer, Business—BBA (North South) MBA (Texas Tech)

Chen, Jing, Assistant Professor, Business Administration—BSc (Shanghai) MS (Beijing) PhD (Michigan)

Faculty

Chen, Liang, Professor, Computer Science—BSc (Huazhong) PhD (Institute of Software, Acadamia Sinica)

Cherian, Chinchu, Assistant Professor, Engineering—Btech MTech PhD (Indian Institute of Technology, Madras)

Cheung, Emily, Adjunct Professor, Engineering—MASc (British Columbia) PEng FEC FCSSE

Chun, Wootae, Associate Professor, Business Administration—BSc (Ohio) MBA (Texas) PhD (Saint Louis)

Clapp, Tara Lynne, Associate Professor, Environmental Planning—BES (Manitoba) MEDes (Calgary) PhD (Southern California)

Climenhage, James, Adjunct Professor, Psychology—BA MA PhD (Simon Fraser)

Connell, David J., Professor, Natural Resources and Environmental Studies—BA (Toronto) BComm MBA (Windsor) PhD (Guelph)

Costello, Bridget Meghan, Lecturer, Physics—BSc (Victoria) MSc (Calgary)

Coxson, Darwyn, Professor, Natural Resources and Environmental Studies—BSc (Lethbridge) PhD (McMaster)

Crandall, Joanie, Assistant Professor, Education—BA (Ottawa) BEd (Queen's) MA (Toronto) PhD (Saskatchewan)

Crockett, Erin, Assistant Professor, Natural Resources and Environmental Studies—PhD (McGill)

Cronshaw, Steven, Professor Emeritus, Business Administration and Psychology—BA BComm (Saskatchewan) MA PhD (Akron)

Crowley, Shannon, Adjunct Professor, Natural Resources and Environmental Studies—BSc (Alaska Southeast) MSc (Northern British Columbia)

Cuthbertson, Mike, Senior Instructor, Business Administration—BComm (British Columbia) CA

Dale, Mark, Professor, Natural Resources and Environmental Studies—BSc MSc (Toronto) PhD (Dalhousie)

Daoust, Gabrielle, Assistant Professor, Global and International Studies—BA (Guelph) MSW (Calgary) PhD (Sussex)

Dawson, Russell, Professor, Natural Resources and Environmental Studies—BSc PhD (Saskatchewan)

De Feo, Alberto, Adjunct Professor, Political Science—BSc (Liceo Scientifico Battaglina) PhD (Camerino)

de Leeuw, Sarah, Professor, Northern Medical Program, Health Sciences, Natural Resources and Environmental Studies, and Canada Research Chair in Humanities and Health Inequities—BA (Victoria) MA (Northern British Columbia) PhD (Queen's)

Deo, Balbinder, Associate Professor, Business Administration, Natural Resources and Environmental Studies—BSC MSc (Armritsar) MBA (Shimla) PhD (Ludhiana and Manitoba)

Déry, Stephen, Adjunct Professor, Natural Resources and Environmental Studies, and Rio Tinto Research Chair in Climate Change and Water Security—BSc MSc (York) PhD (McGill)

DeWiel, Boris, Associate Professor, Political Science—BA (Athabasca) MA PhD (Calgary)

DiFrancesco, Darryn, Assistant Professor, Nursing—BA (Simon Fraser) MA (Ottawa) PhD (British Columbia/Ottawa)

Dobrowolski, Edward, Senor Instructor, Mathematics—MS PhD (Wroclaw)

Duperron, Brenna, Assistant Professor, English—BA MA (Simon Fraser) PhD (Dalhousie)

Duschesne, Annie, Associate Professor, Psychology—BSc (Québec à Montréal) MSc (Montréal) PhD (McGill)

Dunbar, Heidi, Instructor, Nursing—BScN (Victoria) MN (British Columbia)

Dziedzic, Mauricio, Professor, Engineering—BASc MASc (Universidade Federal do Parana) PhD (Toronto)

Earley, Sinead, Assistant Professor, Natural Resources and Environmental Studies—BA (British Columbia) MA (Galway) PhD (Queen's)

Egger, Keith, Professor Emeritus, Natural Resources and Environmental Studies—BSc (Calgary) PhD (Victoria)

El Smaily, Mohammed, Associate Professor, Mathematics—BA MA (Lebanese) PhD (Aix-Marseille)

El-Hakim, Mohab, Associate Professor, Engineering—BASc (Alexandria) MASc PhD (Waterloo) PEng

Elkin, Ché, Professor, Natural Resources and Environmental Studies, and FRBC/Slocan Endowed Chair in Mixedwood Ecology and Management—BSc (Regina) MSc (Toronto) PhD (Calgary)

Enes, Elizabeth, Senior Instructor I, Nursing—MScN (Northern British Columbia) NP

Erasmus, Daniel, Associate Professor, Biochemistry—BSc MSc (Stellenbosch) PhD (British Columbia)

Farhan, Sara, Assistant Professor, History, Gender Studies—BA MA (Western Ontario) PhD (York)

Fisher, Daniela, Adjunct Professor, Natural Resources and Environmental Studies (Environmental Planning)—BSc Hons (Victoria) LLB (British Columbia)

Floyd, Bill, Adjunct Professor, Natural Resources and Environmental Studies— BSc (Northern British Columbia) MSc (Oregon State) PhD (British Columbia)

Fondahl, Gail, Professor Emerita, Natural Resources and Environmental Studies—BA (Dartmouth College) MA PhD (California, Berkeley)

Fraser, Tina, Professor, Education and Adjunct Professor, First Nations Studies and Nursing—MEd (Simon Fraser) PhD (British Columbia)

Fredeen, Arthur, Professor Emeritus, Natural Resources and Environmental Studies—BSA Hons (Saskatchewan) PhD (California, Berkeley)

Fredj, Karima, Associate Professor, Development Economics and International Studies—BA (Tunisia) MSc (Montréal) PhD (McGill)

Freeman, Shannon, Associate Professor, Nursing and Adjunct Professor, Health Sciences—BA Hons (McMaster) MSc (Tohoku University Graduate School of Medicine) PhD (Waterloo)

Freylejer, Leandro, Assistant Professor, Development Economics—BA (Manitoba) MA (Queen's) PhD (Toronto)

Fu, Chengbo, Associate Professor, Business—BA (Dongbei) MSc (Clemson) PhD (Manitoba)

Furber, Kendra, Associate Professor, Northern Medical Program—BSc Hons (Saskatchewan) PhD (Calgary)

Gai, Chunyi, Assistant Professor, Mathematics and Statistics—MSc PhD (Dalhousie)

Garcia-Becerra, June, Assistant Professor, Engineering—BEng (Universidad Iberoamericana) MBiotech PhD (Toronto)

Garriga, Elisabet, Associate Professor, Business—BA (Barcelona) PhD (Navarra)

Ge, Xin, Associate Professor, Business Administration—BA MA (Nanjing) PhD (Alberta)

Geertsema, Marten, Adjunct Professor, Natural Resources and Environmental Studies—BSc MSc (Alberta) PhD (Utrecht)

Gehloff, Maik, Senior Lab Instructor IV, Engineering—MASc (British Columbia)

Gerwing, Travis, Adjunct Professor, Natural Resources and Environmental Studies—BSc MSc (Northern British Columbia) PhD (New Brunswick)

Gibson, Erin, Adjunct Professor, Anthropology (Interdisciplinary Studies)—BA (Simon Fraser) MPhil PhD (Glasgow)

Gillingham, Michael, Professor Emeritus, Natural Resources and Environmental Studies—BSc (McGill) PhD (British Columbia)

Gingerich, Andrea, Associate Professor, Northern Medical Program—BSc (Western Ontario) ND (Canadian College of Naturopathic Medicine) MMEd (Dundee) PhD (Maastricht)

Gooya, Farnaz, Senior Lab Instructor, Health Sciences—MEd (Ottawa) MSc (Nottingham) MD (Tabriz)

Gorrell, Andrea, Associate Professor, Biochemistry, Chemistry—BSc Hons (Texas A&M) PhD (Iowa State)

Gorrell, Jamie, Associate Professor, Natural Resources and Environmental Studies—BSc Hons (Wilfrid Laurier) MSc (Laurentian) PhD (Alberta)

Graham, Rylan, Assistant Professor, Environmental Planning—BA (Regina) MA (Waterloo) PhD (Calgary)

Grainger, Susan, Adjunct Professor, Natural Resources and Environmental Studies—BHMED (British Columbia) BSc (Oregon)

Gray, Sarah, Professor, Biochemistry, Chemistry, Northern Medical Program—BSc PhD (Victoria)

Greenwood, Margo, Professor, Education and Adjunct Professor, Northern Medical Program, Academic Leader NCCAH—BEd (Alberta) MA (Victoria) PhD (British Columbia)

Groulx, Mark, Associate Professor, Natural Resources and Environmental Studies (Environmental Planning)—BSc Hons (Lakehead) MA PhD (Waterloo)

Guest, Kristen, Professor, English and Gender Studies—BA MA (Western) PhD (Toronto)

Gunn, Kelly, Adjunct Professor, Nursing—BSc (Victoria) MBA (Northern British Columbia)

Guta, Dawit, Assistant Professor, Economics—BA MSc (Addis Ababa) PhD (Bonn)

Haeussler, Sybille, Adjunct Professor, Natural Resources and Environmental Studies—BSF Hons (British Columbia) MSc (Oregon State) PhD Hons (Québec)

Halseth, Greg, Professor, Natural Resources and Environmental Studies, and Canada Research Chair in Rural and Small Town Studies—BA (British Columbia) MA PhD (Queen's)

Hamieh, Alia, Associate Professor, Mathematics—BSc MSc (Beirut) PhD (British Columbia)

Hamon, Max, Assistant Professor, History—BA (Utrecht) MPhil (Trinity College Dublin) MA (Central European University Budapest) PhD (McGill)

Hanlon, Neil, Professor, Health Sciences, Natural Resources and Environmental Studies—BA (Ryerson) MA PhD (Queen's)

Haque, Waqar, Professor, Business Administration and Computer Science—BSc Hons (Pakistan) MSc (Alberta) MSc PhD (Iowa State)

Hardan, Tareq, Assistant Professor, Social Work—MSW PhD (McGill)

Harder, Henry, Professor Emeritus, Disability Management, Health Sciences, Psychology—BEd MA EdD (British Columbia)

Harding, Lauren, Assistant Professor, Natural Resources and Environmental Studies—BA (Alberta) MA (York) PhD (British Columbia)

Harris, Luke, Associate Professor, Health Sciences—BSc Hons (Acadia) PhD (Alberta)

Hartley, Ian, Professor, Physics, Natural Resources and Environmental Studies—BSc MScF (New Brunswick) PhD (British Columbia)

Hawkins, Adam, Assistant Professor, Natural Resources and Environmental Studies—BSc (Western Washington) PhD (Northern British Columbia)

Healy, Theresa, Assistant Professor, Gender Studies and Natural Resources and Environmental Studies (Environmental Planning)—BA MA (Saskatchewan) PhD (Simon Fraser)

Heard, Doug, Adjunct Professor, Natural Resources and Environmental Studies—BSc (Waterloo) MSc (British Columbia)

Helle, Steve, Associate Professor, Natural Resources and Environmental Studies—BEng MEng (McGill) PhD (British Columbia)

Hemingway, Dawn, Professor Emerita, Social Work, and Adjunct Professor, Gender Studies—BA (Simon Fraser) MSc MSW (Northern British Columbia)

Henderson, Earl, Adjunct Professor, First Nations Studies—BA MA (Northern British Columbia)

Hirt, Andreas, Assistant Professor, Computer Science—BSc (Northern British Columbia) MSc PhD (Calgary)

Hodder, Dexter, Adjunct Professor, Natural Resources and Environmental Studies—BSc (Memorial) MSc (Thompson Rivers)

Hoffman, Ross, Professor Emeritus, First Nations Studies—BA Hons (Trent) BEd (Toronto) MEd (Victoria) PhD (Trent)

Holler, Jacqueline, Professor, Gender Studies, History, International Studies—BA MA (Simon Fraser) PhD (Emory)

Holyk, Travis, Adjunct Professor, First Nations Studies—BA (Okanagan) MA (Northern British Columbia)

Horne, Dee, Professor Emerita, English—BA (McGill) MA PhD (Toronto)

Hossain, Shahadat, Professor, Computer Science—BSc MSc PhD (Bergen)

Ho Younghusband, Christine, Assistant Professor, Education—BEd BSc (British Columbia) MEd PhD (Simon Fraser)

Huber, Dezene, Professor, Natural Resources and Environmental Studies—BSc (Calgary) PhD (Simon Fraser)

Hussein, Ahmed, Professor Emeritus, Physics—BSc (Alexandria) MSc PhD (Alberta)

Hutchings, Kevin, Professor, English—BA (Guelph) MA (McMaster) PhD (Hamilton)

Hyndman, Jennifer, Professor, Mathematics—BMath (Waterloo) MA PhD (Colorado)

Iorhemen, Oliver, Assistant Professor, Engineering—BEng (Ahmadu Bellow) MSc (Leeds) PhD (Calgary)

Iqbal, Asif, Associate Professor, Engineering—BSc MSc (Bangladesh) PhD (Cambridge)

Irving, Lauren, Senior Lab Instructor, Nursing—BScN (Northern British Columbia) MNP (British Columbia)

Irving, Rebecca, Senior Lab Instructor, Nursing—BScN MScN (Northern British Columbia) FNP

Islam, Siraj Ul, Assistant Professor, Natural Resources and Environmental Studies—MSc MPhil (Quaid-i-Azam)PhD (Northern British Columbia)

Jackson, Peter, Professor, Natural Resources and Environmental Studies—BSc Hons PhD (British Columbia)

Jago, Charles, Professor Emeritus, History—BA Hons (Western Ontario) PhD (Cambridge)

Jain, Rahul, Assistant Professor, Social Work—BA MA LLB (Rajasthan) MSW (Northern British Columbia) PhD (Rajasthan)

Janes, Jasmine, Associate Professor, Natural Resources and Environmental Studies—BSc PhD (Tasmania)

Jensen, Erik, Professor, Chemistry, Physics—BSc Hons (Victoria) PhD (Cambridge)

Jiang, Fan, Associate Professor, Computer Science—BSc MSc PhD (Manitoba)

Jjumba, Anthony, Adjunct Professor, Natural Resources and Environmental Studies—BSc (Makerere) MSc PhD (Simon Fraser)

Johnson, Christopher, Professor, Natural Resources and Environmental Studies—BSc (Victoria) MSc PhD (Northern British Columbia)

Jokinen, Nancy, Associate Professor, Social Work—MSW (Lakehead) PhD (Calgary)

Joly, Tara, Assistant Professor, First Nations Studies—BAS (Guelph) PhD (Aberdeen)

Josewski, Viviane, Assistant Professor, Nursing—BA (Montana) MSc PhD (Simon Fraser)

Jull, Michael, Adjunct Professor, Natural Resources and Environmental Studies—BSF MSc (British Columbia)

Kabzems, Richard, Adjunct Professor, Natural Resources and Environmental Studies—BSA Hons BSc (Saskatchewan) MSc (British Columbia)

Kamali, Mohammed, Assistant Professor, Engineering—BSc (Sharif University of Technology) MSc (Tarbiat Modares) PhD (British Columbia)

Kaminska, Malgorzata, Assistant Professor, Northern Medical Program—BSc Hons (Ottawa) MD (Toronto) MSC (London)

Karimzada, Muhebullah, Assistant Professor, Economics—PhD (McMaster)

Kazemian, Hossein, Associate Professor, Natural Resources and Environmental Studies—BSc MSc PhD (State University of Isfahan)

KC, Luna, Assistant Professor, Global and International Studies—MSc PhD (Wageningen)

Keen, Kevin, Professor, Mathematics—BSc Hons (Simon Fraser) MSc (Montréal) PhD (Toronto)

Keener, Lee, Professor Emeritus, Mathematics—BA (Amherst College) MSc (Oregon) PhD (Rensselaer Polytechnic)

Kelly, Liam, Assistant Professor, Development Economics—BSc (Victoria) MSc PhD (Guelph)

Kilius, Erica, Assistant Professor, Anthropology—BSc Hons (Toronto) MPH (Simon Fraser) PhD (Toronto)

King, Jessie, Adjunct Professor, First Nations Studies—BSc MA PhD (Northern British Columbia)

Klassen-Ross, Tammy, Senior Instructor, Health Sciences, Adjunct Professor, Psychology—BA (British Columbia) MSc PhD (Northern British Columbia)

Kong, Xiaoxue (Sonia), Assistant Professor, Psychology—PhD (McMaster)

Koper, Nicola, Professor, Natural Resources and Environmental Studies—BSc MSc (Guelph) PhD (Alberta)

Korkmaz, Elie, Professor Emeritus, Physics—BSc (Lebanese) MSc PhD (Indiana)

Kowalski, Christopher, Assistant Professor, Psychology—PhD (Western Ontario)

Krehbiel, Richard, Adjunct Professor, Natural Resources and Environmental Studies (Environmental Planning)—Juris Doctor (Saskatchewan)

Kumar, Pranesh, Professor, Mathematics—MSc PhD (Indian Agricultural Research Institute)

Kuo, Kuo-Hsing, Associate Professor, Northern Medical Program and Adjunct Professor, Health Sciences—MD (National Taiwan) MSc (National Yang-Ming) PhD (British Columbia)

Kyle, Lisa, Assistant Professor, Social Work—BA (Simon Fraser) MA PhD (Northern British Columbia)

Lacharite, Jason, Senior Instructor, Political Science—BA (Victoria) MA (Yonsei) PhD (Monash)

Lai, Allan, Adjunct Professor, Nursing—BSN (Thompson Rivers) MScN (Northern British Columbia) NP

LaTosky, Shauna, Assistant Professor, Anthropology—BA Hons MA (Victoria) PhD (Johannes Gutenberg)

Lautensach, Alexander, Adjunct Professor, Education—BEd (Toronto) MSc (Guelph) MScT (McMaster) PhD (Otago)

Lavallee, Loraine, Assistant Professor, Natural Resources and Environmental Studies, Psychology—BA MA PhD (British Columbia)

Lazenby, Richard, Professor Emeritus, Anthropology (Interdisciplinary Studies) and Adjunct Professor, Northern Medical Program—BA MA (Simon Fraser) PhD (McMaster)

Lee, Chow, Professor, Biochemistry, Chemistry—BSc Hons (New South Wales) PhD (Flinders)

Lewis, Kathy, Professor Emerita, Natural Resources and Environmental Studies—BSF (British Columbia) MS (Virginia Polytechnic) PhD (Oregon State)

Li, Han, Professor, Health Sciences and Psychology—BEd Hons (Hua-Zhong NU) MPH (North Carolina) MA PhD (Victoria)

Li, Jianbing, Professor, Chemistry, Natural Resources and Environmental Studies—BASc MASc (Wuhan) PhD (Regina)

Lilgert, Brandin, Adjunct Professor, Nursing—BSc (Victoria) BSc (British Columbia) MScN (Northern British Columbia) NP

Lindgren, B. Staffan, Professor Emeritus, Natural Resources and Environmental Studies—MPM PhD (Simon Fraser)

Linklater, Natalie, Senior Lab Instructor, Engineering—BEng MASc PhD (Carleton)

Litz, David, Assistant Professor, Education—BA (Dalhousie) BEd (Toronto) MES (Dalhousie) MA (Birmingham) EdD (Calgary)

MacDonald, Fiona, Associate Professor, Political Science—BA (Brandon) BSW (Calgary) MA (Simon Fraser) PhD (British Columbia)

MacLeod, Martha, Professor Emerita, Nursing—BA MA (Toronto) PhD (Edinburgh)

MacPhail, Fiona, Professor Emerita, Development Economics—BA Hons MA (Guelph) MA (Sussex) PhD (Dalhousie)

Mandy, Margot, Professor, Chemistry, Physics—BSc Hons (Acadia) MSc PhD (Toronto)

Manyanga, Taru, Assistant Professor, Physical Therapy—BMR-PT MSc (Manitoba) PhD (Ottawa)

Margolin, Indrani, Professor, Social Work—BA Hons (Guelph) MSW (Wilfrid Laurier) PhD (Toronto)

Markey, Sean, Adjunct Professor, Natural Resources and Environmental Studies—BA (British Columbia) MA (York) PhD (Simon Fraser)

Martel, Gordon, Professor Emeritus, History—BA Hons (Simon Fraser) MA (Tufts and Harvard) PhD (Toronto)

Martins, Eduardo, Associate Professor, Natural Resources and Environmental Studies—BSc MSc PhD (Campinas)

Massicotte, Hugues, Professor Emeritus, Natural Resources and Environmental Studies—BScA (Laval) MSc PhD (Guelph)

Mattfeld, Monica, Assistant Professor, English—BA (Cariboo) MA (British Columbia) PhD (Kent)

Meletis, Zoë, Associate Professor, Natural Resources and Environmental Studies—BA (McGill) MScPl (Toronto) PhD (Duke)

Menounos, Brian, Professor, Natural Resources and Environmental Studies—BA MA (Colorado) PhD (British Columbia)

Messinger, Paul, Adjunct Professor, Business Administration—BA (Carleton) MBA (Harvard) MA PhD (California, Berkeley)

Michalos, Alex, Professor Emeritus, Political Science—BA (Western Reserve) MA BD PhD (Chicago)

Milburn, Daniel, Adjunct Professor, Natural Resources and Environmental Studies (Environmental Planning)—BSc (Northern British Columbia) MCIP RPP

Mills, Antonia, Professor Emerita, First Nations Studies and Interdisciplinary Studies—BA Hons PhD (Harvard)

Milner, Cindy, Adjunct Professor, Nursing—BScN (Douglas) MN (Victoria) RN

Mitchell-Foster, Sheona, Adjunct Professor, Health Sciences—BSc MD (Calgary) MPH (Johns Hopkins) FRCSC (British Columbia)

Moghimehfar, Frahad, Assistant Professor, Natural Resources and Environmental Studies—BSc (Azad, Iran) MSc (Allameh Tabataba'I, Iran) PhD (Alberta)

Monu, Kafui, Associate Professor, Business Administration—BComm Hons (Manitoba) MSc PhD (British Columbia)

Morgan, Kalindi, Assistant Professor, Biochemistry, Chemistry—BSc Hons PhD (British Columbia)

Morphett, Taylor, Assistant Professor, English—BA Hons MA PhD (Simon Fraser)

Morris, Marleen, Adjunct Professor, Natural Resources and Environmental Studies—BA (British Columbia) MSc (HEC Paris/Oxford)

Morrison, William, Professor Emeritus, History—BA Hons MA (McMaster) PhD (Western)

Mullins, Philip, Associate Professor, Natural Resources and Environmental Studies (Outdoor, Recreation, Conservation and Tourism)—BA (Lakehead) MA (Alberta)

Murphy, Michael, Professor, Natural Resources and Environmental Studies, Political Science—BA MA (Western Ontario) PhD (McGill)

Murray, Brent, Professor, Natural Resources and Environmental Studies—BSc MSc (Alberta) PhD (McMaster)

Nolin, Catherine, Professor, Natural Resources and Environmental Studies—BA (Calgary) MA PhD (Queen's)

Nyce, Deanna, Adjunct Professor, First Nations Studies—BEd MEd PhD (British Columbia)

O'Neill, Linda, Professor, Psychology—BA MEd (Victoria) PhD (Victoria)

Opio, Chris, Professor Emeritus, Natural Resources and Environmental Studies—BScF (New Brunswick) MEDes (Calgary) PhD (Alberta)

Otter, Ken A., Professor, Natural Resources and Environmental Studies—BSc (British Columbia) MSc PhD (Queen's)

Owens, Philip, Professor, Natural Resources and Environmental Studies, and FRBC Endowed Chair in Landscape Ecology—BSc (Coventry) MSc (British Columbia) PhD (Exeter)

Pammett, Robert, Adjunct Professor, Nursing—BSc MSc (Saskatchewan)

Parisien, Marc-André, Adjunct Professor, Natural Resources and Environmental Studies—BSc (McGill) MSc (Québec à Rimouski) PhD (California, Berkeley)

Parker, Katherine, Professor Emerita, Natural Resources and Environmental Studies—BA MA PhD (Washington State)

Parkes, Margot, Professor, Natural Resources and Environmental Studies—MBChB (Otago) MAS (Brussel) PhD (Otago)

Parshotam, Umesh, Adjunct Professor, Northern Medical Program—BSc (Texas) PhD (Western)

Pawlowska-Mainville, Agnieszka, Associate Professor, Global and International Studies—BA (McGill) MA PhD (Manitoba)

Payne, Geoffrey, Professor, Biochemistry and Northern Medical Program, and Adjunct Professor, Health Sciences—BSc MSc PhD (Memorial)

Pearce, Tristan, Professor, Natural Resources and Environmental Studies, and Canada Research Chair in Cumulative Impacts of Environmental Change—BA (Northern British Columbia) MA PhD (Guelph)

Pearson, Tammy, Associate Professor, Social Work—BA (Cape Breton) BSW (Victoria) MSW (British Columbia) PhD (Northern British Columbia)

Pelletier, Chelsea, Associate Professor, Health Sciences—BKin Hons (Acadia) MSc PhD (McMaster)

Perry, Gretchen, Associate Professor, Social Work—BA Hons (Guelph) MSW (Flinders) PhD (Missouri)

Peters, Heather, Associate Professor, Social Work—BA (Saskatchewan) BSW (British Columbia) MSW (Carleton) PhD (British Columbia)

Petticrew, Ellen, Professor, Natural Resources and Environmental Studies, and FRBC Endowed Chair in Landscape Ecology—BSc Hons (Queen's) MSc (British Columbia) PhD (McGill)

Picketts, Ian, Adjunct Professor, Natural Resources and Environmental Studies—BA (Queen's) MNRES PhD (Northern British Columbia)

Portes, Raquel, Senior Research Scientist, Natural Resources and Environmental Studies—BS MS PhD (Federal University of Viçosa)

Preston, Michael, Assistant Professor, Natural Resources and Environmental Studies—BSc Hons (Liverpool John Moores) MSc (Trent) PhD (Toronto)

Prkachin, Kenneth, Professor Emeritus and Adjunct Professor, Health Sciences and Psychology—BA MA PhD (British Columbia) R. Psych

Pypker, Thomas, Adjunct Professor, Natural Resources and Environmental Studies—BSc (McMaster) MSc (British Columbia) PhD (Oregon State)

Rader, Stephen, Professor, Biochemistry, Chemistry—BA (Swarthmore) PhD (California, San Francisco)

Rahemtulla, Farid, Senior Instructor, Anthropology (Interdisciplinary Studies)—BA (Alberta) MA (Toronto) PhD (Simon Fraser)

Rahmaty, Zahra, Assistant Professor, Nursing—BSc (Tehran) MScN (Iran) PhD (Maryland, Baltimore)

Raoufi, Mohammed, Assistant Professor, Engineering—BSc MSc (Sharif University of Technology) PhD (Alberta)

Raymond, Melanie, Senior Instructor, Education—BA BEd (Simon Fraser) MEd (Calgary)

Reid, Matthew, Professor, Physics—BSc (Northern British Columbia) MSc PhD (Alberta)

Reid, Nick, Assistant Professor, Psychology—MSc PhD (Western)

Reimer, Kerry, Professor Emeritus, Biochemistry, Chemistry—BSc (British Columbia) MSc PhD (Simon Fraser)

Reiners, Peter, Adjunct Professor, Natural Resources and Environmental Studies—MS PhD (Washington)

Rennie, Kriston, Professor, History—BA (Lethbridge) MLitt (St. Andrews) PhD (King's)

Rex, John, Adjunct Professor, Natural Resources and Environmental Studies—BSc (Memorial) MSc PhD (Northern British Columbia)

Robert, Jeanne, Adjunct Professor, Natural Resources and Environmental Science—BSc MSc (Northern British Columbia) PhD (British Columbia)

Roberts, Deborah, Professor, Engineering—BSc PhD (Alberta)

Robinson, Rheanna, Associate Professor, First Nations Studies—BA MA (Northern British Columbia) PhD (British Columbia)

Rocha, Elizabeth, Adjunct Professor, Psychology—BA (British Columbia) MSc (Northern British Columbia) PhD (Saskatchewan)

Romanets, Maryna, Professor, English, Gender Studies—MA (Chernivtsi) PhD (Ukrainian National Academy of Arts and Sciences) PhD (Saskatchewan)

Roters, Jennifer, Assistant Professor, Counselling—PhD (Brock)

Rowswell, Kristine, Senior Instructor, Nursing—BA BScN (Queen's) MScN (Northern British Columbia) NP

Russell, Grahame, Adjunct Professor, Natural Resources and Environmental Studies—BA (Guelph) LLB (Ottawa)

Rutherford, Michael, Professor Emeritus, Natural Resources and Environmental Studies—BSc Hons (British Columbia) PhD (Alberta)

Ryan, Daniel, Associate Professor, Mathematics—BSc MSc PhD (Guelph)

Safaei, Jalil, Professor, Development Economics, Business Administration, International Studies—BA MA (Shiraz, Iran) PhD (Manitoba)

Saha, Sajal, Assistant Professor, Computer Science—MSc (Brock) PhD (Western)

Sanborn, Paul, Professor Emeritus, Natural Resources and Environmental Studies—BA (Western) MSc (Alberta) PhD (British Columbia)

Sanders, Caroline, Professor, Nursing—BSc Hons (Manchester) MSc PhD (Fordham)

Sanderson, Darlene, Associate Professor, Health Sciences, and Donald Rix BC Leadership Chair in Indigenous Environmental Health—BScN (Alberta) MA (Victoria) PhD (Simon Fraser) RN

Sato, Christa, Lecturer, Social Work—BA BSW MSW (Calgary) PhD (Toronto)

Schiller, Catharine, Associate Professor, Nursing—BScN (Toronto Metropolitan) MSc (Toronto) Juris Doctor (Western Ontario) PhD (Northern British Columbia)

Schiller, Corrine, Adjunct Professor, Natural Resources and Environmental Studies—BS (Lethbridge) PhD (York)

Schmidt, Glen, Professor Emeritus, Social Work—BA BSW (Manitoba) MSW (British Columbia) PhD (Memorial)

Schorcht, Blanca, Professor Emerita, English and First Nations Studies—BA MA PhD (British Columbia)

Schuster, Richard, Adjunct Professor, Natural Resources and Environmental Studies—BSc MSc (Graz) PhD (British Columbia)

Selbie, Daniel, Adjunct Professor, Natural Resources and Environmental Studies—PhD (Queen's)

Senthanar, Sonja, Assistant Professor, Disability Management, Health Sciences—BSc Hons (Toronto) MSc (Lakehead) PhD (Waterloo)

Shaw, Anita, Adjunct Professor, Psychology—BSc Hons (Victoria) MA PhD (Northern British Columbia)

Shea, Joseph, Associate Professor, Natural Resources and Environmental Studies—BSc (McMaster) MSc (Calgary) PhD (British Columbia)

Shegelski, Mark, Professor Emeritus, Physics—BSc Hons (Calgary) MSc PhD (British Columbia)

Sherry, John, Associate Professor, Psychology and Counselling—BA (San Diego) MS PhD (Fordham)

Shrimpton, Mark, Professor, Natural Resources and Environmental Studies—BSc (Victoria) MSc PhD (British Columbia)

Shubair, Mamdouh, Associate Professor, Disability Management, Health Sciences—BSc MSc PhD (Waterloo)

Siakaluk, Paul, Professor, Psychology—BA Hons MSc (Calgary) PhD (Alberta)

Sims, Daniel, Associate Professor, First Nations Studies—BA (Concordia) MA PhD (Alberta)

Sinclair, Findlay, Adjunct Professor, Natural Resources and Environmental Studies (Environmental Planning)—BA (Simon Fraser) RPP MCIP

Smith, Angèle, Professor, Anthropology (Interdisciplinary Studies), Gender Studies, International Studies and Adjunct Professor, Health Sciences—BA (Toronto) MA (McMaster) PhD (Massachusetts)

Smith, Heather, Professor, Gender Studies, Global and International Studies—BA (Alberta) MA PhD (Queen's)

Stadnyk, Tricia, Adjunct Professor, Natural Resources and Environmental Studies (Environmental Sciences)—BASc PhD (Waterloo)

Stark, Martha, Adjunct Professor, Biochemistry, Chemistry—BA (Swarthmore) PhD (California)

Stent, Rebecca, Senior Instructor I, Nursing—BScN (Thompson Rivers) MScN (Northern British Columbia)

Stevens, Nancy, Associate Professor, First Nations Studies—BA (Waterloo) PhD (Trent)

Stewart, Katherine, Adjunct Professor, Natural Resources and Environmental Studies—BSc MSc (Lakehead) PhD (Northern British Columbia)

Stewart, Ronald, Adjunct Professor, Natural Resources and Environmental Studies—BSc (Manitoba) MSc PhD (Toronto)

Strong, Willard, Adjunct Professor, Natural Resources and Environmental Studies—BSc (British Columbia) MSc (Simon Fraser) PhD (Oregon)

Sui, Jueyi, Professor, Natural Resources and Environmental Studies—BEng MScE (Hefei) Dr-Ing (Kaiserslautern)

Swainger, Jonathan, Professor Emeritus, History—BA (Lethbridge) MA (Calgary) PhD (Western)

Tang, Youmin, Professor, Natural Resources and Environmental Studies—BSc MSc (Nanjing) PhD (British Columbia)

Tannert, Thomas, Professor, Engineering, and Canada Research Chair in Tall Wood and Hybrid Structures Engineering—Dipl. Ing (Bauhas) MSc (Bio-Bio) PhD (British Columbia) PEng

Thompson, Mark, Adjunct Professor, Natural Resources and Environmental Studies—BSc (Northern British Columbia) MSc (Calgary)

Thring, Ron, Professor, Chemistry, Natural Resources and Environmental Studies—BSc (Botswana and Swaziland) MASc (Bradford UK) MSc (Saskatchewan) PhD (Sherbrooke)

Tong, Fei, Assistant Professor, Engineering—BSc MSc (Tsinghua) PhD (Toronto)

Transken, Si Chava, Associate Professor, Social Work—BA BSW (Laurentian) MA PhD (Toronto)

Usman, Lantana, Professor, Education—Ed. Cert. BEd MBA MEd (Ahmadu Bello) PhD (Alberta)

van Pelt, Linda, Senior Instructor III, Nursing—Dipl. Nurs. (British Columbia Institute of Technology) BSN (Open University) BHS (Thompson Rivers) MScN-FNP (Northern British Columbia)

Venter, Oscar, Professor, Natural Resources and Environmental Studies, and FRBC/West Fraser Endowed Chair in Conservation Solutions—BSc Hons (Concordia) PhD (Queensland)

Walsh, Jacob, Assistant Professor, Chemistry—BSc (Ottawa) PhD (Western Ontario)

Ward, Arlene, Adjunct Professor, Disability Management—BSc (British Columbia) MSc (Calgary)

Werner, Jeffery, Adjunct Professor, Natural Resources and Environmental Studies—BSc MSc (British Columbia) PhD (Pennsylvania)

Wessell Lightfoot, Dana, Professor, Gender Studies and History—BA MA PhD (Toronto)

Whalen, Catherine, Associate Professor, Education—BEd (New Brunswick) MA (Royal Roads) EdD (Calgary)

Wheate, Roger, Professor, Natural Resources and Environmental Studies—BSc Hons (St Andrews) MA (Queen's) PhD (St Andrews)

Whitcombe, Todd, Professor, Chemistry, Natural Resources and Environmental Studies—BSc Hons PhD (Victoria)

Wigglesworth, Jennifer, Assistant Professor, Natural Resources and Environmental Studies—BSc MA (Ottawa) PhD (Queen's)

Wilson, Erin, Associate Professor, Nursing—BSc (Manitoba) MSc (British Columbia) PhD (Northern British Columbia)

Wilson, Gary, Professor, Political Science, International Studies—BA (Carleton) MA PhD (Toronto)

Wimmers-Klick, Julia, Senior Lab Instructor, Northern Medical Program—BSc (Vienna) MD (Innsbruck)

Winwood, Paul John, Associate Professor, Northern Medical Program—BSc MB BS Hons (London) DM (Southampton)

Wood, Lisa, Associate Professor, Natural Resources and Environmental Studies—BSc MSc (Northern British Columbia) PhD (Victoria)

Wood-Adams, Paula, Professor, Engineering—BSc (Alberta) MEng PhD (McGill)

Xiao, Stanley, Assistant Professor, Mathematics—MSc PhD (Waterloo)

Yin, Jun, Adjunct Professor, Chemistry—BS MS (Hohai) PhD (Nevada)

Yurkewich, Jewel, Adjunct Professor, Natural Resources and Environmental Studies—BSc (Alberta) MSc (Eastern Finland)

Zhao, Violet, Assistant Professor, Natural Resources and Environmental Studies—PhD (Alberta)

Zheng, Wenbo, Assistant Professor, Natural Resources and Environmental Studies—MSc (Tongji) PhD (British Columbia)

Zhou, Jianhui, Associate Professor, Engineering—PhD (New Brunswick)

Officers of the University

UNBC Board of Governors

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Darlene McIntosh	Chancellor
Joel McKay	Order-in-Council Appointment (Chair)
Jim Martin	Order-in-Council Appointment (Vice Chair)
Iboyla Agoston	Order-in-Council Appointment
Amanda Alexander	Order-in-Council Appointment
Allison Beswick	Order-in-Council Appointment (Alumna)
Trevor Morrison	Order-in-Council Appointment
Gregory Stewart	Order-in-Council Appointment
Vacant	Order-in-Council Appointment
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Todd Whitcombe	Elected Faculty Member
Emily Roberts	Elected Undergraduate Student Member
Lina Shehata	Elected Graduate Student Member
Joyce Henley	Elected Staff Member

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Bill Owen	Interim Vice President, Academic and Provost
Paula Wood-Adams	Vice President, Research and Innovation
Arleta Lucarelli	Executive Director, Strategy and Staff

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Nicola Koper	Dean, Faculty of Environment
Nathan Lachowsky	Dean, Faculty of Human and Health Sciences
Kriston Rennie	Dean, Faculty of Indigenous Studies, Social Sciences and Humanities
Deborah Roberts	Dean, Faculty of Science and Engineering
Trina Fyfe	University Librarian
Nicole Neufeld	Manager, Continuing Studies

Faculty of Business and Economics

Julius Bankole
Karima Fredj

Faculty of Environment

Mark Groulx
Neil Hanlon

Faculty of Human and Health Sciences

Christine Ho Younghusband
David Litz

Faculty of Indigenous Studies, Social Sciences and Humanities

Gary Wilson
Vacant

Faculty of Science and Engineering

Allan Kranz
Fei Tong

Faculty at Large

Darren Brown
David Casperson
Joanie Crandall
Balbinder Deo
Maik Gehloff (Vice Chair)
Clarence Hofsink
Hossein Kazemian
Tammy Klassen-Ross
Margot Mandy
Kim Stathers
Todd Whitcombe
Susie Wilson

Students

Armaan Jamwal	President of NUGSS
Sriparna Dey	Chairperson of NBCGSS
Malay Lolariya	Student Senator for the Faculty of Business and Economics
Maria Tavares	Student Senator for the Faculty of Environment
Lizna Lakhani	Student Senator for the Faculty of Human and Health Sciences
Cheri Brown	Student Senator for the Faculty of Indigenous Studies, Social Sciences and Humanities
Jared Hirt	Student Senator for the Faculty of Science and Engineering
Rehana Ramzan	Undergraduate Student Senator
Ranjodh Singh	Undergraduate Student Senator
Rachel Fonda	Graduate Student Senator
Tina Watters	Graduate Student Senator

Lay Senators

Claudia Barreira
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Ray Noonan
Patricia Prince

WWN Representative

Deanna Nyce

Non-Voting

Alexandra Parent	Recording Secretary
Kimberly Read	Secretary of Senate
Paul Siakaluk	President of the Faculty Association
Rahim Somani	Vice President, Finance and Administration

University Administrative Officers

Senior Administration

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Interim Vice President, Academic and Provost—Bill Owen, BSc Hons (Augustana) MA PhD (Saskatchewan)

Vice President, Research and Innovation—Paula Wood-Adams, BSc (Alberta) MEng PhD (McGill)

Vice President, Finance and Administration—Rahim Somani, BComm (Karachi) MA (London) CPA CA

Associate Vice President, Division of Medical Sciences—Paul Winwood, BSc MB BS (London)

Interim Associate Vice President, Indigenous—Penína Sara-Lynn Harding, BA (Northern British Columbia)

Associate Vice President, People, Equity, and Inclusion—Manpreet Dhillon

Interim Associate Vice President, Research Operations—Davina Banner-Lukaris, BN Hons (Wales) PhD (West England)

Interim Associate Vice President, Strategy and Outreach—Mark Barnes, BSc MSc MBA (Northern British Columbia)

Vice-Provost, Graduate and Postdoctoral Studies—Katerina Standish, BA (Simon Fraser) PhD (Manitoba)

Executive Director, Strategy and Staff—Arleta Lucarelli, BSc (British Columbia)

Dean, Faculty of Business and Economics—Ronald Camp II, BA (Whitworth) MBA (Willamette) PhD (British Columbia)

Dean, Faculty of Environment—Nicola Koper, BSc MSc (Guelph) PhD (Alberta)

Dean, Faculty of Human and Health Sciences—Nathan Lachowsky, BSc PhD (Guelph)

Dean, Faculty of Indigenous Studies, Social Sciences and Humanities—Kriston Rennie, BA (Lethbridge) MLitt (St. Andrews) PhD (King's)

Dean, Faculty of Science and Engineering—Deborah Roberts, BSc PhD (Alberta)

Senior Director, Students—Dennis Stark, BComm MEd (Northern British Columbia)

Director, Academic Operations and Quality Assurance—John McNeill, BSc Hons (Edinburgh) PhD (Durham)

Director, Enterprise Risk, Strategy & Transformation—Anne Adeniyi-Faleye, MBA (Northern British Columbia)

Director, Graduate—Jill Mitchell Nielsen, BA MA (British Columbia)

Director, Office of Shared Services—Christie Ray, BComm (Northern British Columbia)

Athletics

Director, Athletics and Recreation—Loralyn Murdoch, BPE (Alberta) MEd (Victoria)

Centre for Teaching, Learning, and Technology

Director, Centre for Teaching, Learning, and Technology—Ben Daniel, BSc (Juba) DiplComp (Khartoum) MSc (Twente) MPhilED (Oslo) PhD (Saskatchewan)

Communications

Director, Communications and Marketing—Vacant

Financial Services

Director, Finance—Kiran Kullar, BComm (Toronto) CPA CA

Human Resources

Director, Human Resources—Jennifer Dawson, BSc (Northern British Columbia)

Information Technology Services

Chief Information Officer—Trevor Fuson, BComm (Northern British Columbia) MScIS (Athabasca)

Office of the Registrar

University Registrar and Secretary to Senate—Kimberly Read, BA (British Columbia)

Deputy Registrar—Marlina Hawes, BA (Northern British Columbia)

Associate Registrar, International—Amy Beyer, BA (Northern British Columbia)

Sustainable Facilities and Ancillary Services

Director, Sustainable Facilities and Ancillary Services—David Claus, BEng (Victoria) PhD (Oxford)

Associate Director, Ancillary Services—Dan Kusz

Associate Director, Capital Planning—Jason McCannon

University Library

University Librarian—Trina Fyfe, BA (Waterloo) MIST (Toronto) PhD (Northern British Columbia)

Head, Archives and Special Collections—Erica Hernández-Read, BA MAS (British Columbia)

Archivist—Kim Stathers, BA MLIS MAS (British Columbia)

Librarian, Access Services—Annelise Dowd, BA (British Columbia) MIST (McGill)

Librarian, Acquisitions—Heather Empey, BA (Augustana) MLIS (Alberta)

Librarian, Data Services—Susie Wilson, BSc (Northern British Columbia) MLIS (Alberta)

Librarian, Division of Medical Services—Kristy Hancock, BA (Simon Fraser) MLIS (Dalhousie)

Librarian, Knowledge Synthesis—Terri McKellar, BA (Toronto) BN (New Brunswick) MLIS (British Columbia)

Librarian, Metadata— Geoffrey Boyd, BA (Victoria) MLIS (Alberta)

Librarian, Research and Learning Services—Kealin McCabe, BA (Wilfrid Laurier) MLIS (Western Ontario) EdD (British Columbia)

Fees

Graduate tuition fee units are established by the Board of Governors of the University of Northern British Columbia at its March meeting. Tuition changes take effect at the beginning of the September Semester. In the event of a discrepancy between the present information and official documentation from the Board, the official documentation from the Board will take precedence. The fees presented here are for 2025-2026.

Note: Students who complete their graduation requirements early are required to pay the minimum tuition fee units.

Tuition Fee Units for Full-Time Domestic Master's Students

The full-time basic tuition fee unit is $1,893.67 per semester for Canadian citizens and permanent residents, with the following exceptions:

PROGRAM	BASIC TUITION FEE UNIT
Master of Arts in Disability Management	$2,402.22
Master of Education	$2,586.99
Master of Engineering in Integrated Wood Design	$522.24 per credit hour
Master of Science in Health Sciences	$2,402.22
Master of Science in Nursing	$2,402.22
Master of Science in Nursing - Family Nurse Practitioner	$291.99 per credit hour
Master of Social Work	$2,217.43

The minimum fee for the Master's degree is three full-time tuition fee units.

Tuition Fee Units for Full-Time International Master's Students

The full-time basic tuition fee unit is $2,651.13 per semester for international students, with the following exceptions:

PROGRAM	BASIC TUITION FEE UNIT
Master of Arts in Disability Management	$3,363.11
Master of Education	$3,621.78
Master of Engineering in Integrated Wood Design	$731.14 per credit hour
Master of Science in Health Sciences	$3,363.11
Master of Science in Nursing	$3,363.11
Master of Science in Nursing - Family Nurse Practitioner	$395.66 per credit hour
Master of Social Work	$3,104.40

The minimum fee for the Master's degree is three full-time tuition fee units.

Tuition Fee Units for Part-Time Domestic Master's Students

The part-time basic tuition fee unit is $1,000.94 per semester for Canadian citizens and permanent residents with the following exceptions:

PROGRAM	BASIC TUITION FEE UNIT
Master of Arts in Disability Management	$1,261.16
Master of Education	$1,358.17
Master of Science in Health Sciences	$1,261.16
Master of Science in Nursing	$1,261.16
Master of Social Work	$1,164.15

The minimum fee for the Master's degree is nine part-time tuition fee units.

Program Fees for Full-Time MBA Students

The MBA program consists of 5 semesters. For the first semester, a $2000.00 deposit is due within 30 days of admission with the balance due the first day of classes. The deposit is not refundable after April 1. All future semesters, tuition, program fees and student fees are due prior to the first weekend of the semester. Non-payment of fees prior to the first weekend may hold up registration and access to the online platform. The pre-MBA program course fee is $714.11 for domestic students and $821.23 for international students.

Domestic students: Tuition is $803.56 per credit hour, plus $478.61 for the MBA fee per semester. Textbooks, course materials and ancillary fees are not included in the above fees.

International students: Tuition is $1,128.40 per credit hour, plus $478.61 for the MBA fee per semester. Textbooks, course materials and ancillary fees are not included in the above fees.

Some travel is required and may involve additional costs to the student.

Change Management Certificate Deposit	$1,500.00

Note: All fees are subject to Board of Governors approval. The tuition fees do not include UNBC student fees, cost of transportation or accommodation, cost of textbooks or course materials. Please refer to the UNBC Graduate Studies website (www.unbc.ca/graduate-programs) for more information on student fees.

Tuition Fee Units for Full-Time PhD Students

The full-time basic tuition fee unit is $1,893.67 per semester for Canadian citizens and permanent residents, and $2,651.13 per semester for international students. Students entering a Doctoral program for the first time may be eligible for a Doctoral tuition scholarship for the initial two years of registration, renewable for a further two consecutive years if progress is deemed satisfactory.

The minimum fee for the Doctoral degree is nine full-time tuition fee units. See *Admission to Doctoral Degrees* in Admissions and Regulations.

Fees for Undergraduate Courses

Graduate students taking undergraduate courses will be charged on a per-credit-hour basis for those courses. The tuition fee unit payment schedule noted above does not include graduate or undergraduate courses taken as extra to the degree.

Tuition Fee Units for Continuing Students

Domestic Master's students who extend their studies beyond two years (or beyond four years if enrolled part-time) or domestic Doctoral students who extend their studies beyond three years must pay a continuing registration fee of $666.90 per semester.

For graduate students enrolled in the MBA program, a $1,428.23 continuation fee for domestic students or a $1,642.46 continuation fee for international students will be charged according to the regulations for graduate programs should the period of study extend beyond five semesters.

Prorated Completion Tuition

This policy applies to students who are completing their degree via a thesis, project, dissertation, or practicum only. The MBA and MEng programs are not eligible for prorated completion fees or early completion.

A student will have their tuition fees prorated to the end of the month in which the Office of Graduate Administration confirms all degree requirements have been met (including submission of the final approved document) provided the student has paid the minimum instalments required for their degree. The prorated amount is calculated based on the student's enrolment and fee instalment status:

- **Full-time Master's students:** Fees may not be prorated in semesters 1 through 3. Semesters 4 through 6 are prorated based on the full-time tuition amount. Semesters 7 through 15 incur continuing registration fees and are prorated on that basis.
- **Part-time Master's students:** Fees may not be prorated in semesters 1 through 9. Semesters 10 through 12 are prorated based on the part-time tuition amount. Semesters 7 through 15 (or 21 in Education) incur continuing registration fees and are prorated on that basis.
- **Doctoral students:** Fees may not be prorated in semesters 1 through 9. Semesters 10 through 21 incur continuing registration fees and are prorated on that basis.

Prorated Defence Fee Reduction Schedule

The following fee prorating schedule is based on submission of a fully defended and revised thesis, dissertation, project or practicum with all committee signatures, formatted correctly for Library and Archives Canada submission (if applicable). Student fees are not prorated. Tuition fees must be paid in advance by the date due. Students must have paid the minimum required instalments based on their status as a full-time or part-time student to be eligible for fee proration.

Fall Semester Defences
Add/drop period: Full refund
September 30: 75% of tuition refunded
October 31: 50% of tuition refunded
November 30: 25% of tuition refunded
December by grading deadline (varies): No refund

January Semester Defences
Add/drop period: Full refund
January 31: 75% of tuition refunded
February 28/29: 50% of tuition refunded
March 31: 25% of tuition refunded
April by grading deadline (varies): No refund

May Semester Defences
Add/drop period: Full refund
May 31: 75% of tuition refunded
June 30: 50% of tuition refunded
July 31: 25% of tuition refunded
August by grading deadline (varies): No refund

Non-Degree Graduate Students

Non-degree graduate students are charged $1,053.29 (domestic) or $1,474.61 (international) for each course attempted.

Audit Fees for Degree and Non-Degree Graduate Students

Full-time and part-time graduate (degree) students auditing undergraduate courses will be charged the same per-credit-hour fee as part-time undergraduate students.

Graduate (degree) students who audit courses at the graduate or undergraduate level are responsible for all ancillary and applicable course fees (e.g., field trip fees).

Non-degree students as defined in *Admission to Non-Degree Coursework* in Admissions and Regulations, will be charged $526.65 (domestic) or $737.31 (international) (half of the cost of taking one course as a non-degree student) for auditing any 3-credit-hour course. They are responsible for all applicable ancillary and individual course fees.

Additional Semester Fees

Student Services Fee	$46.87 per semester
Student Society Fee (Prince George campus)	$80.14 per semester
Student Society Fee (Regional campus)	$73.73 per semester
Student ID Card Fee	$2.33 per semester
Intramural Recreation and Fitness Fee (Prince George campus)	$66.78 per semester
PGPIRG Fee (Prince George campus)	$5.23 per semester
Over the Edge Newspaper Fee (Prince George campus)	$11.93 per semester
Late Registration Fee (if applicable)	$100.00 per semester
GSS Health and Dental Plan Fee	$383.69 annually
GSS U-PASS (Prince George campus)	$60.00 per semester
BC Federation of Students	$11.25 per semester

International Student Fees

International Tuition Deposit $1,500.00*
*due by the deadline specified at the time of admission offer. Please refer to UNBC Finance website for refund conditions and to the Office of the Registrar for conditions under which this fee may be waived.

International Student Fee $125.00 per semester

Miscellaneous Fees

Application Fee-Domestic Applicants $76.50*
*to accompany application for admission if all post-secondary transcripts come from institutions within Canada (non-refundable)

Application Fee-International Applicants $153.00*
*to accompany application for admission (non-refundable)

Re-Application Fee $100.00

Graduate Orientation Fee $45.05

Medical Insurance for International Students $190.00*
*per semester (please refer to the following section on medical insurance for international students)

Graduation Processing Fee $44.18*
*per application for all graduating students (non-refundable)

Student ID Card Replacement $15.00*
*per lost card

Thesis/Dissertation Registration Fee $48.00*
*Library and Archives Canada fee for inclusion in LAC Database and Dissertation Abstracts (per thesis submitted)

Official Transcript Fee $10.61*
*per official transcript

NSF Charge $15.00*
*per returned cheque

Graduate Admission Deferral Deposit $250.00

Parking Fees

Metered $3.50*
*per day including taxes

Monthly Permit $55.00

Carpool Permit $35.00*
*per month plus taxes (for details see Parking Services)

Housing and Residence Life Fees

Application Fee	$30.00 (non-refundable)
Late Application Fee	$150.00 (non-refundable)
Residence Room Deposit	$275.00
Residence Infrastructure Fee	$35.00 per semester
Residence Life Fee	$55.00 per semester
Rent - Four Bedroom Suite Rental	$3,186.50 per semester, per occupant
Residence Parking	$240.00 per semester

Housing rent includes local telephone services and high-speed internet connection.

Outstanding accounts are subject to a monthly service charge of 2% on the outstanding principal (26.82% per annum).

Additional Information on Fees

BC Residents 65 Years or Older

BC residents who are 65 years of age or older, and who are eligible for admission, may register for courses and receive a waiver of tuition. Please note that in those areas where there is a limited number of spaces available or when programs/courses are deemed to be cost-recovery, students under this category of registration may not receive priority or be eligible for the waiver. Students are responsible for all ancillary fees.

Student Services Fee

The student fees are collected from full-time and part-time students registered for courses, and are utilized to augment services to students.

GSS Health and Dental Plan Fee

All GSS members registered in the September semester and paying GSS fees are automatically covered by the GSS Health and Dental Plan. This includes full-time and part-time students, and international students (Prince George campus only).

Your student plan provides you with health and dental coverage for 12 months, from September 1 to August 31 of the following year. If you are already covered by an equivalent extended health and dental plan, you may opt out online during the change-of-coverage period (typically within the first 3 weeks of classes; for exact deadlines visit www.ihaveaplan.ca). Your plan also gives you the option to enroll your family (spouse and/or dependents) by paying an additional fee. Most members that are not automatically covered, but who wish to have coverage, are able to enroll themselves for an additional fee. Students starting in January may enroll at a pro-rated rate for 8 months of coverage (January 1 to August 31). For more information, contact www.ihaveaplan.ca or 1-866-358-4431.

PGPIRG Fee

The PGPIRG fee is collected by UNBC on behalf of the Prince George Public Interest Research Group. The mandate of this group is to organize its members around topics of public interest, such as social justice and environmental issues. Please contact the group at (250) 960-7474 for further information.

Payment Due Date

All student accounts are payable in full by the first day of the semester.

Financial Hold

Students who fail to pay the outstanding balance of their current account will be placed on financial hold. While on financial hold, no subsequent registration activity will be allowed, no official transcripts of the academic record will be issued, and a student will be denied graduation. The financial hold will be removed when the outstanding balance, including all service charges, is paid in full.

Failure to Notify

Any student failing to provide written notification to the Office of the Registrar of their complete withdrawal from a course or slate of courses will be assessed full tuition fee units for those registered courses and receive grades of F on their transcript.

Payments

Payments can be made by cash, debit card, cheque, American Express, MasterCard, Visa, wire transfer, or money order. Please ensure that the correct student number is written on the face of all cheques and money orders submitted. Fees may be paid by the following methods:

- by mail: cheques or money orders should be made payable to the University of Northern British Columbia and must reach UNBC by the due date. Cheques or money orders are requested in Canadian funds drawn on a Canadian bank. The University is not responsible for payments lost in the mail.
- by wire transfer: bank-to-bank wire transfers can be arranged through your financial institution. Wire transfer instructions can be found on our website at: www.unbc.ca/finance/accounts-receivable/payment-options.
- in person: at the Cashier's Office during hours of operation. Tuition payments are also accepted at UNBC's regional offices in Terrace, Fort St. John and Quesnel.
- American Express, MasterCard, Visa, or Interac Debit Card will be accepted in person by the Cashier, or online at the UNBC website.

Any questions regarding making payments may be directed to the Cashier's Office by telephone at (250) 960-5631 or by fax at (250) 960-5251.

Payment inquiries can be addressed to cashier@unbc.ca.

Do not email credit card or banking information. For further information, please visit: www.unbc.ca/finance/accounts-receivable/payment-options.

Refund Policy Note

Due to the semester fee payment schedule, there is normally no refund of fees for graduate students who withdraw from courses. If no course registration exists, registration must be maintained by registering in either the thesis or project (except for students in course-based programs without course offerings in the May semester).

Fee Reduction Schedule for Course Revision Period: For Non-Degree Graduate Students

The fee reduction schedule will apply to non-degree graduate students who withdraw from courses. Refunds can be applied for at the Cashier's Office after the revision period. Allow two to three weeks for processing. If there is a credit on a student's account and no refund is requested, the credit will be applied to the next semester.

September Semester (September 3 to December 19)

September 17, 2025	Last day to add/drop without financial penalty
October 23, 2025	Last day to add/drop without academic penalty, 50% tuition refund

January Semester (January 8 to April 25)

January 22, 2026	Last day to add/drop without financial penalty
February 27, 2026	Last day to add/drop without academic penalty, 50% tuition refund

May Semester (May 11 to August 21)

May 26, 2026	Last day to add/drop without financial penalty
June 23, 2026	Last day to add/drop without academic penalty, 50% tuition refund

Note: Exceptions to the refund policy may apply, subject to approval by the UNBC Board of Governors.

For condensed courses, the last day to revise registration is indicated in the course-specific documentation.

Medical Insurance Fee for International Students

UNBC has a compulsory medical insurance policy for international students. International students must provide proof of valid medical coverage for each semester that they register at UNBC. A hold will be placed on a student's file if proof of valid medical coverage is not supplied.

A medical insurance fee of $190.00 will be assessed automatically each semester. If students have valid BC medical insurance or comparable private insurance, the fee can be waived. Students without medical insurance are asked to enroll in a university-sponsored plan which costs $190.00 for four months of coverage.

Students must contact the International office to enroll in the private insurance plan or to receive a waiver of the medical insurance fee. Please note that simply paying the $190.00 fee does not fulfill the policy. The policy requires that international students have valid medical insurance while at UNBC, and that they demonstrate proof of such coverage.

Note: Standards for accounts receivable billing and collection of student accounts receivable are subject to UNBC policy on student accounts. For further information on student accounts receivable, please see the Finance website at www.unbc.ca/finance.

Academic Dates

Academic Year

The academic year extends from September 1 to August 31. Each 12-month academic year begins in September and is composed of the following semesters:

- September Semester - September to December
- January Semester - January to April
- May Semester - May to August

2025 – 2026 Semester Dates

2025 September Semester

September

1	Monday	Labour Day, University closed
2	Tuesday	Orientation Day
3	Wednesday	First day of classes, September Semester All September Semester fees due
17	Wednesday	*Last day to register or revise registration for the September Semester *Last day to withdraw from program without financial penalty *Last day to change September Semester courses from audit to credit and credit to audit
30	Tuesday	National Day for Truth and Reconciliation, University closed

October

13	Monday	Thanksgiving Day, University closed
23	Thursday	*Last day to withdraw from September Semester courses without academic penalty (course will be denoted with W)

November

1	Saturday	Deadline to submit Application for Graduation if completing degree requirements by December (degree conferral in January)
10 -14	Mon. to Fri.	Mid-Semester Break (no classes November 10-14)
11	Tuesday	Remembrance Day, University closed

December

5	Friday	Last day of classes
9	Tuesday	First day of exam period
19	Friday	Last day of exam period
25	Thursday	Christmas Day, University closed
26	Friday	Boxing Day, University closed
27-31	Sat. to Wed.	University closed

2026 January Semester

January

1	Thursday	New Year's Day, University closed
7	Wednesday	Orientation Day
8	Thursday	First day of classes, January Semester All January Semester fees due
22	Thursday	*Last day to register or revise registration for the January Semester *Last day to withdraw from program without financial penalty *Last day to change January Semester courses from audit to credit and credit to audit

February

16	Monday	Family Day, University closed
17-20	Tues. to Fri.	Mid-Semester Break (no classes February 17-20)
27	Friday	*Last day to withdraw from January Semester courses without academic penalty (course will be denoted with W)

March

1	Sunday	Deadline to submit Application for Graduation if completing degree requirements by April (degree conferral in May)

April

1	Wednesday	Deadline to apply for UNBC-administered scholarships and bursaries
3	Friday	Good Friday, University closed
5	Sunday	Easter Sunday, University closed
6	Monday	Easter Monday, University closed
13	Monday	Last day of classes
16	Thursday	First day of exam period
25	Saturday	Last day of exam period

2026 May Semester and 2026 Spring Intersession

May

8	Friday	Orientation Day
11	Monday	First day of classes, May Semester and Spring Intersession All May Semester fees due, including Spring/Summer Intersessions
15	Friday	*Last day to register or revise registration for the Spring Intersession
18	Monday	Victoria Day, University closed
26	Tuesday	*Last day to register or revise registration for the May Semester **Last day to withdraw from program without financial penalty *Last day to change May Semester courses from audit to credit and credit to audit
29	Friday	Convocation Day (Prince George campus)

June

2	Tuesday	*Last day to withdraw from Spring Intersession courses without academic penalty, 50% tuition refund
19	Friday	Last day of classes, Spring Intersession
20	Saturday	Maintenance shutdown, Prince George campus closed
22	Monday	First day of exam period, Spring Intersession
23	Tuesday	*Last day to withdraw from May Semester courses without academic penalty (course will be denoted with W)
26	Friday	Last day of exam period, Spring Intersession
29	June - 3 July	Mid-Semester Break (no classes June 29 - July 3)
30	Tuesday	Recommended deadline to apply for the BC Student Assistance Program (BC Student Loans)

2026 May Semester continued and 2026 Summer Intersession

July

1	Wednesday	Canada Day, University closed
6	Monday	First day of classes, Summer Intersession
10	Friday	*Last day to register or revise registration for the Summer Intersession
15	Wednesday	Deadline to submit Application for Graduation if completing degree requirements by August (degree conferral in September)
28	Tuesday	*Last day to withdraw from Summer Intersession courses without academic penalty, 50% tuition refund

August

3	Monday	BC Day, University closed
14	Friday	Last day of classes, May Semester and Summer Intersession
17	Monday	First day of exam period, May Semester and Summer Intersession
21	Friday	Last day of exam period, May Semester and Summer Intersession

*Graduate students must have approval to alter their program of study. Students must be continuously enrolled in order to maintain their position in Graduate Studies, except for students in course-based programs without course offerings in the May semester.

2025 – 2026 Senate Dates

September 24, 2025

October 22, 2025

November 26, 2025

January 28, 2026

February 25, 2026

March 25, 2026

April 22, 2026

May 27, 2026

June 24, 2026

August 26, 2026

2025 – 2026 Graduate Student Deadline Dates

2025 September Semester

Course Registration Deadlines

September 17	*Last day to register or revise registration for the September Semester *Last day to withdraw from the program without financial penalty *Last day to change September Semester courses from audit to credit and credit to audit status
October 23	*Last day to withdraw from September Semester courses without academic penalty

Fee Deadline

September 3	All September Semester tuition and student fees due

Non-Degree Status Deadline

November 15	Deadline to apply for non-degree status for January Semester courses

Graduation Deadline

November 1	Deadline to submit Application for Graduation for the January degree conferral (program requirements completed by December)

2026 January Semester

Course Registration Deadlines

January 22	*Last day to register or revise registration for the January Semester *Last day to withdraw from the program without financial penalty *Last day to change January Semester courses from audit to credit and credit to audit status
February 27	*Last day to withdraw from January Semester courses without academic penalty

Fee Deadline

January 8	All January Semester tuition and student fees due

Non-Degree Status Deadline

April 15	Deadline to apply for non-degree status for May Semester courses

Graduation Deadline

March 1	Deadline to submit Application for Graduation for the May degree conferral (program requirements completed by April)
April 30	Deadline to complete all requirements for Master's and Doctoral programs for graduation in the January semester

2026 May Semester

Course Registration Deadlines

May 15	*Last day to register or revise registration for the Spring Intersession
May 26	*Last day to register or revise registration for the May Semester *Last day to withdraw from the program without financial penalty *Last day to change May Semester courses from audit to credit and credit to audit status
June 23	*Last day to withdraw from May Semester courses without academic penalty
July 10	*Last day to register or revise registration for the Summer Intersession

Fee Deadline

May 11	All May Semester, Spring Intersession, and Summer Intersession tuition and student fees due

Non-Degree Status Deadline

August 15	Deadline to apply for non-degree status for September Semester courses

Student Loans Deadline

June 30	Recommended deadline to apply for the BC Student Assistance Program (BC Student Loans)

Graduation Deadline

July 15	Deadline to submit Application for Graduation for the September degree conferral (program requirements completed by August)

*Graduate students must have approval to alter their program of study. Students must be continuously enrolled in order to maintain their position in Graduate Studies, except for students in course-based programs without course offerings in the May semester.

Graduate Programs Admissions and Regulations

1.0 General Admission

In the spirit of the UN Declaration on the Rights of Indigenous Peoples and the recommendations of the Truth and Reconciliation Commission, UNBC respects and recognizes that the national boundaries imposed by colonization do not represent Indigenous citizenship and territories. Therefore, UNBC recognizes all Indigenous students coming from nations in what became Canada and the United States as domestic for the purposes of application processing, application fee and tuition fees.

Prospective graduate students must submit an application online. There are three semester intakes for graduate admissions (September, May and January). Not all programs offer admission to each semester intake.

Programs normally have a priority deadline for submission of a complete application to be considered for entrance awards. As admission to graduate degrees is competitive, applications for admission should be submitted as early as possible. Program application deadlines, intake information and application instructions are posted on the graduate application website: www.unbc.ca/apply/graduate.

All documents submitted to the Office of the Registrar must be in the original language in which they were produced. Documents not produced in the English language must be accompanied by a notarized translation into English. Documents submitted in support of an application become the property of UNBC and are not subsequently released. Admission to a graduate program is valid only for the semester indicated in the letter of offer of admission.

UNBC specifically reserves the right to exercise its sole, absolute, and unfettered discretion in admitting individuals to the University, its programs, or courses.

Applicants who have been admitted to a graduate program must indicate their intention to accept or decline an offer of admission within 30 days. Failure to accept an offer may result in admission being rescinded.

To be considered for admission to a graduate program, all applicants must submit a complete application by the application deadline (www.unbc.ca/admissions/graduate/graduate-application-intakes-and-deadlines).

Full details on application requirements can be found on our website: www.unbc.ca/admissions/graduate/graduate-application-requirements.

1.1 English Language Requirements

English is the primary language of instruction and communication at UNBC. Consequently, it is expected that an applicant be able to demonstrate an acceptable level of proficiency in the use of English in order to receive and participate in classroom instruction and discussion as well as to complete written assignments.

Applicants whose first language is not English, regardless of citizenship or country of origin, must submit evidence of English language proficiency prior to admission. French-speaking Canadians and Canadian First Nations language speakers are exempted from this requirement.

Students who have completed a degree program entirely in the English language at a recognized institution from a country approved by UNBC where English is an official language may be exempted from this requirement. A listing of English language proficiency test-exempt countries is maintained by the Office of the Registrar.

Acceptable evidence of English language proficiency may be any one of the following:

- TOEFL (Test of English as a Foreign Language) score of 90 or higher in the internet-based test, with not less than 20 in any of the reading, listening, writing or speaking components; or equivalent other TOEFL score. UNBC's institutional TOEFL code is 0320.
- IELTS (International English Language Testing System) academic score of at least 6.5 overall, with not less than 6.0 in any of the four modules.
- CAEL (Canadian Academic English Language Assessment) or the CAEL CE: overall 70, with no subtest below 60.
- CELPIP (Canadian English Language Proficiency Index Program)
  - CELPIT-A (Academic Reading and Writing): 4H
  - CELL (Listening): 4H
  - CELTOP (Speaking): 4H
- MELAB (Michigan English Language Assessment Battery): 85 final score, with 3 in the speaking test.
- PTE (Pearson Test of English - Academic): 65 overall score, with a score of not less than 60 in reading, writing, listening, and speaking.
- A final grade of 3.00 (B) or better in both the UNBC English Language Studies 50 and English Language Studies 170, obtained concurrently and prior to application for graduate admission.
- A final grade of 3.00 (B) or better in an articulated BCCAT EAP 4 program, prior to application for graduate admission.

In order to be considered valid, results must be sent directly from the testing agency/institution to the Office of the Registrar. Scores are valid for a period of two years.

Some graduate programs may require higher English language proficiency scores. Please consult the programs section of the calendar for additional requirements.

UNBC reserves the right to consider, in addition to test scores, any factors that it considers appropriate in making a final determination of the English language proficiency of an applicant.

1.2 GRE Requirement for Graduate Programs

The Graduate Record Examination (GRE) is prepared and scored by the GRE Board and Educational Testing Service. UNBC's institution code is 0320. The GRE is used widely by universities to supplement undergraduate records and other qualifications for admission to graduate study.

GRE requirements are prescribed by individual programs. For some programs, completion of the examination may be mandatory. Applicants are advised to check program listings for detailed information. However, UNBC reserves the right to require a GRE score (on Subject and General Tests) for any applicant. Voluntary submission of a GRE score may facilitate the admission process.

1.3 Admission to Master's Degrees

1.3.1 In general, applicants to a Master's degree program must hold a four-year baccalaureate degree (or equivalent) from a recognized institution.

Domestic applicants are normally required to have a minimum overall average of 3.00 (B) for third- and fourth-year courses.

Specific minimum admission requirements for graduates with credentials completed at an institution outside of Canada are determined by country and are listed on the graduate admission website: www.unbc.ca/apply/graduate/international-admission-requirements.

Higher entrance standards or different GPA requirements than those outlined in this section may be set by individual programs and, where defined, can be found in the program calendar entry or on the graduate admissions website: www.unbc.ca/admissions/graduate.

1.3.2 In exceptional situations and at the discretion of the program, an applicant's admissibility may be adjudicated on the basis of performance in at least 12 credit hours of upper-level coursework directly related to the intended field of study.

1.3.3 A program may recommend admission for an applicant who has a four-year baccalaureate degree (or equivalent) who does not meet the minimum GPA requirement for the program if the applicant demonstrates sufficient relevant experience and expertise to offset GPA deficiencies.

1.4 Admission to the Master's Degree as a Conditionally Admitted Mature Student

Five years after completion of a baccalaureate degree as defined in *Admission to Master's Degrees* in Admissions and Regulations, applicants whose academic record is such that they would not be admissible to a Master's program may be admitted conditionally as mature students, provided they are recommended by the appropriate program.

The minimum GPA for admission to a Master's program as a conditionally admitted mature student is 2.67 (B-) or equivalent.

A student conditionally admitted to a graduate program must earn a grade of at least 3.00 (B) in each of the first two 3-credit-hour graduate courses taken to continue in the Master's degree program.

Students admitted in this category normally will not receive transfer credit for any courses completed prior to enrolling in their graduate program.

1.5 Admission to Non-Degree Coursework

Non-degree graduate students are those taking graduate courses, but not for credit toward a degree at UNBC. Such students are admitted under one of following categories: visiting graduate students, exchange graduate students, or non-degree students.

1.5.1 **Visiting graduate students** are those on a letter of permission which specifies courses allowed for credit toward a graduate degree at another university. Applicants in this category must provide a letter of permission from their home institution. No other supporting documentation is required. Students must request that an official transcript be sent directly to their home institution upon completion of coursework at UNBC.

1.5.2 **Exchange graduate students** are those covered by the Western Deans' Agreement or other formal exchange agreement. If a student is admitted under the Western Deans' Agreement or other formal exchange agreement, all tuition fees at UNBC will be waived; however, ancillary student fees will be charged. Applicants in this category must submit a completed and duly signed Western Deans' Agreement form at their home institution (if applicable) certifying the applicant as an exchange student, under the

provisions of the agreement. Courses to be taken toward their degree must be specified in the documentation. No other supporting material is required. Students must request that an official transcript be sent directly to their home institution upon completion of coursework at UNBC.

1.5.3 **Non-degree students** are normally those who wish to improve their academic background. Applicants under this category who **do not** hold a Master's degree must normally meet the same entrance requirements and follow the same application procedure as outlined in *Admission to Master's Degrees* in Admissions and Regulations, with the exception of letters of reference. Holders of a Master's degree (or equivalent) from a recognized institution in the same discipline as the coursework applied for must complete an application for admission to graduate programs, and provide proof of conferral of the Master's degree.

A maximum of three graduate courses may be taken under this category. Individual programs may impose further restrictions. International students studying in Canada may be eligible to complete courses as non-degree students. Please see the Office of Graduate Administration homepage, www.unbc.ca/graduate-administration for further information.

1.5.4 If a student admitted as a non-degree student is later admitted to a graduate degree program, coursework taken as a non-degree student may be applied to the graduate program subject to the recommendation of the supervisory committee and the approval of the Dean.

1.6 Auditing Graduate Courses

An individual who is either a graduate student in a UNBC graduate program or a non-degree graduate student as defined in *Admission to Master's Degrees* in Admissions and Regulations may be permitted to audit up to 3 credit hours of graduate courses in a semester. A continuing student should add the audit course to their graduate registration form. A new applicant auditing a course should submit a graduate registration form to the Office of the Registrar clearly indicating the course name and number with an application for admission to Graduate Programs together with proof of degree conferral.

Neither full-time nor part-time graduate students in a UNBC graduate program will be charged for auditing graduate-level courses as long as auditing the course is required by the graduate supervisor/supervisory committee. If any course audit is not already included as part of a student's approved graduate program, then a graduate program revision form must be completed. The supervisor must provide a rationale for the course audit, explaining how the course is related to the student's research. The appropriate signatures must also be included on the graduate registration form and/or the add/drop form.

Registration as an auditor is subject to the following conditions:

1.6.1 Admittance to the class is dependent on the class size and other factors that the instructor and the program establish.

1.6.2 The degree of participation in the course is at the discretion of the instructor.

1.6.3 Attendance and participation shall grant no entitlement to an academic record of such attendance and shall not be considered as meeting admission, prerequisite or course requirements for any graduate program.

1.7 Upgrading for Admission to Graduate Programs

Individuals wishing to apply to graduate programs may not meet the normal requirements for admission. Such cases normally fall into either of the following categories:

1.7.1 **Admission Requirements Satisfied but Course Background Inappropriate or Prerequisites Lacking** Upon the recommendation of the program concerned, the Dean may approve the inclusion of the missing background or prerequisites as part of the requirements for the Master's degree.

1.7.2 **Pre-Entry Program** When admission requirements are not satisfied and upon the recommendation of the program concerned, the Dean may approve a pre-entry program of undergraduate coursework totalling at least 12 credit hours of upper division courses. An average of not less than 3.33 (B+) must be achieved in the coursework, and no course must be completed at a level below 2.67 (B-). Courses taken for a pre-entry program may not be used for credit towards a graduate degree. Students approved by the Dean for a pre-entry program are guaranteed admission to the appropriate graduate program upon successful completion of the recommended courses.

1.7.3 Graduate course challenge is not permitted.

1.8 Integrated Delivery Graduate and Undergraduate Courses

1.8.1 An "integrated delivery" course is one in which a graduate course is co-taught with a 400-level undergraduate course which in turn is indicated as being offered at an advanced level. At the graduate level, learning experiences are qualitatively and quantitatively distinctive from the undergraduate experience and normally build upon the undergraduate course content. Nevertheless, courses taken specifically to meet the registration requirements of professional bodies may have the same content at each level.

1.8.2 All courses which are integrated on a continuing basis are so indicated in the graduate calendar by way of stated preclusions.

1.8.3 Integrated delivery courses are taught by faculty members who are approved to teach graduate level courses.

1.9 Permission for Undergraduates to Take Graduate Coursework

1.9.1 Students in their final year of a baccalaureate degree program at UNBC who have a GPA of at least 3.33 (B+) in the last 30 credit hours of coursework attempted and have completed all required lower-division coursework may be permitted to register in a maximum of 6 credit hours of graduate courses with the permission of the instructor and the graduate program concerned and with the approval of the Dean. If a student is subsequently admitted to a graduate program, graduate courses used for credit toward an undergraduate program cannot be used for credit toward a graduate program.

1.9.2 Simultaneous enrollment in a graduate program and an undergraduate, diploma or certificate program is not permitted.

1.10 Admission as a Visiting Research Student

Admission to this category is restricted to graduate students covered by the Canadian Graduate Student Research Mobility Agreement or other approved research agreements. A visiting research student must register in the course VRES 950-0 Visiting Research Student for each semester covered by the agreement. Visiting research students are not permitted to take other courses at UNBC.

1.11 Misrepresentation of Application Information

Misrepresentation of application information constitutes misconduct as per the *Academic and Non-Academic Conduct Student Policy*. An applicant's admission, acceptance or registration to the University, a program or a course of study may be revoked. There may be impacts on future considerations. For more information on student conduct at UNBC, visit www.unbc.ca/policy.

2.0 Registration Procedures and Status

2.1 Initial Registration

All students admitted to a graduate program must normally register during the dates specified for such registration. All letters of admission that are not used to register in the semester to which they apply are automatically cancelled. Students who are issued a letter of admission for the September Semester may not use this document for entry in the January Semester. Any requests for deferral of admission to a graduate program must be made in writing to UNBC Graduate Admissions in the Office of the Registrar, along with payment of the admission deferral fee.

2.2 Enrollment and Re-enrollment

2.2.1 Continuity of Registration All students are required to either register in every semester (September, January, May) from the time of admission until the requirements of the degree have been met, or formally withdraw in accordance with *Leave of Absence* in Admissions and Regulations (except for students in course-based programs without course offerings in the May semester). Students are required to pay minimum tuition fees (see Fees section).

2.2.2 Re-registration Students who are missing one semester or more of registration and who have not been withdrawn from their graduate program must:

a. Pay any outstanding fees;
b. Register for those semesters not previously registered in; and
c. Pay any new tuition fee units.

Students who have registered at another university or college since last in attendance at UNBC are required to state the names of all educational institutions of post-secondary level attended and to submit an official transcript of their academic records at these institutions to the Office of the Registrar.

2.2.3 Reinstatement Students who have withdrawn from their graduate program and later wish to return must apply to be reinstated to their program. Reinstatement requires the support of the supervisor (where assigned) and program Chair.

Students who have exceeded the time limit to complete their degree (inclusive of time away from their graduate program) may be reinstated with the support of the program following a review of previously completed coursework and the current calendar requirements for degree completion. Accepting previously completed courses for credit towards the degree where the time limit has expired is at the discretion of the program. Additional, repeated, or supplemental coursework may be required. Students who were required to withdraw are not eligible for reinstatement.

The procedure for reinstatement is available on the Graduate Administration website, including deadlines and applicable fees.

2.3 Definition of Full-Time and Part-Time Status

A full-time graduate student is one who is either:
a. enrolled in courses totalling a minimum of 6 credit hours during a single semester; or
b. registered in a thesis, project, dissertation or other scholarly work during a semester.

A part-time student is any student who does not meet either criteria above.

Note: This definition does not necessarily govern the fee structure, which is determined at the time of admission.

2.4 Maximum Academic Load

2.4.1 The maximum academic load in a graduate program during any semester is 18 credit hours of coursework or 15 credit hours of coursework plus thesis, project, or dissertation. Programs may limit students to fewer credit hours.

2.4.2 Simultaneous enrollment in a graduate program and an undergraduate, diploma or certificate program is not permitted.

2.4.3 Simultaneous enrollment in more than one graduate program is not permitted with the exception of the situation covered by *Admission to Doctoral Degrees* in Admissions and Regulations. Concurrent enrollment in a graduate degree program and related graduate diplomas or certificates may be permitted by an individual program upon receipt of a separate application and payment of the appropriate fee(s).

2.5 Leave of Absence

A student may request a leave of absence when personal, health, parental, professional or academic reasons (as detailed below) interrupt studies. Leaves of absence are approved by the supervisor (where appointed) or program Chair and Dean. Leaves normally start at the beginning of a semester (for a duration up to a maximum of 12 months or 18 months for parental leave). Extended leaves of absence are only granted on an exceptional basis, with very strong reasoning from the student, full support of the supervisor (where appointed) or program Chair and approval of the Dean. The conditions for a return from a leave of absence may require that additional coursework be completed or repeated and additional criteria be established for continued study. Time spent on leave does not count towards the time limit for program completion. Procedures and documentation required for a leave of absence request are outlined on the Office of Graduate Administration website.

A student cannot undertake academic or research work during the period of leave and cannot hold a teaching or research assistant position. At least one month prior to the end of the leave of absence, students must inform their supervisor (where appointed) or program Chair of their intention to return and register.

The request for a leave must be submitted two weeks prior to the start of the semester in which the leave will begin. Late requests can only be accepted under exceptional circumstances. Provided the request is received before the deadline, students on a leave of absence do not pay tuition or student fees for the duration of the leave.

2.5.1 Awards and Scholarships During On-Leave Status Award payments for awards established by UNBC are suspended at the start of the leave of absence for up to a maximum of 12 months (or 18 months for parental leave) and resume upon the student's return, provided the student continues to meet all requirements for the award. For awards outside of the University, award payment during a leave is governed by the terms and conditions of leaves established by the donor or granting agency.

2.6 Leaves of Absence Categories

Personal Leave
In the event a student encounters personal circumstances that have an impact on their ability to continue their studies, a maximum of 12 months leave may be taken over the duration of the degree program.

Medical or Compassionate Leave
Where circumstances warrant, a student may request medical or compassionate leave with appropriate supporting documentation.

Parental Leave
A student with parenting responsibilities for a newborn or newly-adopted child is entitled to a leave period of 18 months in each instance.

Professional Leave
A student may be eligible to suspend their program of study for a period up to 12 months in order to pursue work experience or employment in a field related to their area of study.

2.6.1 Withdrawals

There are four types of withdrawals for discontinuation of studies:

a. Withdrawal With Permission
A student may voluntarily withdraw from studies provided they are in good academic standing at the time of the request and do not have outstanding tuition and/or fees.

b. Compassionate Withdrawal with Extenuating Circumstances
A student who is facing unanticipated extenuating circumstances or medical concerns may ask for withdrawal with the approval of the Dean. Retroactive withdrawals are considered only in the event of documentation substantiating an inability to provide timely notification.

c. Withdrawal Without Permission
Graduate students are required to maintain continuous registration for the duration of their program (except for students who are in course-based programs without appropriate courses available in the May semester). A student who has not maintained continuous registration is considered Withdrawn Without Permission from their program. A student who has been Withdrawn Without Permission and wishes to return to their program is normally considered under the criteria for reapplication (See *Reinstatement* in Admissions and Regulations). The conditions for return may require that additional coursework be completed or repeated and additional criteria may be established for continued study.

d. Required to Withdraw
A student who is not meeting academic or program standards or whose thesis, dissertation, project, portfolio, comprehensive exam or practicum is not progressing satisfactorily may be required by the Dean to withdraw from their graduate program. Normally, a student required to withdraw is not considered for re-entry into the same graduate program.

The dates published in the calendar for withdrawal without financial penalty and withdrawal without academic penalty apply.

2.7 Letter of Permission for Studies Elsewhere

Students currently registered in a graduate program who wish to undertake studies at another institution for transfer credit toward their graduate degree at UNBC must apply in writing to the Dean, specifying the host institution, the courses to be taken, and their credit values. The application must be supported by the supervisor. Students must request that an official transcript be sent directly to the Office of the Registrar at UNBC from the host institution upon completion of the coursework.
Note: Students are required to maintain continuous registration and pay the fees for the semester at UNBC while studying elsewhere.

2.7.1 Western Deans' Agreement

Students currently registered in a graduate program who wish to undertake studies at a western Canadian university for transfer credit toward their graduate degree at UNBC may be eligible for exchange status under the provision of the Western Deans' Agreement. Information and relevant forms are available from the Graduate Administration website, www.unbc.ca/graduate-administration.

3.0 Student Responsibilities

a. Students are responsible for familiarizing themselves with the Graduate Regulations. If students are unsure about any aspect of the Graduate Regulations, they should contact the Office of the Registrar or the Office of Graduate Administration.
b. Students are responsible for familiarizing themselves with the program requirements and deadlines. If students are unsure about any aspect of the program regulations, they should contact the program Chair.
c. Students are responsible for ensuring the completeness and accuracy of their registration. If students are unsure about any aspect of their record, they should contact the Office of the Registrar.
d. Students are responsible for familiarizing themselves with their fee obligations as outlined in the fees section of the calendar. If students are unsure about any aspect of the fee regulations, they should contact the Office of the Registrar.
e. Students are equally responsible for maintaining open communication with their supervisor, supervisory committee, and graduate program Chair through mutually agreed upon regular meetings. Any problems, real or potential, should be brought to the attention of the supervisor, supervisory committee and graduate program Chair promptly. Students should be aware that formal routes of appeal exist in the form of the Appeals Procedure of the Office of the Registrar (see *Appeals* in Admissions and Regulations and *Appeals Process* in Regulations and Policies).
f. A letter mailed to a student's address as it appears on record in the Office of the Registrar will be deemed adequate notification to the student for all matters concerning the student's record. Changes in address and telephone number must be reported promptly to the Office of the Registrar.

4.0 Regulations Governing Master's Programs

4.1 Course and Program Requirements

4.1.1 Graduate Programs Approval Students must submit a program approval form (if required by the program) by the deadline on the Graduate Administration website, www.unbc.ca/graduate-administration.

4.1.2 Coursework and Research Considerable variation is permitted in the balance between research and the coursework required for the Master's degree, although most programs include a thesis based on research (see *Master's Degree Without a Thesis or Project* in Admissions and Regulations).

Before the thesis, project, or practicum is written, the student should refer to the Office of Graduate Administration website for a copy of the *Formatting Guidelines for Thesis, Dissertation and Projects*, which specifies academic and technical requirements to ensure acceptability of the document by the University and the National Library of Canada.

4.1.3 Integrated Courses Normally, Master's students enrolled in thesis programs should complete at least 6 credit hours of graduate coursework in addition to any integrated delivery courses that may be taken. The Chair of the program or, if applicable, the Chair of the graduate committee decides whether or not a graduate course qualifies as part of the 6 credit hour requirement of a student's degree.

4.1.4 Language Requirements Some Master's programs may require a reading knowledge of one or more languages other than English. Language requirements will be prescribed for individual students by the supervisory committee according to program regulations. Such requirements are considered part of the student's program. When a language requirement is imposed, it must be met prior to taking the oral examination or, in the case of non-thesis Master's programs, before the completion of the comprehensive examination and/or the project oral.

4.1.5 UNBC Course Requirements and Applicability of Transfer of Credit At least half of the coursework taken must be completed as a degree candidate in a graduate program at UNBC and be UNBC courses. The program concerned may accept courses taken at other institutions for credit toward a UNBC graduate degree.

Courses taken at UNBC as a non-degree student in a graduate program may be considered for transfer to a graduate degree (see *Admission to Non-Degree Coursework* in Admissions and Regulations).

In order to qualify for transfer of credit, courses must meet all of the following conditions:

a. must be a graduate-level course;
b. must be completed with a grade of at least B (or equivalent); and
c. must not have been used to obtain any degree, diploma, certificate or other credential unless otherwise noted.

The grades from courses allowed for transfer of credit will not appear on the transcript, and they will not be used in determining sessional or cumulative GPAs. Credit granted at another institution on the basis of life or work experience is not acceptable for transfer of credit. For students admitted as mature students (see *Admission to the Master's Degree as a Conditionally Admitted Mature Student* in Admissions and Regulations), transfer of credit will not normally be granted for courses taken before enrolling in graduate programs at UNBC.

4.1.6 Master's Degree Without a Thesis or Project For programs that offer the option of a Master's degree without a thesis or project, the following regulations apply:

a. if required by the program, a program of study must be submitted by the deadline on the Graduate Administration website;
b. there must be evidence of independent scholarly work which may be in the form of an extended paper(s), work report, etc. The credit value for this work may range from 3 to 12 credit hours.

4.2 Time Limit

The maximum time for completion given below is not intended to be the normal time for completion. It is intended to take into account a wide variety of extraordinary circumstances and events that may delay completion.

4.2.1 Normally, a student proceeding toward a Master's degree will be required to complete all degree requirements within five years (60 consecutive months) from the date of the first registration in the Master's degree. In no case will a degree be awarded in less than 12 consecutive months from the time of the first registration. However, it is expected that a full-time student will complete a Master's degree within 36 consecutive months from the date of first registration.

4.2.2 If a degree is not completed within the specified period following the first registration, the student may be withdrawn from the program. Under exceptional circumstances, time extensions may be granted by the Dean. Such requests for time extension must be made prior to the end of the semester in which the student's time limit expires.

4.2.3 A time extension is normally approved for two semesters with the expectation that all outstanding degree requirements of a student's graduate program (including the defence and thesis corrections) are completed within this period of time. Further time extensions may be granted under exceptional circumstances. Students who fail to complete at the end of a time extension are required to withdraw from their graduate program.

4.2.4 Variances to the time limits are as follows:

- Master of Education (part time): seven years (84 consecutive months).

4.3 Academic Performance

A student who fails to meet academic standards, or whose thesis, project, practicum, or comprehensive examination is not progressing satisfactorily, may be required to withdraw by the Dean on the advice of the supervisor and supervisory committee.

4.3.1 Students must attain a Semester GPA of at least 3.00 (B) for every semester in which they are registered. Individual programs may set higher standards. Any student with a Semester GPA below 3.00 may be allowed to register in the next semester while their academic performance is reviewed by their supervisory committee. Continuation in their graduate program is recommended by the supervisory committee subject to approval by the Dean.

Students who were registered in one course in a semester that resulted in a Semester GPA less than 3.00 based on a B- grade may be allowed to continue in their graduate program. However, if the student's Cumulative GPA is lower than a 3.00, a continuance review is required.

4.3.2 A grade of F in a course taken for credit in a graduate program must be reviewed by the supervisory committee and a recommendation must be made to the Dean concerning continuance of the student in the program. Such students will not be allowed to register in the next semester until approved to do so by the Dean.

4.3.3 Graduate students may not repeat graduate courses except under exceptional circumstances if recommended by the supervisory committee subject to approval by the Dean.

4.3.4 Progress report requirements vary by program and deadlines are posted on the Graduate Administration website. If the progress report indicates a second Needs Improvement or Unsatisfactory progress, the program reviews the student's continuation in a formal continuance review meeting and submits recommendations to the Dean.

4.3.5 Conditions may be imposed by the Dean for continuation in the program. The conditions normally must be met within the next semester or the student will be required to withdraw.

4.4 Academic Supervision

4.4.1 Supervisor Each Master's student shall have a faculty member assigned as an academic supervisor or advisor.

The role of the supervisor or advisor is to provide advice, guidance, instruction, and encouragement in the research activities of their students and to evaluate their progress and performance. The supervisor must be aware of and adhere to the various and relevant university regulations; provide guidance to the student on the nature of research, the standards required, the adequacy of the student's progress, and the quality of the student's work; and be accessible to the student to give advice and constructive criticism.

The supervisor and student must maintain contact through mutually agreed upon regular meetings. Supervisors who expect to be absent from the University for an extended period of time (including during sabbaticals) are responsible for making suitable arrangements (including the appointment of a temporary replacement) with the student and the Chair of the program, or if applicable, the Chair of the graduate committee for the continued supervision of the student or the nomination of another supervisor. All changes of this nature must be approved by the Chair of the program or graduate committee.

4.4.2 Supervisory Committee Each student in a thesis or project-based Master's program shall have a supervisory committee. The Chair of this committee shall be the supervisor.

The committee consists of at least three members including the supervisor. One member is normally from outside the program. If, at any point, more than one member of a supervisory committee is absent from the University for an extended period of time (including during sabbaticals), arrangements should be made so that the progress of the student is not impeded. No more than one member of a supervisory committee should be on an extended absence at any one time. Timelines for the formation of a supervisory committee vary by program and are posted on the Graduate Administration website, www.unbc.ca/graduate-administration.

The duties of the committee include recommending a program of study chosen in conformity with the program requirements as stated in the graduate calendar (such as competence in languages other than English, in statistics, in computing, or in other research skills); meeting periodically to facilitate appropriate supervision of the thesis, project, or practicum; and participating in a final oral examination when the degree program requirements prescribes such an examination.

A member of a supervisory committee who has an adjunct or emeritus position with UNBC cannot be the sole supervisor of a graduate student. A faculty member who leaves UNBC cannot remain as the sole supervisor for a graduate student. The Chair of the program is expected to ensure that a new supervisor or co-supervisor is appointed from existing faculty.

All such changes require the approval of the Chair of the program or graduate committee, who may recommend further changes of the supervisor or supervisory committee.

4.5 Final Oral Examinations and Examining Committees

4.5.1 General Regulations

a. Master's degrees require a final examination.
b. Degrees that have a final examination by project, comprehensive exam, major paper, etc., may be examined in a manner agreed upon by the program

and the Dean; otherwise, the examination shall be as for theses.

c. For all theses, students may proceed to an oral examination when the supervisory committee is satisfied that the scholarly work represents an examinable document for the degree requirements. The supervisory committee and student confirm this by submitting a request for examination at least six weeks before the anticipated date of oral examination. Required forms, current timelines and procedures are posted on the Graduate Administration website, www.unbc.ca/graduate-administration.
d. Before proceeding to the final examination, all courses taken for credit in graduate programs must be completed with a cumulative GPA of not less than 3.00 (B) and with no grade in any course less than B- (or the higher standard set by the individual program). Any language requirement must be met before the student proceeds to the examination.
e. The final oral examining committee shall consist of the Chair, the supervisory committee, and an external examiner who normally attends the oral examination. At a minimum, the people attending the defence must be the student, supervisor (or one of the co-supervisors), the Chair, external examiner and one committee member. The Dean appoints the Chair, normally a tenured member of the faculty at the associate professor level or higher with extensive experience in graduate programs, or a faculty Dean. The Chair must be independent of the program, student and project.
f. Normally, the oral examinations are open to the University community. Copies of the thesis abstract shall be made available to all those attending the examination. The Dean shall have the right to attend all phases of the examination. In rare circumstances where a public examination would be detrimental to the student or the sponsor of the research to have it made public, the author of the thesis, project or dissertation may request a closed oral examination. The request for a closed oral examination must be made in writing to the Dean for review and approval when the request for oral examination is made.
g. The MBA program schedules its project defences in the final semester concurrent with coursework.

4.5.2 Examining Committees The role of the examining committee is to assess the thesis, project or practicum, and to conduct an oral examination, if applicable, based on that scholarly work. The examining committee will consist of the supervisory committee and at least one other examiner, called the external examiner, who must be from outside the program area in which the Master's is based and who has had no past (previous five years), current, or planned involvement or association with the student or the thesis research.

External examiners should have established reputations in the area of the thesis research. Ideally, they should be at associate or full professor rank if they are at a university or be of comparable stature if they are not at a university. Please refer to the policy on the appointment of an external examiner available from the Office of Graduate Administration or from the website at www.unbc.ca/graduate-administration.

For Master's degrees without a thesis, the membership of the final oral examining committee and the examination procedure shall be determined and approved by the program and the Dean (see *General Regulations* in Admissions and Regulations).

4.5.3 Format of the Thesis Examination The first part of the oral examination shall consist of an oral presentation by the candidate to include a summary of the salient points of the research, normally within a time span of 20 to 25 minutes. This is followed by the questioning and examination of the candidate by the examining committee. The oral defence is normally about two hours in duration. It is the responsibility of the Chair of the oral examination to pose questions raised by the external examiner (if not in attendance). The Chair of the oral examination may exercise discretion in allowing questions from guests following completion of the formal examination.

4.5.4 Results of Oral Examinations The decision of the examining committee shall be based on the content of the scholarly work or thesis as well as the candidate's ability to defend it. After the examination, the committee shall recommend to the Dean one of the following results:

a. Clear Pass
This decision is selected when the thesis, project or practicum is acceptable as presented, and the oral defence is acceptable. The only alterations to be made are grammatical, labelling, numbering changes or the correction of typographical errors.

In this case, all members of the examining committee shall sign the approval pages. A PASS grade is submitted to the Office of the Registrar for the student's thesis, project or practicum.

b. Pass with Minor Revision
This decision is selected when the thesis, project or practicum is acceptable subject to minor revision, and the oral defence is acceptable. Minor revisions are defined as any change beyond the correction of typographical errors that entails the reorganization of portions of the manuscript or the rewriting of minor portions of the thesis. It is within the discretion of the examining committee to determine whether the quantity or number of minor revisions proposed make the outcome "pass with major revisions" more appropriate.

In this case, all members of the examining committee, except the supervisor, shall sign the approval pages.

The supervisor shall sign the approval pages when the thesis, project or practicum has been amended to include the changes that were requested by the examining committee. A PASS grade is submitted to the Office of the Registrar for the student's thesis, project or practicum.

The Office of Graduate Administration must receive confirmation that the thesis, project or practicum has been amended to include the changes that were requested by the examining committee by the last day of the semester in which the oral examination took place. If this deadline is not met, registration for the subsequent semester is required in order to maintain continuous registration (See *Continuity of Registration* in Admissions and Regulations).

c. Pass with Major Revision
This decision is selected when the thesis, project or practicum is acceptable subject to major revision, and the oral defence is acceptable. Pass with major revisions means that a complete chapter or chapters must be rewritten, additional data is to be presented and/or interpreted, or the general format must be changed. Alternatively, the cumulative number of minor revisions is sufficient to merit a pass with major revisions.

In this case, only the Chair of the examining committee shall sign the approval pages. The supervisor shall supervise the revision of the thesis, project or practicum. When the revisions have been completed and have been approved by the supervisor, the supervisor shall distribute the revised thesis, project or practicum to the rest of the examining committee. If it is acceptable to the examining committee, the supervisor shall ensure that the approval pages are signed by each member of the examining committee. A PASS grade is submitted to the Office of the Registrar for the student's thesis, project or practicum.
The Office of Graduate Administration must receive confirmation that the thesis, project or practicum has been amended to include the changes that were requested by the examining committee by the last day of the semester in which the oral examination took place. If this deadline is not met, registration for the subsequent semester is required in order to maintain continuous registration (See *Continuity of Registration* in Admissions and Regulations).

d. Adjournment of the Examination
This decision is selected when the examination is adjourned.

Reasons to adjourn the examination include, but are not limited to, the following: further research or experimentation is required; the thesis is acceptable but the student has failed the oral defence; or the external examiner casts the lone dissenting vote. In the case of an adjourned examination, the candidate shall not be passed and no member shall sign the approval pages.

When an examination is adjourned, each member of the examining committee shall make a written report to the Office of Graduate Administration within 14 calendar days of the date of the oral examination. After reviewing these reports, the Dean sets a date for reconvening the examination. The Dean shall also determine whether or not the composition of the original committee is appropriate for the reconvened examination. The date for reconvening shall be no later than six months from the date of the first examination. If the date for reconvening falls outside the last day of the semester in which the adjourned oral examination took place, registration for the subsequent semester is required in order to maintain continuous registration (See *Continuity of Registration* in Admissions and Regulations).

e. Failure
This decision is selected when the thesis, project or practicum is unacceptable, and the oral defence is unacceptable.

If two or more members of the examining committee are opposed to passing the student, the student will not be recommended for the degree. In this case, the examining committee shall make a written report to the Office of Graduate Administration within 14 calendar days from the date of the oral examination outlining the reasons for this decision. A student who fails the oral examination has the right to appeal, and should consult with the Office of the Registrar regarding the appropriate procedures.

4.5.5 Consequence of Failed Examination A student who fails the oral examination twice shall be required to withdraw from their graduate program.

4.5.6 Students who are awarded a PASS decision with minor or major revisions will be required to submit a corrected thesis, which has been approved by the supervisory committee and/or external examiner, if applicable, to the Office of Graduate Administration by the date stated on the outcome of defence form. Students who do not submit a corrected thesis or fail to provide revisions which are acceptable to their examining committee will be deemed to have failed the defence and will not be recommended for the award of their graduate degree.

4.6 Degree Completion and Graduation

4.6.1 The University Senate grants degrees at the end of each semester. Each candidate for a degree must complete an Application for Graduation form

and must pay the graduation fee (see Fees Section). Application for Graduation forms are available from the Office of the Registrar or online at www.unbc.ca graduate-administration.

4.6.2 The deadline for completing all requirements for the degree is the final business day in April for the Convocation ceremony in May.

4.6.3 Students can be considered for the awarding of a degree only when all of the following requirements have been satisfied:

a. Completion of the program of study and meeting the grade point average requirements for the degree;
b. Submission of three final copies of the thesis, or two final copies of the project, or practicum report. Regulations governing proper submission are set out in the *Formatting Guidelines for Thesis, Dissertation and Projects*. Only the latest version of these instructions is valid. Students should obtain a copy from the Office of Graduate Administration or from the Office of Graduate Administration website at www.unbc.ca/graduate-administration;
c. Signing of the approval pages for the student's thesis, project or other scholarly work by the supervisor;
d. Submission of an Application for Graduation form to the Office of the Registrar and an official degree audit completed by the University; and
e. Payment of all outstanding fees. Those students who have outstanding accounts will not receive their degree parchment or be issued transcripts. Students should be aware of the semester fee payment schedule for graduate degrees (see Fees section).

5.0 Appeals

Appeals are heard by the Senate Committee on Student Appeals and are not subject to further appeal. Further information may be obtained from the Office of the Registrar. Please refer to the *Academic and Non-Academic Conduct Policy* and the *Student Appeals Procedures* for further information.

6.0 Research Services

All matters concerning the administration of research grants and contracts are handled by the Office of Research and Innovation, to which inquiries concerning research policies and procedures should be directed. Students whose research falls within the University definition of research involving human and non-human subjects and other ethical and safety issues must receive prior approval from the appropriate screening committee. Regulations on these issues may be obtained from the Office of Research and Innovation. The Office of Research and Innovation should be contacted for further details concerning research-oriented services offered to graduate students.

7.0 Regulations Governing Doctoral Programs

The Calendar regulations listed below apply to Doctoral students as well as to Master's students:

- General admission;
- GRE requirements;
- Admission to non-degree coursework;
- Auditing graduate courses;
- English requirements for international students;
- Registration procedures and status;
- Student responsibilities; and
- Academic performance.

In addition, Doctoral students are subject to the regulations that follow:

7.1 Admission to Doctoral Degrees

7.1.1 Admission to a Doctoral program normally requires a Master's degree or equivalent from a recognized institution. Admission to a Doctoral degree program requires evidence that the applicant is capable of undertaking substantial original research. Such capability will be judged partly by means of three external assessment reports sent directly to the Office of the Registrar by qualified referees.

7.1.2 Admission to a Doctoral program normally requires a Master's degree. Additional entrance standards, such as GPA requirements, may be set by individual Doctoral programs.

7.1.3 The Dean may approve the admission of an applicant to a Doctoral program without a Master's degree if the applicant has received a baccalaureate degree from a recognized institution with a cumulative GPA of at least 3.67 (A-) and has completed at least two semesters of a Master's degree program at UNBC with a cumulative GPA of at least 3.67 (A-).

7.1.4 Continuation to a Doctoral Program Students enrolled in a Master's program at UNBC may continue to a Doctoral program prior to completion of the Master's degree. Students may apply to be transferred to Doctoral status no sooner than two semesters after initial registration in the Master's program at UNBC. After a review, which must include an evaluation by the student's supervisory committee, the program will recommend to the Dean one of the following:

a. admission to the Doctoral program without completion of a Master's program;
b. admission to the Doctoral program but with concurrent completion of all requirements for a Master's degree within one semester from the date of transfer;

c. admission to the Doctoral program following completion of the requirements for the Master's degree; and
d. refusal of admission to the Doctoral program.

Students admitted to a Doctoral program under *Continuation to a Doctoral Program* must complete courses from the Master's and Doctoral programs as recommended by the existing supervisory committee and approved by the Dean.

Students admitted under *Continuation to a Doctoral Program* in Admissions and Regulations who do not complete the requirements for the Master's degree within the one semester limit will lose their status in the Doctoral program and be returned to Master's status.

Students admitted to a Doctoral program under *Continuation to a Doctoral Program* in Admissions and Regulations, but who are not continuing in the Doctoral program, may re-register as a candidate for the Master's degree, provided that work to date has met the standards of the Master's program and the candidacy examination has not been attempted.

7.1.5 No more than four full-time tuition fee units or the equivalent for part-time students will be credited in such cases towards the fees for the Doctoral program.

7.1.6 Part-time Doctoral work is not feasible in some areas because of the divergent nature of academic disciplines. Accordingly, no program is obligated to offer part-time Doctoral work.

7.2 Minimum Requirements

The minimum requirement for a Doctoral degree is 24 credit hours of coursework beyond the Master's level, or 36 credit hours of coursework beyond the baccalaureate level, and satisfactory completion of the prescribed program. Individual programs may require more credit hours of coursework.

7.3 The Dissertation

A Doctoral program requires a broad and comprehensive knowledge of the field or fields of study, such knowledge to be demonstrated through a candidacy examination. It also requires the completion of a research project culminating in a dissertation which meets the requirements and standards of graduate programs. This dissertation must contain original work, and must be a significant and original contribution to knowledge in the candidate's field(s) of study. It must contain evidence of broad knowledge of the relevant literature, and must demonstrate a critical understanding of the works of scholars eminent in the field(s) related to the dissertation. The dissertation should, in the opinion of scholars in the field(s), merit publication, in whole or in part.

The general style and form of dissertations may differ from program to program, but all dissertations must be presented in a form which constitutes a connected and continuous text. The dissertation may contain material previously published by the candidate, whether alone or in conjunction with others. Such previously published material must be fully integrated into the dissertation. In such cases, the candidate's own work must be clearly distinguished from that of other researchers. The candidate is responsible at the final oral examination for defense of the entire contents of the dissertation.

Before beginning to write the dissertation, the candidate should obtain a copy of the *Formatting Guidelines for Thesis, Dissertation and Projects* from the Office of Graduate Administration; this document specifies the academic and technical requirements necessary to ensure that the work is acceptable to the University and to the National Library of Canada.

7.4 Language Requirements

A Doctoral program may require a reading knowledge of one or more languages other than English. Language requirements will be set for individual students by their supervisory committees according to the regulations of the programs and shall as a rule be geared to the individual research requirements of each candidate. Where language requirements are set, they shall be considered part of the student's program, and must be met at the latest before the student defends the dissertation.

7.5 Course Transfer

On the recommendation of the program concerned, the Dean may accept courses taken at other recognized universities for credit towards a Doctoral program. However, at least half of the courses taken for the degree must be taken as a graduate student at UNBC.

7.6 Integrated Courses

Doctoral students will not receive degree credit for more than 6 credit hours of integrated delivery coursework (see *Integrated Delivery Graduate and Undergraduate Courses* in Admissions and Regulations).

7.7 Time Limit

The maximum time for completion given below is not intended to be the normal time for completion. It is intended to take into account a wide variety of extraordinary circumstances and events that may delay completion.

7.7.1 Normally, a student proceeding to a Doctoral degree must complete all the degree requirements within seven consecutive years (84 consecutive months) from the date of first registration in the program. If the student has

transferred from a Master's program, completion is required within seven years of the date of the first registration in the Master's program.

7.7.2 If a degree is not completed within the specified period following the first registration, the student may be withdrawn from the program. Under exceptional circumstances, time extensions may be granted by the Dean. Such requests for time extension must be made prior to the end of the semester in which the student's time limit expires.

7.7.3 A time extension is normally approved for two semesters with the expectation that all outstanding degree requirements of a student's graduate program (including the defence and dissertation corrections) are completed within this period of time. Further time extensions may be granted under exceptional circumstances. Students who fail to complete at the end of a time extension are required to withdraw from their graduate program.

7.7.4 Residency Requirement A student with a Master's degree registering in a Doctoral program must pursue studies under the direction of a faculty member as a full-time student for at least two full semesters within 24 consecutive months of initial registration.

7.8 Academic Supervision (Doctorate)

7.8.1 Supervision Each Doctoral candidate has, at the time of their application for admission, identified and gained the agreement of a member of faculty to act as supervisor. Subject to an offer of admission to the program, the agreement is approved by the Dean.

The supervisor must be aware of, and adhere to, the various and relevant university regulations; must provide guidance to the student on the nature of research, the standards required, the adequacy of the student's progress, and the quality of the student's work; and must be accessible to the student to give advice and constructive criticism.

The supervisor and student must maintain in contact through regular meetings. Supervisors who expect to be absent from the University for an extended period of time (including during sabbaticals) must make suitable arrangements (including the appointment of a temporary replacement if appropriate) with the student and the Chair of the program, or if applicable the Chair of the graduate committee for the continued supervision of the student, or must request that the program or faculty nominate another supervisor to be approved by the Dean.

A member of a supervisory committee who has an adjunct or emeritus position with UNBC cannot be the sole supervisor of a graduate student. A faculty member who leaves UNBC cannot remain as a sole supervisor for a graduate student. The Chair of the degree program is expected to ensure that a new supervisor or co-supervisor is appointed from existing faculty. All such changes require the approval of the Dean who may recommend further changes of the supervisor or supervisory committee.

7.8.2 Supervisory Committee Each student has a supervisory committee nominated by the Chair of the program, or if applicable, the Chair of the graduate committee and approved by the Dean. The Chair of this committee will be the supervisor.

The duties of the committee include recommending a program of study chosen in conformity with degree program requirements, supervising the dissertation, and participating in a final oral examination. The committee may conduct other examinations, and recommends to the Dean whether or not a degree shall be awarded to the candidate.

The composition of the Doctoral supervisory committee is at least four members, including the academic supervisor. At least one member of the committee must be from outside the program in which the candidate's research is being carried out.

7.9 Doctoral Candidacy Examination

Within two years of registration as a Doctoral candidate and at least six months before the final oral examination, a student must pass a candidacy examination. The purpose of this examination is to test the student's understanding of material considered essential to the completion of the degree, and to test the student's competence to conduct the research which will culminate in the dissertation. The candidacy examination may be written or oral, or both, at the discretion of the program. Individual graduate programs or supervisory committees may also require other examinations in addition to the candidacy examination. Examples of such examinations would be those to test competence in languages other than English, in statistics, in computing, or in other research skills. In some graduate programs there may be comprehensive examinations to be completed before the candidacy examinations, to test knowledge in the field. The candidacy examination is a degree requirement, and cannot be waived by any graduate program. However, the form, content, and administration of such examinations are determined by the individual graduate programs. While there may be wide variety in the content of candidacy examinations, the manner in which the examinations are constructed, conducted, and evaluated must be consistent within individual graduate programs.

Graduate programs are responsible for providing students with a written statement of procedures, requirements, and regulations governing candidacy examinations. This information must be provided to Doctoral students at their initial registration and must be on file with the Dean.

Students who fail any components of the candidacy exam may be allowed a second attempt to pass the outstanding

components. Normally, the second attempt takes place within a six-month period from the date of the first examination, as set by the graduate program. Failure of the second attempt results in the student being required to withdraw from the program.

7.10 Final Oral Examinations (Doctorate)

All Doctoral programs require a final oral examination. The regulations for such examinations are the same as for Master's programs, except as noted below.

7.10.1 Formation of the Examining Committee The final oral examining committee for the Doctoral degree shall consist of the Chair, the supervisory committee, and an external examiner from outside the university. Minimum required attendance for a defence, either in person or virtually, must include the Chair, the student, supervisor (or one of the co-supervisors), the external examiner, and one committee member. The Dean appoints the Chair, normally a tenured member of the faculty at the associate professor level or higher with extensive experience in graduate programs, or a faculty Dean. The Chair must be independent of the program, student and project.

The external examiner must be a distinguished scholar with particular experience, both in the field of the dissertation research and in supervising Doctoral students.

The proposed external examiner must be in a position to review the dissertation objectively and to provide a critical analysis of the work and the presentation. It is therefore essential that the external examiner not have a current or previous association with the student, the supervisor, or the graduate program which would hinder this type of objective analysis. The external examiner should hold a PhD and an appointment with a recognized university, ideally at the associate or full professor rank, or be a recognized scholar in their field. Procedures regarding appointment of the external examiner and request for oral examination are on the Graduate Administration website.

Once the Doctoral supervisory committee members have each declared that the dissertation is of adequate substance to warrant that the student proceed to the final examination, the dissertation is sent to the external examiner. At this point no changes to the examining committee are allowed. The Dean requests that the external examiner provide an overall evaluation and a detailed report on the merits and deficiencies of the dissertation. A judgement of unsatisfactory performance by the external examiner is reviewed by the Dean, but normally constitutes a failed attempt of the dissertation defence. If the Doctoral supervisory committee members judge an unfavourable report by an external examiner to be unwarranted, they may recommend, through the graduate program Chair, engagement of a second external examiner.

Upon receipt of a favourable report from the external examiner, the candidate may proceed to the oral defence.

7.10.2 The Examination Requirements and procedures for scheduling and conducting the oral examination are available on the Graduate Administration website.

The examination is normally held at the Prince George campus. Exceptions must have the unanimous agreement of all Doctoral supervisory committee members and the student. Normally, the oral examination shall be open to all members of the UNBC community. In exceptional cases, the final oral examination may be closed, for example, when the results of the dissertation research must be kept confidential for a period of time. In such cases, the Doctoral supervisory committee members and graduate program Chair shall recommend such action to the Dean who may then approve that the final oral examination be closed to all but the examining committee and the Dean.

The oral examination shall consist of a 25- to 30-minute oral presentation by the candidate to include a summary of the salient points of the research, which is followed by the questioning and examination of the candidate by the examining committee. Guidelines and procedures for the format of the final oral examination are available on the Graduate Administration website.

The decision of the examining committee is based on the dissertation and the candidate's ability to defend their work. The committee makes a recommendation for a PASS or FAIL as previously detailed in *Results of Oral Examinations* in Admissions and Regulations. The dissertation must be passed by the external examiner and a majority of members of the examining committee. In the case of a failure for the dissertation at the PhD level, a detailed written report is prepared by the Chair and made available to the candidate and submitted to the Dean via the Graduate Administration office. A student who receives a failure on either the dissertation or the oral examination twice is required to withdraw from their Doctoral program.

The examining committee may also make recommendations regarding authority for final approval of required revisions, time limits for the completion of revisions, the necessity for a second oral examination, and any other matters.

7.11 Degree Completion and Graduation

7.11.1 The University Senate grants degrees at the end of each semester. Each candidate for a degree must complete an Application for Graduation form and must pay the graduation fees (see Fees section). Application for Graduation forms are available at the Office of the Registrar or online at www.unbc.ca/graduate-administration.

7.11.2 The deadline for completing all requirements for the degree is the final business day in April for the Convocation ceremony in May.

7.11.3 Students can be considered for the awarding of a degree only when all of the following requirements have been satisfied:

a. Completion of the program of study and meeting the grade point average requirements for the degree;
b. Submission of three final copies of the dissertation. Regulations governing proper submission are set out in the *Formatting Guidelines for Thesis, Dissertation and Projects*. Only the latest version of these instructions is valid. Students should obtain a copy from the Office of Graduate Administration or online at www.unbc.ca/graduate-administration;
c. Signing of the approval pages for the student's dissertation by the supervisor;
d. Submission of an Application for Graduation form to the Office of the Registrar and an official degree audit completed by the University; and
e. Payment of all outstanding fees. Those students who have outstanding accounts will not receive their degree parchment or be issued transcripts. Students should be aware of the semester fee payment schedule for graduate degrees (see Fees section).

Graduate General Regulations and Policies

I. Formal Relationship Between the University and Students

Upon registering and while registered in a for-credit course, program of study or audited course offered by or through the University of Northern British Columbia (UNBC), a Student enters a formal relationship with the University by which they

- acknowledge the right of the University to set acceptable standards of Academic Integrity and of Academic and Non-Academic Conduct;
- accept and agree to be subject to the University's Policies, Rules and Procedures; and
- accept the right of the University to investigate, impose discipline and determine consequences for Academic or Non-Academic Conduct found to have violated the University's standards, Policies, Rules or Procedures.

By registering to become a student at UNBC, a Student agrees to enter the formal relationship outlined above. Students are required to inform themselves of UNBC's policies, procedures, rules and regulations, and any subsequent amendments in place at the University. Please refer to the following website to access UNBC's Policies and Procedures: www.unbc.ca/policy.

II. UNBC's Core Values and Statement of Principles

1. UNBC is a place of research, teaching, and learning, where members of the University community value inclusiveness and diversity, community, integrity, and academic excellence. These values are supported through an unwavering commitment to free expression and debate in an atmosphere of respectful interactions, safety and good conduct.
2. The University is committed to reconciliation and recognizing Aboriginal Ways of Knowing within the Academy. UNBC's motto, '*En Cha Huná*, meaning "they also live," sets a foundation of respect, and reflects a shared commitment to responsibility, reciprocity and relationship in the interactions between students and the University community as a whole.
3. All members of the University community share the responsibility for the academic standards and reputation of the University. Academic integrity is founded on values of respect for knowledge, truth, scholarship and acting with honesty. Upholding academic integrity is a condition of continued membership in the University community.
4. The University strives, whenever possible, to take an educational and developmental approach to Academic and Non-Academic Misconduct, informed by knowledge and respect for mental health, well-being, cultural differences, and principles of reconciliation.
5. The University adheres to the principles of procedural fairness and natural justice in working to ensure that students, faculty and staff are aware of their applicable rights and responsibilities with respect to Academic and Non-Academic Conduct, in investigating alleged misconduct, and when taking steps to establish or impose consequences.

III. Academic Conduct and Non-Academic Conduct

UNBC is committed to creating a scholarly community characterized by free expression, open debate, critical and free inquiry, and diversity of thought and perspective; the orderly and safe enjoyment of University facilities by all members of the University community; and the proper functioning of the University and protection of University property.

The *Academic and Non-Academic Conduct Student Policy* defines students' responsibilities as academic community members, defines inappropriate student conduct, and provides procedures and outcomes to be invoked if students engage in such behaviour. Each student is responsible for their conduct that affects the University community.

A student may appeal a decision made or disciplinary measure imposed in response to a finding of Academic Misconduct. A student may appeal a suspension imposed in response to a finding of Non-Academic Misconduct. In accordance with the *University Act*, the appeal is to the Senate Committee on Student Appeals.

For more information on academic conduct and non-academic conduct and the appeals processes at UNBC visit www.unbc.ca/policy.

IV. Harassment, Discrimination and Diversity Initiatives

UNBC is committed to providing a working and learning environment in which all students, staff and faculty are treated with respect and dignity. UNBC acknowledges the right of all individuals in the University community to work

or learn without discrimination or harassment. An approved policy, available at www.unbc.ca/policy, applies to all members of the UNBC community.

V. Notification of Disclosure of Personal Information to Statistics Canada

Statistics Canada is the national statistical agency. As such, Statistics Canada carries out hundreds of surveys each year on a wide range of matters, including education.

It is essential to be able to follow students across time and institutions to understand, for example, the factors affecting enrollment demand at postsecondary institutions. The increased emphasis on accountability for public investment means that it is also important to understand 'outcomes'. In order to conduct such studies, Statistics Canada asks all colleges and universities to provide data on students and graduates. Institutions collect and provide to Statistics Canada student identification information (student's name, student ID number, Social Insurance Number), student contact information (address and telephone number), student demographic characteristics, and enrollment information.

The federal Statistics Act provides the legal authority for Statistics Canada to obtain access to personal information held by educational institutions. The information may be used for statistical purposes only, and the confidentiality provisions of the Statistics Act prevent the information from being released in any way that would identify a student.

Students may contact Statistics Canada via e-mail if they have any questions: statcan.PSIS-SIEP.statcan@canada.ca.

VI. BC Freedom of Information and Protection of Privacy Act

UNBC gathers and maintains information used for the purposes of admission, registration and other fundamental activities related to membership in the UNBC community and attendance at a public post-secondary institution in the province of British Columbia. Information provided to the University by students, and any other information placed into the student record, is protected and used in compliance with the BC Freedom of Information and Protection of Privacy Act (2014).

VII. General Academic Regulations

Note: Graduate students are directed, as well, to the Graduate Programs Admissions and Regulations section of this Calendar.

1. Purpose of Academic Regulations

UNBC is committed to high academic standards as well as to assisting students to achieve their educational goals.

The Academic Regulations provide the framework within which academic programs are completed, and offer academic guidance along the program path.

The University reserves the right to add to, to alter, or to amend these regulations at any time.

2. E-mail Communication

E-mail is one of the official means of communication between UNBC and its students. All students are assigned a UNBC e-mail address upon admission. The e-mail address assigned to a student by the University will be the only e-mail address used by UNBC for communication with students for academic and administrative purposes. Students are responsible for checking their UNBC e-mail account regularly so as to remain current with administrative and academic notifications. It is the student's responsibility to ensure that time-critical e-mail is accessed, read, and acted upon in a timely fashion. If a student chooses to forward University e-mail to another e-mail address, it is the student's responsibility to ensure that the alternate account is active.

3. Full-Time Studies

A full-time graduate student during any one of the academic semesters is one who is either enrolled in courses totalling a minimum of 6 credit hours during a single semester or working on a dissertation, thesis, project, or comprehensive examination (Master's level only) during a semester (see Graduate Programs Admissions and Regulations section).

4. Part-Time Studies

A part-time graduate student during any one of the academic semesters is one who is enrolled in courses totalling less than 6 credit hours during a single semester, and who is not working on a dissertation, thesis or project (see Graduate Programs Admissions and Regulations section).

5. Class Attendance

Students are expected to attend classes on a regular basis. Instructors may establish attendance requirements for each class. These expectations must be defined in the course syllabus.

6. Official and Unofficial Transcripts

Official transcripts are confidential and are only released on written request from the student. Transcripts issued to an

institution, company, or agency are mailed directly to their address, or held for pick-up at the Office of the Registrar in confidential envelopes marked 'Official Transcript'. Third-party requests must be accompanied by a signed authorization from the student.

Each transcript will include the student's complete record at the University. Since credit earned is determined on the results of final examinations, a transcript will not include results of mid-term examinations.

Transcripts will not be released without payment of the required transcript fee, and/or if there is an outstanding financial obligation to the University.

Requests for transcripts can be made online by using the myUNBC login link at www.unbc.ca or by completing a Transcript Request Form available online at www.unbc.ca/registrar/transcripts. There is a three business day turnaround for transcript requests.

Unofficial transcripts are available to students directly through their myUNBC Student Account.

7. Evaluation of Transcripts

The evaluation of transcripts is the responsibility of the Office of the Registrar.

8. Criminal Records Review

Under the requirements of the Criminal Records Review Act (2014), UNBC requires, as part of the application process, criminal record reviews for applicants to program areas that involve working with children or other vulnerable persons. The cost of this search is the responsibility of the student. Results which identify relevant criminal convictions may disqualify an applicant from admission into a program. Submission of a Criminal Records Search at the point of admission does not preclude either the program or provincial certification bodies from requesting a subsequent Criminal Records Search prior to field placement or professional registration.

Criminal Records Searches are requirements for the following graduate programs:

- Counselling (MEd)
- Disability Management (MA)
- Health Sciences (MSc)
- Nursing (MScN, MScN:FNP)
- Social Work (MSW)

9. Student Access to Official University Record

Students have the right to inspect their official university record, including the student file, under the supervision of a staff member and as maintained by the Office of the Registrar. Students have the right to have access to their financial assistance file, as maintained by Awards and Financial Aid under the supervision of a staff member. Assessment reports and letters of reference submitted by third parties in support of students applying to graduate programs will not be available for inspection. Students may inspect their official university record during normal office hours, and upon advance request in writing. When students inspect their original records, examination will be permitted only under conditions that will prevent alteration or mutilation. In the event of a dispute as to the accuracy of the information maintained in their official university record, a student may appeal to the Registrar.

10. Registration After the Published Revision Deadline Date

No graduate student is permitted to alter their registration for any course after the last date to revise registration as published in the academic calendar, except on the express written permission of the instructor and the Dean.

11. Change of Grade after Submission of Final Grades

Except for grade changes resulting from formal Academic Appeal, any changes in final grade after the initial grade submission must be transmitted to the Office of the Registrar.

12. Repeating Courses

Graduate students may not repeat graduate courses except under exceptional circumstances and only with the approval of the Dean on the recommendation of the supervisory committee. In the event that a course is repeated, it is the second grade earned which will be used in the GPA calculation.

13. Conferral of Degrees

All students who expect to receive a credential must apply to graduate. Students are eligible to graduate at the end of each semester. All applications for graduation must be received by the Office of the Registrar before each deadline, accompanied by the appropriate (non-refundable) graduation fee.

14. Graduation Constraints

1. Students must submit their Application for Graduation Form in their final semester alongside their request for oral examination, which would normally be no later than November 1, March 1, and July 1 to graduate at the end of the September, January, and May semesters, respectively.

2. Students who have any outstanding obligation to the University are not permitted to graduate. Outstanding obligations include, but are not limited to, the following:

   - tuition fees owing;
   - library or other fines;
   - outstanding library loans;
   - outstanding equipment or other loans.

15. Grounds for Withholding Official Transcripts

In instances of non-payment of any portion of tuition, prescribed fees or University library fines and/or bills, or of delinquency in the return or replacement of University property on loan, or non-repayment of cash advances or loans, or violation of a residence contract, the University shall not permit a student to register for further courses, and shall not issue an official transcript. The above prohibitions shall be in force until such time as indebtedness to the University has been cleared to the satisfaction of the University.

16. Grading

Each course taken for academic credit is assigned a final grade at the end of the semester. The final grade for each course will be indicated by a letter grade on the student's transcript.

Grade Point Average: Grade Point Average (GPA) is a method of expressing a student's academic performance as a numerical value. Each letter grade is assigned a numerical equivalent, which is then multiplied by the credit hour value assigned to the course to produce the grade point.

Semester Grade Point Average: Semester Grade Point Average (SGPA) is computed by dividing the total number of grade points earned by the total number of credit hours taken in a semester.

Cumulative Grade Point Average: The UNBC Cumulative Grade Point Average (CGPA) expresses performance as a numerical average for all UNBC courses for all semesters completed. The CGPA is calculated by dividing the total number of grade points earned to date by the total number of credit hours undertaken to date. (Letter grades of P or W are not assigned a numerical value and are not used in calculating the GPA.) See *Repeating Courses* in Regulations and Policies for the treatment of repeated courses in GPA calculations.

The CGPA provides the numerical value used to determine good academic standing or academic probation.

Graduation Requirement: In order to graduate, a student must have the minimum CGPA required by the student's program, and also have satisfied non-course-based requirements of the program.

17. International Exchange Grading

In the case of a formal exchange, the grades from an exchange university are reported using a PASS/FAIL grading system and are not counted towards a student's UNBC CGPA.

18. Academic Distinction

Each year a very small number of students graduate with distinction. Selection criteria take into account the student's overall academic record and, as appropriate, the quality of the thesis; and are considered by the Dean's Committee on Graduate Honours. Students do not apply for graduation with distinction.

Grading System – Graduate Students

UNBC Grade Point	Letter Grade	Percentage	Definition/ Standing
4.33	A+	90 -100%	
4.00	A	85-89.9%	Excellent
3.67	A-	80-84.9%	
3.33	B+	77-79.9%	
3.00	B	73-76.9%	Good
2.67	B-	70-72.9%	

Passing grade is B- for all courses taken towards a graduate degree. Courses in which achievement is less than B- are assigned a letter grade of F. Individual programs may set higher standards.

The following are not included in academic average:

P	Passing grade	credit awarded
AEG	Aegrotat standing	credit awarded
DEF	Deferred grade	no credit awarded
W	Withdrawn	no credit awarded
WE	Withdrawn under extenuating circumstances	no credit awarded
AUD	Audit of course	no credit awarded
INP	Course, project or thesis work in progress	
NGR	No grade reported	

Calculation of Grade Point Average

The following is an example of how a student's GPA is calculated at the end of a semester:

1.	PSYC 600-4	B	3.0	4 credit hours x 3.0	= 12.00
2.	PSYC 611-3	A+	4.33	3 credit hours x 4.33	= 12.99
			Total	7 credit hours	= 24.99

Semester GPA: 24.99/7 = 3.57

19. Examinations

a. When a graduate course has a final examination, the examination shall normally be worth at least 25% of the total course marks.
b. With the exception of laboratory, clinical or practicum-based final examinations, tests worth, aggregate, more than 10% of the final grade must not be administered during the final week of classes. During the last two weeks of classes, major papers or projects must not be newly assigned.
c. Students are required to write no more than two final exams in any one 24-hour period. When a course has a final examination, it must be administered during the scheduled examination period.
d. Final exams are no longer than three hours in duration. Exceptions must be approved by the program Chair.
e. Faculty Deans may make exceptions to this policy in extraordinary cases. Such exceptions must be made at the beginning of the semester, and have the approval of the program Chair.

20. Conduct in Examinations

Students must be prepared to present appropriate identification upon entering the examination room. Appropriate identification is defined as a UNBC student card and/or some other form of photo identification acceptable to the proctor. The following regulations apply to the conduct of examinations:

a. Books, papers, or other materials or devices must not be in the possession of the student during an exam except by the express permission of the examiner and/or proctor. Specifically, without such permission, no laptop computers, mobile phone sets, handheld electronic devices or the like may be in the possession of the student in the examination room (see *Academic Misconduct* in Regulations and Policies).
b. No candidate is permitted to enter the examination room more than 30 minutes after the beginning of the examination, or permitted to leave within 30 minutes after the examination has started.
c. Candidates must not communicate in any way with other candidates in the examination room.
d. Candidates must not leave their seats, except when granted permission by the proctor.
e. Candidates must turn in all materials, including rough work, upon leaving the examination room.
f. Food and beverages other than water are not permitted in the examination room.

21. Student Access to Final Examinations

The instructor will, on request by a student, informally review the final examination with the student after the semester grade has been released.

Final examinations will be retained by the instructor for a period of one year after the examination period, after which time they may be shredded or destroyed by other acceptable means.

22. Religious Holidays/Examination Schedule

In some instances, students may find themselves, for religious reasons, unable to write a final examination on a scheduled day. If the final examination cannot be rescheduled to avoid the conflict, the student concerned shall be evaluated by other means, which may include another examination scheduled at a different time. Students must complete the appropriate form and notify the instructor(s) of a conflict at least two weeks prior to the examination period.

23. Final Examinations Missed

Satisfactory explanation, with supporting documentation as appropriate, for any final examination missed must be made by the student or designate to the Office of the Registrar within 48 hours from the time the examination was written.

Within 48 hours of receiving a submission, the Registrar (or designate) may direct the program under which the course is offered to arrange the writing of a special examination in the case of an examination which was missed.

Normally, for explanations of sickness, a doctor's certification is required.

24. Deferred Examinations and Grades

Students may apply for a deferred examination or a deferred status to complete required term work if medical or compassionate reasons prevent attendance at an examination or completion of assignments. Written application for a deferment, along with supporting documentation and written approval from the instructor and program Chair, should be received by the Office of the Registrar without exception before the date of the final examination; after that date, *Final Examinations Missed* in Regulations and Policies applies. Forms for deferred status are available to faculty from the Office of the Registrar. If a student is granted a deferral, the exam must be written or the assignment(s) completed and graded before the last day of classes in the following semester, unless prior arrangements have been made with the instructor and notification has been submitted to the Office of the Registrar. If a student is granted a deferral but does not complete the required work, or does not appear for the examination, a grade of F will be assigned. If a student's request for deferred status is refused, the instructor will submit a final grade.

25. Academic Misconduct

Any academic conduct that violates *The Academic and Non-Academic Conduct – Student Policy* is a serious offense. The formal processes set out in the following three documents: *Academic and Non-Academic Conduct – Student Policy, Academic and Non Academic Misconduct Procedures,* and *Appeals Procedures* are to be followed. For more information on student academic conduct at UNBC, visit www.unbc.ca/policy.

26. Appeals Process

All students have the natural and reasonable right to appeal grades given during the term, the final grade of a course, requirement to withdraw and decisions the University makes regarding academic and non-academic misconduct. The Senate Committee on Student Appeals is the final adjudicator in such matters. For more information on student appeals, please visit www.unbc.ca/policy.

27. Appeals Concerning Academic Relationships

Appeals may arise out of other difficulties involving the academic relationship between students and faculty members. It is sometimes necessary, for instance, for a student to change supervisors, or a student may have other difficulties with a supervisor, or a student may have difficulties of a personal nature with a faculty member. Because the personal and professional relationship between student and faculty member can become entangled, and because problems of this sort can be perceived as potentially career-threatening by a student, there is a need for a process by which a student can seek mediation and resolution in such cases. Because each case is unique, the following procedure shall be followed:

a. A student experiencing such difficulties should attempt to resolve them informally at the level of the individual instructor or the program Chair.

b. If this cannot be done, or if the nature of the problem is such that the student does not wish to attempt it, the student should seek the advice of the Dean who shall follow one of the following procedures:

   i. If the Dean thinks it advisable, the Dean shall seek to bring about a solution through informal means;
   ii. After assessing the evidence that is presented, if in the opinion of the Dean the complaint is invalid, the Dean shall advise the student of this opinion, and take no further action;
   iii. After assessing the evidence that is presented, if in the opinion of the Dean the complaint is valid but an informal solution is unlikely, or if the Dean has attempted an informal solution and has failed, they shall advise the student of this fact;
   iv. In the case of an appeal of a final grade, the student may choose not to proceed further, or the student may choose to proceed with the matter. In the latter case, the student shall make a written complaint, through the Registrar, to the Senate Committee on Student Appeals which shall consider it according to its rules of procedure.

28. University Closure/Weather

On rare occasions, the President (or designate) may elect to close the University due to inclement weather or other human or natural circumstances. In such circumstances, classes and examinations are formally cancelled and rescheduled. Assignments due on the date of the closure must be submitted on the next day that the University is open.

Academic Structure

Faculty of Business and Economics
School of Business
School of Economics

Faculty of Environment
Department of Ecosystem Science and Management
- Biology
- Forestry
- Outdoor Recreation and Tourism Management

Department of Geography, Earth and Environmental Sciences
- Environmental Science
- Geography

School of Planning and Sustainability
- Environmental Planning
- Environmental and Sustainability Studies

Faculty of Human and Health Sciences
Department of Psychology
School of Education
School of Health Sciences
School of Nursing
School of Social Work
UBC Division of Medical Sciences

Faculty of Indigenous Studies, Social Sciences and Humanities
Department of Anthropology
Department of English
Department of First Nations Studies
Department of History
Department of Global and International Studies
Department of Political Science
Interdisciplinary Studies
Northern Studies
Women's and Gender Studies

Faculty of Science and Engineering
Department of Chemistry and Biochemistry
Department of Computer Science
School of Engineering (Civil, Environmental, Integrated)
Department of Mathematics and Statistics
Department of Physics

Biochemistry (MSc Program)

Kerry Reimer, Professor Emeritus

Todd Whitcombe, Professor and Chair
Sarah Gray, Professor
Chow Lee, Professor
Geoffrey Payne, Professor
Stephen Rader, Professor
Daniel Erasmus, Associate Professor
Kendra Furber, Associate Professor
Andrea Gorrell, Associate Professor
Maggie Li, Adjunct Professor
Martha Stark, Adjunct Professor

Website: www.unbc.ca/biochemistry

Thesis and project options are available. The thesis option prepares graduate students for careers in research or further academic study by requiring the design and completion of an original research program and preparation of a thesis. The project option provides training across disciplines particularly suitable to individuals with more defined career objectives, as well as providing a mechanism for non-traditional students (e.g., working students, teachers, and professionals) to upgrade their skills.

All students must participate in the Graduate Seminar course BCMB 704-1.5 for at least two semesters during their course of studies.

Thesis Option

The Master of Science thesis option is designed for candidates who wish to develop career interests related to scientific research or who intend to pursue further academic research degrees. MSc students within the Biochemistry thesis stream are required to complete 3 credit hours of Graduate Seminar (two semesters), a minimum of 12 credit hours of approved graduate-level electives (i.e., at or above the 600 level), and a 12 credit-hour thesis (BCMB 794-12). It is expected that the electives consist of scientifically-oriented courses and that the thesis involves an independent investigation resulting in an original scientific contribution.

A maximum of 6 credit hours from independent studies can be counted towards the elective requirement. Specific details of coursework are determined by the research area undertaken by the student. The supervisory committee ensures the selection of appropriate elective courses, and may require a student to complete more than 12 elective credit hours if, for example, weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

Students are required to (a) make an oral presentation of the thesis proposal to the supervisory committee, (b) write an original thesis based on the research completed (in accordance with established UNBC guidelines), and (c) present a public oral defence of the thesis to the examining committee. All course requirements must have been satisfied prior to the oral defence.

Summary of Thesis Option

Graduate Seminar	3 credit hours
Elective Courses	12 credit hours
MSc Thesis	12 credit hours
Total Required	27 credit hours

Project Option

The Master of Science project option is designed for candidates who wish to upgrade their skills, or who are constrained in their ability to undertake a traditional research thesis. MSc students within the BCMB project stream are required to complete 3 credit hours of Graduate Seminar (two semesters), a minimum of 18 credit hours of approved electives, and a 6 credit-hour project (BCMB 793-6). Given the course-intensive nature of this option, MSc projects are limited, subject to sufficient teaching resources and a critical mass of faculty within an area of defined specialization. It is expected the electives consist of scientifically-oriented courses, and the project involves an independent investigation resulting in a scientific contribution, although this contribution need not include original research. Because of the number of courses required for this option, it is restricted to designated specializations that have been decided upon within each program area.

The 18 elective credit hours must be graduate-level study (i.e., at or above the 600 level) selected from the science courses available within the designated specialization. A maximum of 6 credit hours from independent studies can be counted towards the elective course requirement. Specific details of coursework are determined by the nature of the project undertaken by each student. The supervisory committee ensures the selection of appropriate elective courses, and may require a student to complete more than 18 credit hours if weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

In order to complete an MSc project successfully, a student is required to (a) make a presentation of the project proposal to the supervisory committee, (b) write a project report, and (c) present a public oral defence of the project to the examining committee. All core and elective course

requirements must have been satisfied prior to the oral presentation of the project.

Summary of Project Option

Graduate Seminar	3 credit hours
Elective Courses	18 credit hours
MSc Project	6 credit hours
Total Required	27 credit hours

Recommended Progression

The normal time for completion of the MSc is two academic years. While this is the recommended timeline, it may be adjusted at the discretion of the supervisory committee to suit a particular student's research and program needs.

The Graduate Seminar courses are offered during all September and January Semesters. Students are expected to enrol in a seminar course at least two times during their degree program.

Electives may be taken at any time during Years I and II. The sequencing of electives is determined by the student in discussion with the supervisory committee. Over the September and January Semesters of Year I, the student, under the direction of the supervisory committee, develops a thesis or project proposal. By the end of the second semester, the student should have successfully defended their proposal to the supervisory committee. It is expected that the student has successfully defended the thesis or completed the evaluation phase of the project by the end of Year II.

Admission Requirements

In addition to the admission application requirements outlined in *General Admission* of the Graduate Academic Calendar, acceptance to the MSc program is contingent upon the prospective student finding a member of the faculty to serve as their supervisor. Normally three letters of recommendation are required with two being from individuals who are able to comment on the applicant's academic and research potential.

Additional information about graduate admissions, including application deadlines, is available on the website unbc.ca/admissions/graduate.

Normal Time Required for Completion

Normally, the degree should be completed in two years or less. Students may take longer to complete the degree depending on their personal circumstances and the nature of their research or project involvement.

Business Administration (MBA)

Website: www.unbc.ca/commerce/mba

The MBA is recognized worldwide as the hallmark of the management professional. Graduates of the UNBC MBA program develop a well-rounded understanding of the skills needed by leaders of private and public sector organizations, and the challenges facing enterprises.

The program is designed to allow professionals to complete their degree within two years while continuing to work full-time. During the first year of the program, students are introduced to the major disciplinary areas within the field of business, including strategy, economics, accounting, finance, organizational behaviour, marketing, and operations management. This part of the program builds the broad base of knowledge and skills required by senior management.

During the second year of the program, students gain a broad understanding of the global, legal and ethical environment in which organizations operate, and of the challenges facing organizations. In the context of northern British Columbia, there are economic, social, and environmental challenges confronting small and rural communities participating in a resource-based economy. Through the development of leadership and management capabilities, the MBA Program helps the communities and organizations achieve sustainable success and prosperity in a changing and complex world.

Course participants have the opportunity to focus on individual interests during the MBA Project. Working under the supervision of a faculty member, students complete a major research project, applying relevant theory to the study of a substantial organizational problem or issue.

The MBA Program coursework normally includes work assessed on an individual and group basis. Enterprise problems are seldom completely resolved through individual effort, and group work reinforces and enhances individual ability to work within multi-disciplinary teams.

Students come to the MBA Program with diverse backgrounds, a range of social and cultural perspectives, and different industry and business experiences. The MBA Program encourages this diversity as it fosters a rich learning environment.

Admission Requirements

The number of spaces in the MBA Program each year is limited to facilitate quality interaction with faculty and to enrich learning for every student. Admission is by a selection process based on criteria described below.

In addition to the general admission requirements outlined in *General Admission* of the Graduate Academic Calendar, candidates are required to provide:

- Evidence of a minimum of three years of work experience in a managerial or professional position;
- Three letters of reference from academics, colleagues, supervisors or significant clients;
- Demonstrated proficiency in English, as stipulated in *English Language Requirements* of the Graduate Programs Admissions and Regulations.

Additional information about graduate admissions, including application deadlines, is available on the website www.unbc.ca/admissions/graduate, and at the School of Business web page at www.unbc.ca/commerce. The MBA Program accepts students for the September Semester.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Exceptional Admission

Under special circumstances, candidates who either lack a formal degree or do not meet the grade point average requirements, but who have other outstanding qualifications, such as a professional designation, may be eligible for admission. For these candidates, a personal interview is required. The personal interview is designed to assess the applicant's business skills and knowledge.

Required Courses for the First Year

COMM 603-3	Business and Corporate Strategy
COMM 610-3	Accounting
COMM 620-3	Corporate Finance
COMM 632-3	Organizational Behaviour
COMM 640-3	Marketing
COMM 650-3	Operations Management
COMM 652-3	Business Analytics
COMM 690-3	Economic and Business Development
ECON 608-3	Managerial Economics

Required Courses for the Second Year

CHOOSE Option A or B

Option A

COMM 799-6 MBA Project
Five of the following:

COMM 701-3 Strategy Implementation
COMM 702-3 Sustainability Management
COMM 735-3 Law, Governance and Ethics
COMM 736-3 Human Resource Management and Industrial Relations
COMM 737-3 Leadership Practice and Development
COMM 751-3 Project Management
COMM 755-3 Management of Technology

Option B

COMM 701-3 Strategy Implementation
COMM 702-3 Sustainability Management
COMM 735-3 Law, Governance and Ethics
COMM 736-3 Human Resource Management and Industrial Relations
COMM 737-3 Leadership Practice and Development
COMM 751-3 Project Management
COMM 755-3 Management of Technology

Graduate Certificate in Change Leadership

This certificate is a subset of our full MBA program that provides students with the skills to analyse the structure of their organizations and help businesses navigate through organizational change. As organizations face dynamic changes in the business environment, the need to pivot quickly becomes a valuable skill for all employees. People with these skills are needed in a diverse set of organizations, from large government organizations to small local companies. Students in this program acquire the skills to understand their organizations, analyse issues and problems, and effect change. MBA students who complete the degree and take COMM 738-3 Change Management are also eligible for the certificate.

Requirements

COMM 632-3 Organizational Behaviour
COMM 737-3 Leadership Practice and Development
COMM 738-3 Change Management

Business Administration (MSc)

Kafui Monu, Associate Professor and Chair
Waqar Haque, Professor
Wootae Chun, Associate Professor
Balbinder Deo, Associate Professor
Karima Fredj, Associate Professor
Chengbo Fu, Associate Professor
Xin Ge, Associate Professor
Komla Avoumatsodo, Assistant Professor
Darren Brown, Assistant Professor
Leandro Freylejer, Assistant Professor
Dawit Guta, Assistant Professor
Liam Kelly, Assistant Professor

Website: www.unbc.ca/commerce/msc/master-science-business-administration-mscba

The goal of the MSc Program in Business Administration is to educate and train business professionals with advanced research skills and extensive knowledge in a specialized area, e.g., accounting, finance, human resources management/organizational behaviour, marketing, operations management/international business.

These individuals meet a growing need in Northern British Columbia and beyond for professional skills in establishing, expanding, and managing all types of business enterprises that have long-term sustainability and contribute to the economic growth and vitality of the North and the country at large. The students in the program come from a wide variety of backgrounds, including business, resource development, mathematics, and the social sciences.

The MSc is a research-based degree with a thesis and is different from the MBA degree which is a terminal and course-based degree. The MSc in Business Administration is normally completed in two years.

Admissions

To be eligible for admission, students are required to have an acceptable academic standing, i.e., a GPA of at least 3.00 (B) in the work of the last 60 credit hours, in a four-year (120 credit hours) baccalaureate degree or equivalent from a recognized institution.

The MSc in Business Administration requires students to complete graduate-level courses in statistical and research methods that in turn are grounded in undergraduate-level preparation in mathematics and statistics. Accordingly, all

students admitted to the MSc in Business Administration must have sufficient preparation in mathematics and statistics equivalent to the Bachelor of Commerce degree at UNBC. Students without the necessary undergraduate preparation are required to complete these mathematics and statistics requirements before they are admitted to the MSc Program in Business Administration.

Additionally, students applying to the MSc Program in Business Administration who hold an undergraduate degree other than the BComm must have background preparation in their chosen area of MSc specialization (e.g., accounting, finance) equivalent to that obtained through the BComm degree.

Students without the necessary undergraduate preparation in their intended specialty area must make up this requirement through undergraduate coursework before they are admitted to the MSc Program in Business Administration. Both sets of requirements (i.e., mathematics/statistics and content specialization in business) may be completed as part of a Pre-Entry Program for Admission to Graduate Studies, as set out by the Business Graduate Studies Committee and as approved by the Dean.

The Business Graduate Studies Committee may recommend a conditional offer of admission contingent on completion of additional preparatory courses, but graduate courses within the MSc Program must not be started until the pre-entry coursework is completed.

Within the MSc Program students study and research topics in one of the specialized areas of Accounting, Finance, Human Resources Management/Organizational Behaviour, Marketing, or Operations Management/International Business.

Applicants to the MSc Program must apply to one of the specialized areas within the program and the area faculty will evaluate applications against the background preparation considered necessary for specialized study within the area. Students may apply to other areas of the Business program if their area of first choice is not available.

Application deadlines are found online at www.unbc.ca/admissions/graduate. The MSc Program in Business Administration accepts students for the September Semester.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Requirements

The course of study has two major components: (1) 18 credit hours of courses to provide research methods and statistical knowledge and skills as well as substantive breadth of knowledge in business administration; and (2) 18 credit hours of courses to provide additional substantive depth in an area of specialized concentration that includes a Master's Thesis representing an original empirical investigation in the chosen specialized area of business administration.

Required Courses

COMM 662-3	Research Methodology
COMM 760-3	Seminar in Business Administration
COMM 762-3	Independent Research in Business Administration
COMM 763-12	Master's Thesis

Two graduate-level or upper-division undergraduate level courses in consultation with the student's Supervisor and approval from the Chair of the School of Business.

One of the following:

STAT 672-3	Survey Sampling Design and Analysis
STAT 673-3	Experimental Design and Analysis
STAT 675-3	Methods for Multivariate Data

The student and supervisor choose the STAT course from the above list to best fit the student's MScBA program of study.

A different graduate-level statistics course may be taken from the School of Business or other UNBC department as an alternative to STAT 672-3, STAT 673-3, or STAT 675-3. Students select required statistics courses in consultation with their supervisor and require the permission of the Chair of the School of Business.

Chemistry (MSc Program)

Kerry Reimer, Professor Emeritus

Todd Whitcombe, Professor and Chair
Erik Jensen, Professor
Chow Lee, Professor
Jianbing Li, Professor
Margot Mandy, Professor
Stephen Rader, Professor
Ron Thring, Professor
Andrea Gorrell, Associate Professor
Hossein Kazemian, Adjunct Professor

Website: www.unbc.ca/chemistry

Thesis and project options are available. The thesis option prepares graduate students for careers in research or further academic study by requiring the design and completion of an original research program and preparation of a thesis. The project option provides training across disciplines particularly suitable to individuals with more defined career objectives, as well as providing a mechanism for non-traditional students (e.g., working students, teachers, and professionals) to upgrade their skills.

All students must participate in the Graduate Seminar course CHEM 714-1.5 for at least two semesters during their course of studies.

Thesis Option

The Master of Science thesis option is designed for candidates who wish to develop career interests related to scientific research or who intend to pursue further academic research degrees. MSc students within the Chemistry thesis stream are required to complete 3 credit hours of Graduate Seminar (two semesters), a minimum of 12 credit hours of approved graduate-level electives (i.e., at or above the 600 level), and a 12 credit-hour thesis (CHEM 794-12). It is expected that the electives consist of scientifically-oriented courses and that the thesis involves an independent investigation resulting in an original scientific contribution.

A maximum of 6 credit hours from independent studies can be counted towards the elective requirement. Specific details of coursework are determined by the research area undertaken by the student. The supervisory committee ensures the selection of appropriate elective courses, and may require a student to complete more than 12 elective credit hours if, for example, weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

Students are required to (a) make an oral presentation of the thesis proposal to the supervisory committee, (b) write an original thesis based on the research completed (in accordance with established UNBC guidelines), and (c) present a public oral defence of the thesis to the examining committee. All course requirements must have been satisfied prior to the oral defence.

Summary of Thesis Option

Graduate Seminar	3 credit hours
Elective Courses	12 credit hours
MSc Thesis	12 credit hours
Total Required	27 credit hours

Project Option

The Master of Science project option is designed for candidates who wish to upgrade their skills, or who are constrained in their ability to undertake a traditional research thesis. MSc students within the CHEM project stream are required to complete 3 credit hours of Graduate Seminar (two semesters), a minimum of 18 credit hours of approved electives, and a 6 credit-hour project (CHEM 793-6). Given the course-intensive nature of this option, MSc projects are limited, subject to sufficient teaching resources and a critical mass of faculty within an area of defined specialization. It is expected that the electives consist of scientifically-oriented courses, and that the project involves an independent investigation resulting in a scientific contribution, although this contribution need not include original research. Because of the number of courses required for this option, it is restricted to designated specializations that have been decided upon within each program area.

The 18 elective credit hours must be graduate-level study (i.e., at or above the 600 level) selected from the science courses available within the designated specialization. A maximum of 6 credit hours from independent studies can be counted towards the elective course requirement. Specific details of coursework are determined by the nature of the project undertaken by each student. The supervisory committee ensures the appropriate selection of elective courses, and may require a student to complete more than 18 credit hours if weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

In order to complete an MSc project successfully, a student is required to (a) make a presentation of the project proposal to the supervisory committee, (b) write a project report, and (c) present a public oral defence of the project to the examining committee. All core and elective course requirements must have been satisfied prior to the oral presentation of the project.

Summary of Project Option

Graduate Seminar	3 credit hours
Elective Courses	18 credit hours
MSc Project	6 credit hours
Total Required	27 credit hours

Recommended Progression

The normal time for completion of the MSc is two academic years. While this is the recommended timeline, it may be adjusted at the discretion of the supervisory committee to suit a particular student's research and program needs.

The Graduate Seminar courses are offered during all September and January Semesters. Students are expected to enrol in a seminar course at least two times during their degree program.

Electives may be taken at any time during Years I and II. The sequencing of electives is determined by the student in discussion with the supervisory committee. Over the September and January Semesters of Year I, the student, under the direction of the supervisory committee, develops a thesis or project proposal. By the end of the second semester, the student should have successfully defended their proposal to the supervisory committee. It is expected that the student has successfully defended the thesis or completed the evaluation phase of the project by the end of Year II.

Admission Requirements

In addition to the admission application requirements outlined in *General Admission* of the Graduate Academic Calendar, acceptance to the MSc program is contingent upon the prospective student finding a member of the faculty to serve as their supervisor. Normally, three letters of recommendation are required with two being from individuals who are able to comment on the applicant's academic and research potential.

Additional information about graduate admissions, including application deadlines, is available on the website www.unbc.ca/admissions/graduate.

Normal Time Required for Completion

Normally, the degree should be completed in two years or less. Students may take longer to complete the degree depending on their personal circumstances and the nature of their research or project involvement.

Computer Science (MSc Program)

Shahadat Hossain, Professor and Chair
Liang Chen, Professor
Waqar Haque, Professor
David Casperson, Associate Professor
Fan Jiang, Assistant Professor
Andreas Hirt, Assistant Professor
Sajal Saha, Assistant Professor
Allan Kranz, Senior Lab Instructor

Website:
www.unbc.ca/computer-science/graduate-program

Thesis and project options are available. The thesis option prepares graduate students for careers in research or further academic study by requiring the design and completion of an original research program and preparation of a thesis. The project option provides training across disciplines particularly suitable to individuals with more defined career objectives, as well as providing a mechanism for non-traditional students (e.g., working students, teachers, and professionals) to upgrade their skills.

All students must participate in the Graduate Seminar course CPSC 704-1.5 for at least two semesters during their course of studies.

Thesis Option

The Master of Science thesis option is designed for candidates who wish to develop career interests related to scientific research or who intend to pursue further academic research degrees. MSc students within the Computer Science stream are required to complete 3 credit hours of Graduate Seminar, a minimum of 12 credit hours of approved graduate-level electives (i.e., at or above the 600 level), and a 12 credit-hour thesis (CPSC 794-12). It is expected that the electives consist of scientifically-oriented courses and that the thesis involves an independent investigation resulting in a scientific contribution.

A maximum of 6 credit hours from independent studies can be counted towards the elective requirement. Specific details of coursework are determined by the research area undertaken by the student. The supervisory committee ensures the appropriate selection of elective courses, and may require a student to complete more than 12 elective credit hours if, for example, weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

Students are required to (a) make an oral presentation of the thesis proposal to the supervisory committee, (b) write an original thesis based on the research completed (in accordance with established UNBC guidelines), (c) present a public oral defence of the thesis to the examining committee. All course requirements must have been satisfied prior to the oral defence.

Summary of Thesis Option

Graduate Seminar	3 credit hours
Elective Courses	12 credit hours
MSc Thesis	12 credit hours
Total Required	27 credit hours

Project Option

The Master of Science project option is designed for candidates who wish to upgrade their skills, or who are constrained in their ability to undertake a traditional research thesis. MSc students within the Computer Science project stream are required to complete 3 credit hours of Graduate Seminar, a minimum of 18 credit hours of approved electives, and a 6 credit-hour project (CPSC 793-6). Given the course-intensive nature of this option, MSc projects are limited, subject to sufficient teaching resources and a critical mass of faculty within an area of defined specialization. It is expected that the electives consist of scientifically-oriented courses, and that the project involves an independent investigation resulting in a scientific contribution, although this contribution need not include original research. Because of the number of courses required for this option, it is restricted to designated specializations that have been decided upon within each program area. Designation of a specialization implies that sufficient resources are available to ensure that required courses within the specialization can be offered to fulfill the requirements for the degree.

The 18 elective credit hours must be graduate-level study (i.e., at or above the 600 level) selected from the science courses available within the designated specialization. A maximum of 6 credit hours from independent studies can be counted towards the elective requirement. Specific details of coursework are determined by the nature of the project undertaken by each student. The supervisory committee ensures the appropriate selection of elective courses, and may require a student to complete more than 18 credit hours if weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

In order to complete an MSc project successfully, a student is required to (a) make a presentation of the project

proposal to the supervisory committee, (b) write a project report, and (c) present a public oral defence of the project to the examining committee. All core and elective course requirements must have been satisfied prior to the oral presentation of the project.

Summary of Project Option

Graduate Seminar	3 credit hours
Elective Courses	18 credit hours
MSc Project	6 credit hours
Total Required	27 credit hours

Recommended Progression

The normal time for completion of the MSc is two academic years. While this is the recommended timeline, it may be adjusted at the discretion of the supervisory committee to suit a particular student's research and program needs.

The Graduate Seminar courses are offered during all September and January Semesters. Students are expected to enrol in a seminar course at least two times during their degree program.

Electives may be taken at any time during Years I and II. The sequencing of electives is determined by the student in discussion with the supervisory committee. Over the September and January Semesters of Year I, the student, under the direction of the supervisory committee, develops a thesis or project proposal. By the end of the second semester, the student should have successfully defended their proposal to the supervisory committee. It is expected that the student has successfully defended the thesis or completed the evaluation phase of the project by the end of Year II.

Admission Requirements

In addition to the admission application requirements outlined in *General Admission* of the Graduate Academic Calendar, acceptance to the MSc program is contingent upon the prospective student finding a member of the faculty to serve as their supervisor. Normally, at least two of the three letters of recommendation must be from individuals who are able to comment on the applicant's academic and research potential.

Additional information about graduate admissions, including application deadlines, is available on the website www.unbc.ca/admissions/graduate.

Normal Time Required for Completion

Normally, the degree should be completed in two years or less. Students may take longer to complete the degree depending on their personal circumstances and the nature of their research or project involvement.

Development Economics (MA Program)

Paul Bowles, Professor Emeritus
Fiona MacPhail, Professor Emerita

Karima Fredj, Associate Professor and Chair
Jalil Safaei, Professor
Komla Avoumatsodo, Assistant Professor
Dawit Guta, Assistant Professor
Leandro Freylejer, Assistant Professor
Muhebullah Karimada, Assistant Professor
Liam Kelly, Assistant Professor

Website: www.unbc.ca/economics

Economic development remains a critical issue for more than three-quarters of the world's population who reside in countries classified as "low income" or "middle income." The causes and consequences of economic development remain contested issues. This academic program considers the changing global, regional and national contexts for economic development; the policy lessons that can be learned from comparative studies; and the tools required to enable development economists to contribute to the development process.

Economic development cannot be studied in isolation from other dimensions of development.

An understanding of poverty, for example, requires not only economic analysis but also an understanding of the insights provided by other social and health sciences. The training of a development economist must therefore expose students to interdisciplinary approaches to development.

The Master of Arts degree in Development Economics is available on a full-time or part-time basis. Students must complete all required work to meet the degree requirements in one of the following options: coursework only, project-based, and thesis option. Normally, students are initially admitted into the coursework only option.

Admission Requirements

Applicants to the UNBC Development Economics MA program must follow the admission requirements outlined in *General Admission* of the Graduate Academic Calendar. Applicants normally should have a four-year undergraduate degree that is equivalent to a UNBC degree in Economics.

In addition to these requirements, applicants must also provide a sample of written work (usually a senior-level undergraduate essay or research paper) as part of their application.
Entrance to the MA is competitive and only applicants with a record of excellence in their undergraduate work, strong letters of academic recommendation, and strong letters of intent are considered. In their letters of intent, applicants should demonstrate evidence of interest in the MA's areas of specialization (Development Economics).

Application deadlines are found online at www.unbc.ca/admissions/graduate. The Development Economics MA Program accepts students for the September Semester.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Requirements

The course of study is composed of a minimum of 25 credit hours for the coursework only and project options and a minimum of 28 credit hours for the thesis option.

Students in the coursework only option are required to complete coursework totaling 24 credit hours plus ECON 700. Depending on academic performance, students in this option may be eligible to apply to transfer to either the project or the thesis option after they have completed their first 12 credit hours of coursework (which must include at least 9 credit hours from required courses). Students wishing to transfer to the project or thesis option must obtain the support of a supervisor and of the Program Chair. Students approved to transfer to the project option must complete any remaining required courses and produce a detailed project proposal with bibliography, and successfully defend a formal oral examination, a 9-credit-hour project of a maximum of 50 pages in length. Students approved to transfer to the thesis option must complete any remaining required courses and produce a detailed thesis proposal and successfully defend in a formal oral examination, a 12-credit-hour thesis of a maximum of 75 pages.

In addition, any student who does not, at the time of entry to the program, have a course in econometrics at the undergraduate level is required to take ECON 312-3 (Introduction to Econometrics) as part of their graduate degree program in order to meet graduate requirements. A minimum grade of B is required in such a course.

Required Courses

ECON 601-3	Global Economy and Development
ECON 604-3	Poverty, Inequality and Development
ECON 651-3	Microeconomic Theory and Applications
ECON 700-0.5	Graduate Colloquia*

ECON 710-3 Macroeconomic Policy for Development
ECON 712-3 Applied Econometrics
*All students must complete Graduate Colloquia ECON 700-0.5 twice during their course of study.

Additional requirements are based upon the option followed.

Coursework Only Option:

Nine credit hours of elective courses.

At least one of the following:

ECON 610-3	Health Economics
ECON 611-3	Cost-Benefit Analysis
ECON 625-3	Trade and the Environment
ECON 635-3	Financial Economics and Quantitative Methods

Students may take up to two of their elective courses from other graduate programs with the permission of the Chair of Economics.

Project Option:

ECON 798-9 Economics Project

Thesis Option:

ECON 799-12 Master's Thesis

Disability Management (MA Program)

Website: www.unbc.ca/health-sciences/disability-management

The program provides graduates with the knowledge and skills necessary to assist labour, management, insurance providers, employers, and employees with the development of successful work-entry or return-to-work strategies for persons with disabilities.

The program is attractive to students interested in integrating the fields of economics, community health, social work, psychology, education, and business. The combination of coursework, research, and the application of knowledge gives students a well-rounded, applied education in the field of Disability Management.

The MA in Disability Management is offered primarily as an online part-time program. A full-time, in-person option may be considered in special cases. Please see the information below and our website: www.unbc.ca/health-sciences/disability-management for additional details.

Admission

Application deadlines can be found online at www.unbc.ca/admissions/graduate.

The Disability Management MA program accepts students for the September semester.

In addition to meeting the admission application requirements outlined in *General Admission* of the Graduate Admissions and Regulations, all applicants to the Disability Management MA program are required to submit a Criminal Record Check search prior to the first day of classes in their entry semester.

Domestic applicants must supply a Criminal Record Check search result after receiving an offer of admission and before the first day of classes. The search result is not required with the application. International applicants must submit a Criminal Record Check search result provided by their local police authority upon application, and will also be required to submit a British Columbia Criminal Record Check if offered admission. The Office of the Registrar will provide instructions to domestic and international applicants who have accepted offers of admission on how to complete a British Columbia Criminal Record Check.

Program Options

Comprehensive Examination Option

The Comprehensive Examination Option consists of four components:

Core courses in Disability Management	12 credit hours
Research courses	6 credit hours
Electives	15 credit hours
Comprehensive Examination	3 credit hours
Total	36 credit hours

Thesis Option

A thesis option is also available for students who wish to pursue a research-based degree and who are able to travel to the Prince George campus to fulfill their thesis requirements. The thesis-based option is only available pending thesis supervisor availability and interest.

The Thesis Option consists of four components:

Core courses in Disability Management	12 credit hours
Research courses	6 credit hours
Electives	9 credit hours
Thesis	9 credit hours
Total	36 credit hours

Requirements

Core Courses

DISM 609-3	Professional Ethics in Health Care Management
DISM 710-3	Foundations in Disability Management
DISM 711-3	Disability Management: Legislation, Policy and Procedures
DISM 712-3	Disability Management Interventions

Other courses may be substituted or added with the approval of the student's supervisory committee.

Research Courses

Two additional courses from the following list:

EDUC 602-4	Quantitative Research Design and Data Analysis
HHSC 603-3	Community Research Methods
HHSC 703-3	Qualitative Research Approaches in Health and Human Sciences
PSYC 600-4	Univariate Statistics
PSYC 605-4	Multivariate Statistics
SOCW 609-3	Quantitative Research Methods

Other courses may be substituted or added with the approval of the student's supervisory committee.

Elective Courses

Candidates must complete a minimum of 9 credit hours from the following list:

COUN 613-3	Interpersonal Counselling Skills
DISM 798-(3-6)	Directed Studies
ECON 610-3	Health Economics
ECON 611-3	Cost-Benefit Analysis
EDUC 609-3	Aboriginal/Indigenous Learners: History, Culture, and Ways of Knowing
HHSC 602-3	Organization and Financing of Canadian Health Care
NURS 604-3	The Healing and Well-being of Indigenous Peoples
POLS 603-3	Social and Health Policy in the Context of Health and Health Care
PSYC 609-3	Health Psychology
SOCW 605-3	Community Work/Politics of Change
SOCW 698-3	Special Topics

Other courses may be substituted or added with the approval of the student's supervisory committee.

Comprehensive Examination or Thesis

DISM 796-3	Disability Management Comprehensive Examination
DISM 799-9	Disability Management Thesis

Comprehensive Examination

The comprehensive examination option of study requires the successful completion of a comprehensive examination that evaluates a candidate's knowledge of theory, research and practice in their field of study.

Thesis

An oral examination is required as per University regulations. All students taking the thesis option will be required to be in Prince George for the oral examination.

Education (MEd Program)

Tina Fraser, Professor and Chair
Lantana Usman, Professor
Catherine Whalen, Associate Professor
Hartley Banack, Assistant Professor
Shendah Benoit, Assistant Professor
Joanie Crandall, Assistant Professor
Christine Ho Younghusband, Assistant Professor
David Litz, Assistant Professor
Melanie Raymond, Senior Instructor
Gretchen Vogelsang, Lecturer

Website: www.unbc.ca/education/master-of-education

The Master of Education Program is responsible for the preparation of professional educators who may pursue advanced study at the Doctoral level and/or advanced professional employment.

As distinct from undergraduate degree programs that advance students' knowledge of their disciplines, graduate degree programs at the Master's level have the more difficult task of not only advancing students' knowledge to the point of mastery, but also preparing students to demonstrate that they are capable of advancing the knowledge of their disciplines. The MEd degree awarded under the authority of the School of Education includes the courses and supervised study necessary to meet this obligation.

Admission

Application deadlines can be found online at www.unbc.ca/admissions/graduate.

In addition to full-time students, the Education degree programs attempt to accommodate part-time students who may hold full-time jobs. For this reason, most of the Education courses are offered in the late afternoon and evening, as well as during Summer Session, so they can be accessed by persons during their annual vacation. It is recommended that students plan to make full use of the Summer Session offerings to complete their degree within the prescribed time limit. It is also recommended that students complete EDUC 601-3 (Educational Research Design and Methodology) and either EDUC 602-4 (Quantitative Research Design and Data Analysis) or EDUC 610-4 (Qualitative Analysis in Education) during the first half of their MEd program.

Requirements

Provided that such courses have not been associated with the receipt of either a degree or diploma from UNBC or another educational institution, students may apply to the Dean for up to 6 credit hours for previously completed graduate-level coursework that is equivalent to that completed in the MEd Program. Where equivalent courses have been associated previously with the receipt of either a degree or diploma, students will be permitted to elect alternative courses from the MEd Program to satisfy the requirements for the degree.

Students in an MEd Program may take up to 6 credit hours of elective coursework from UNBC programs other than that in which they are completing their specialization or from other institutions under the Western Deans' Agreement (students require permission of their Academic Supervisor and the Education Graduate Program Chair). The supervisory committee may advise thesis students to take the research seminar course, EDUC 795-3.

MEd Program Requirements

Thesis Requirement

The thesis route emphasizes academic study, research, and the successful completion of a thesis. This program route is designed to develop each student's ability to evaluate theory and practice, and conduct research that contributes to the discipline. The thesis route requires the successful completion of a minimum of 31 credit hours of graduate coursework in the Multidisciplinary Leadership specialization, or a minimum of 31 credit hours in the Special Education specialization. This requirement must include a minimum of 22 credit hours of graduate coursework in the Multidisciplinary Leadership specialization, or a minimum of 22 credit hours in the Special Education specialization and 9 credit hours of supervised research culminating in the completion of a thesis and the successful defense of it in an oral examination.

Project Requirement

The project route emphasizes the study of theory and practice, and the successful completion of an innovative research and/or development project that addresses a particular aspect of practice. This program route is designed to develop a student's ability to evaluate and improve professional practice in the discipline. The project route requires the successful completion of a minimum of 31 credit hours in the Multidisciplinary Leadership specialization, or a minimum of 31 credit hours in the Special Education specialization. This requirement must include a minimum of 25 credit hours of graduate coursework in the Multidisciplinary Leadership specialization, or a minimum of 25 credit hours in the

Special Education specialization, and 6 credit hours of supervised work, culminating in the successful completion of a project.

Comprehensive Examination Requirement

The comprehensive examination route requires the successful completion of a comprehensive examination that evaluates a candidate's knowledge of theory, research, and practice in their field of study. This program route is designed to enhance and reinforce a student's knowledge of both theory and practice, as well as their interrelationship. The comprehensive examination route requires the successful completion of a minimum of 31 credit hours graduate course credit in the Multidisciplinary Leadership specialization, or a minimum of 31 credit hours in the Special Education specialization. This requirement must include a minimum of 28 credit hours of graduate coursework in the Multidisciplinary Leadership specialization, or a minimum of 28 credit hours in the Special Education specialization, and 3 credit hours awarded upon the successful completion of a written comprehensive examination.

Application can be made to the School of Education to enter a thesis or project route after having completed at least 12 credit hours of coursework.

The research seminar course, EDUC 795-3, is strongly recommended, and may even be required, if research is to be undertaken.

Multidisciplinary Leadership (MDL)

The Multidisciplinary Leadership specialization is designed to prepare graduates to take on roles of responsibility and leadership in a number of educational and community environments. In particular, our graduates will develop skills in collaboration and communication, as well as specific leadership practices that enable the creation of positive and innovative organizational environments. At the same time, a rigorous academic focus provides the knowledge that is necessary to ground effective practice in the diverse and rich scholarship of leadership. Working from a philosophy of reflective engagement, students will be encouraged to engage in field studies that allow them to investigate the important social, economic, political, and cultural implications for contemporary forms of leadership.

The Multidisciplinary Leadership specialization requires completion of a minimum of 31 credit hours, and includes required core courses, focus area courses, elective courses, and an option of one of three routes: a comprehensive examination (3 credit hours), a project (6 credit hours), or a thesis (9 credit hours). Students will choose from one of the focus areas within the Multidisciplinary Leadership specialization. Multidisciplinary Leadership students are required to complete five core courses, required focus area courses, and a sufficient number of elective courses to meet the minimum 31 credit hour graduation requirement, including a comprehensive examination. The number of electives will vary according to the route chosen.
The Multidisciplinary Leadership specialization is divided into three focus areas: Educational Leadership, Assessment and Evaluation, and Curriculum. The focus areas share a common core of leadership and methodological courses, but beyond that are designed to allow students to prepare for leadership roles in a variety of specialized educational contexts.

Educational Leadership

The Educational Leadership focus area is designed for those individuals who want to specialize in school-based leadership. The specific management responsibilities of the school principal and the legal, economic, political, and social environment in which educational institutions operate are the central focus. Nevertheless, the scope of school leadership is more than managerial in nature, and other courses focus on the importance of building professional learning communities, accommodating diversity, the context of northern education, and creating positive learning environments that are central to effective educational leadership.

Assessment and Evaluation

The Assessment and Evaluation focus area allows for the development of strengths in the areas of quantitative data management and decision-making. Increasing levels of accountability have become a central goal of public school systems. Teachers and administrators increasingly focus on the importance of the links between assessment and effective teaching practice. This focus area emphasizes the role of assessment in school systems as well as the acquisition of the skills needed to engage in all aspects of educational research.

Curriculum

The Curriculum focus area provides students with the maximum flexibility to self-direct their Master of Education degree content to meet their own needs and interests. As such, it does not have any core courses other than those common to all focus areas. Students will be able to select course topics which reflect personal and professional interests. This third focus area will also allow students in the current "Curriculum and Instruction specialization-Language in Education" focus area to convert to the Multidisciplinary Leadership specialization should they so choose.

The course requirements and courses for the Multidisciplinary Leadership specialization appear below.

Required Core Courses

EDUC 601-3	Educational Research Design and Methodology
EDUC 606-3	Leading for Change
EDUC 609-3	Aboriginal/Indigenous Learners: History, Culture, and Ways of Knowing
EDUC 655-3	Collaboration, Communication and Community: Leaders as Community Builders
EDUC 656-3	Instructional Leadership

One of the following research courses is required; the other may be taken as elective credit:

EDUC 602-4	Quantitative Research Design and Data Analysis
EDUC 610-4	Qualitative Analysis in Education

Required Educational Leadership Focus Area Courses

Two of the following courses must be completed to meet the focus area requirements, the remaining courses may become electives.

EDUC 615-3	The School Principalship
EDUC 616-3	Policy and Politics in Public Education
EDUC 617-3	Leading for Learning: Teacher Leadership and Principal Preparation
EDUC 626-3	Inclusive Education: Learning for All

Required Assessment and Evaluation Focus Area Courses

EDUC 603-4	Advanced Quantitative Data Analysis

Required Curriculum Focus Area Courses

Selected courses to be approved by the supervisory committee.

Elective Courses

EDUC 603-4	Advanced Quantitative Data Analysis
EDUC 615-3	The School Principalship
EDUC 616-3	Policy and Politics in Public Education
EDUC 617-3	Leading for Learning: Teacher Leadership and Principal Preparation
EDUC 626-3	Inclusive Education: Learning for All
EDUC 633-3	Human Development: Implications for Education
EDUC 634-3	Achievement Motivation
EDUC 635-3	Educating Exceptional Students
EDUC 636-3	Language and Learning Disabilities
EDUC 655-3	Collaboration, Communication and Community: Leaders as Community Builders
EDUC 656-3	Instructional Leadership
EDUC 692-3	Special Topics
EDUC 693-3	Directed Reading
EDUC 795-3	Research Seminar

Thesis, Project or Comprehensive Examination

EDUC 797-3	Comprehensive Examination
EDUC 798-6	MEd Project (Research or non-research option)
EDUC 799-9	MEd Thesis

Special Education

The Special Education specialization prepares students to provide professional services and leadership in Special Education and educational programs offered in schools and other educational institutions. The program includes an integrated core of required courses, elective courses, and thesis, project, portfolio, or comprehensive examination routes.

The Special Education specialization is delivered online or by other distance technologies. It requires a minimum of 31 graduate credit hours for completion, with an option to take up to 10 additional elective credit hours. The Special Education specialization requires students to complete five required courses, and a sufficient number of elective courses to meet the minimum 31 credit hour graduation requirement including the portfolio (3 credit hours), comprehensive examination (3 credit hours), project (6 credit hours), or thesis (9 credit hours) routes.

Curriculum

Required Core Courses

EDUC 601-3	Educational Research Design and Methodology
EDUC 633-3	Human Development: Implications for Education
EDUC 635-3	Educating Exceptional Students
EDUC 636-3	Language and Learning Disabilities

One of the following research courses is required; the other may be taken as elective credit:

EDUC 602-4	Quantitative Research Design and Data Analysis
EDUC 610-4	Qualitative Analysis in Education

Choose one of the following four routes to completion: Portfolio, Comprehensive Examination, Project, or Thesis.

1. Portfolio

EDUC 796-3 Portfolio
and
a minimum of 12 credit hours of additional coursework selected from the list of electives below.

2. Comprehensive Examination

EDUC 797-3 Comprehensive Examination
and
a minimum of 12 credit hours of additional coursework selected from the list of electives below

3. Project

EDUC 798-6 MEd Project
and
a minimum of 9 credit hours of additional coursework selected from the list of electives below

4. Thesis

EDUC 799-9 MEd Thesis
and
a minimum of 6 credit hours of additional coursework selected from the list of electives below

Elective Courses[1]

One of EDUC 602-4 and EDUC 610-4 may be taken as an elective provided the other is taken as a required core course.

EDUC 609-3	Aboriginal/Indigenous Learners: History, Culture, and Ways of Knowing
EDUC 622-4	Psychoeducational Assessment
EDUC 632-3	Language Development: Implications for Education
EDUC 634-3	Achievement Motivation
EDUC 637-3	Interventions for Literacy Disorders
EDUC 638-3	Mathematic Disorders and Remediation
EDUC 639-3	School-Based Teams, Consultants, and Families
EDUC 640-3[2]	Focus on a Selected Disability
EDUC 795-3	Research Seminar (strongly recommended, and may be required by supervisor if EDUC 799 Thesis or EDUC 798 Project has been chosen for the completion route)

[1] With the approval of the Graduate Supervisor and Graduate Program Chair, a student may complete up to 6 credit hours of graduate coursework not from the above list. These elective credit hours may be other graduate-level EDUC courses, and/or from other UNBC graduate programs, and/or from other accredited Canadian universities via approved transfer agreements (e.g., Western Deans' Agreement).

[2] This course focuses in depth on educational aspects of a specific disability or range of disabilities, such as FASD, Autism Spectrum Disorder, hearing disability and deafness, or visual impairment. The courses are named specifically: e.g., Focus on Autism, Focus on FASD. A student may take this course up to two times (each time with a different focus).

Leading for Learning Graduate Certificate

The Leading for Learning Graduate Certificate is intended for those professionals who wish to receive a British Columbia Education Leadership Council approved certificate. The certificate prepares graduates to become recognized educational leaders whether in a teacher-leader or administrative-leader position. The certificate is designed to ladder into the MEd in Multidisciplinary Leadership (MDL).

Admission

Admission requirements are the same as for the MEd degree.

The Leading for Learning Graduate Certificate requires 15 credit hours of coursework – that is, five courses, two of which are required courses in the MEd Multidisciplinary Leadership (MDL) specialization, and the other three of which are part of a series of acceptable courses for the Educational Leadership Focus Area of the MDL. The certificate courses are normally offered over a four-semester cycle. While it is expected that most certificate completers will continue with completion of a Master's of Education Multidisciplinary Leadership degree, students may choose to complete only the certificate. The schedule of courses offered on most UNBC campuses allows completion of the certificate first and in the sequence of courses as follows but this is not a requirement. Variation from this schedule of courses requires the permission of the MEd MDL Coordinator and School of Education Chair. It is also possible to complete the MEd MDL without meeting all the requirements of the certificate.

Required Courses

EDUC 606-3	Leading for Change
EDUC 609-3	Aboriginal/Indigenous Learners: History, Culture, and Ways of Knowing

Plus three of the following:

EDUC 615-3	The School Principalship
EDUC 616-3	Policy and Politics in Public Education
EDUC 617-3	Leading for Learning: Teacher Leadership and Principal Preparation
EDUC 626-3	Inclusive Education: Learning for All
EDUC 656-3	Instructional Leadership

A Leadership Development Portfolio and an Inquiry Project must also be completed concurrently in order to meet requirements of the certificate.

Students already enrolled in the MEd MDL specialization may complete these courses and receive the certificate, subject to a sequence of available courses being offered by the University.

Students applying to UNBC's Master of Education Multidisciplinary Leadership specialization with a fully or partially completed graduate diploma or certificate, developed under the BC Educational Leadership Council process in conjunction with the Association of BC Deans of Education, may be eligible to receive up to 15 credit hours of transfer credit, at the discretion of the Chair of the School of Education. For each course so credited the student will be rebated the equivalent of one 3 credit-hour, non-degree graduate course fee against the student's total Master's of Education tuition.

Engineering (MASc Program)

Website: www.unbc.ca/engineering/master-applied-science-engineering

The Master of Applied Science in Engineering degree is a research-based degree with a thesis. The degree is suited to students who wish to pursue a research-based program in engineering disciplines such as, but not limited to, civil, environmental, structural, and building sciences.

MASc in Engineering students are expected to complete an original research program, culminating in the preparation of a thesis. Graduates are prepared for careers in applied research and engineering or for further academic study.

Requirements

The Master of Applied Science thesis is designed for candidates who wish to develop career interests related to applied scientific research or who intend to pursue further academic research degrees. MASc students are required to complete 3 credit hours of the ENGR 700-3 Technical Writing course, 3 credit hours of the ENGR 701-3 Graduate Seminar in Engineering course, along with 6 credit hours of mandatory courses to be selected from graduate-level methods and/or analysis courses, a minimum of 6 credit hours of approved electives, and a 12 credit-hour thesis (ENGR 790-12). It is expected that electives consist of engineering courses, and the thesis involves an independent investigation resulting in a scientific contribution.

The 6 credit hours of electives must be graduate-level study (i.e., at or above the 600 level) selected from the courses available at UNBC. A maximum of 3 credit hours from independent studies can be counted towards the elective requirement. Specific details of coursework are determined by the research area undertaken by the student. The supervisory committee ensures an appropriate selection of elective courses is taken and may require a student to complete more than 6 credit hours of electives if, for example, weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses).

As part of the MASc thesis (ENGR 790-12), students are required to (a) make an oral presentation of the thesis proposal to the supervisory committee; (b) write an original thesis based on the completed research (in accordance with established UNBC guidelines); and (c) present an oral defence of the thesis to the examining committee as per *Final Oral Examinations and Examining Committees in Admissions and Regulations*. All course requirements must have been satisfied prior to the oral defence.

ENGR 700-3 Technical Writing	3 credit hours
ENGR 701-3 Graduate Seminar in Engineering	3 credit hours
Methods and/or Analysis Courses	6 credit hours
Elective Courses	6 credit hours
ENGR 790-12 MASc Thesis	12 credit hours
Total Required for Degree	30 credit hours

Recommended Progression

The normal time for completion of the MASc is two academic years as a full-time student. While this is the recommended timeline, it may be adjusted at the discretion of the supervisory committee to suit a particular student's research and program needs.

Mandatory methods and/or analysis courses and electives may be taken at any time. The sequencing of courses is determined by the student in discussion with their supervisor and the supervisory committee. In Year 1, the student, under the direction of the supervisory committee, develops a thesis proposal. By the end of the second semester after enrollment, the student should have successfully defended their proposal to the supervisory committee. This allows the student to start the collection of data and/or preparation of experiments and models during the last semester of Year 1. Students are expected to successfully defend their thesis by the end of Year 2.

Admission, Regulations and Committee Structures

Admission Requirements

In addition to the admission application requirements outlined in *General Admission* of the Graduate Academic Calendar, applicants are required to hold a four-year Baccalaureate degree (or equivalent) from a recognized institution in engineering or related area. Acceptance to the MASc program is contingent upon prospective students finding a faculty member to serve as their supervisor.

Applicants are required to provide three letters of recommendation. Normally, at least two of the three letters, exclusive of any letter provided by an intended supervisor, must be from individuals who are able to comment on the applicant's academic and research potential.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The Master of Applied Science Program accepts students for the September, January, and May semesters.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Transfer Students

On the recommendation of the School of Engineering, the Dean of the Faculty of Science and Engineering may accept courses taken at other institutions for credit toward a UNBC graduate program. At the time of application, it is recommended applicants clearly state in a letter their intent to transfer courses and identify the courses to be considered for possible transfer.

Normal Time Required for Completion

Normally, the degree should be completed within two years. Students may take longer to complete the degree depending on their personal circumstances and the nature of their research involvement.

Committee Structure

Students are advised by a supervisory committee consisting of at least three members, including the academic supervisor who serves as the Chair of the committee. At least one committee member (in addition to the supervisor) should be a member of the UNBC School of Engineering. The committee is normally formed during the student's first semester of study.

English (MA Program)

Karin Beeler, Professor Emerita
Stan Beeler, Professor Emeritus
Dee Horne, Professor Emerita
Blanca Schorcht, Professor Emerita

Kevin Hutchings, Professor and Chair
Robert Budde, Professor
Kristen Guest, Professor
Maryna Romanets, Professor
Troy Bordun, Assistant Professor
Christine Campana, Assistant Professor
Brenna Duperron, Assistant Professor
Monica Mattfeld, Assistant Professor
Taylor Morphett, Assistant Professor

Website: www.unbc.ca/english

Literary representations both reflect and help to create our views of the world, including our social theories and practices; thus, the study of literature can provide students with insights concerning past and present concepts of personal and social identity, cultural traditions and beliefs, and interpersonal and cross-cultural relationships. Since the time of Aristotle, moreover, literary commentators have analyzed "setting" as an important formal aspect of literary writing; literary study can therefore help us to investigate, and perhaps to reconsider, our relationships to both our human and non-human environments. In today's world, where efforts to resolve intercultural conflicts and environmental problems have taken on a profound sense of urgency, literary study provides a crucial forum for intellectual and ethical debate leading to the revision of cultural practice.

The study of English literature provides students with critical skills of analysis and synthesis, helping them to identify and understand complex problems, and encouraging them to conceptualize viable resolutions and alternative understandings. Perhaps more than any other academic discipline, English literature also emphasizes the importance of literacy, including the development of effective writing and oral presentation skills, thereby providing students with the communications skills so highly valued in the professional world.

The Master of Arts degree in English is available on a full-time or part-time basis. Students may choose a course-based MA option (plus ENGL 770) or the coursework and graduate thesis option. Upon admission into the English MA program, each student is assigned a supervisor, who works closely with the student to monitor their program of study and progress. In consultation with supervisors and supervisory committee members, each student chooses courses designed to complement and inform the proposed research area, completing most of the coursework during the first year of the program. The second year is devoted primarily to the production of the thesis or, in the case of the course-based MA, to the completion of coursework and the major research paper.

Admission

Applicants to the UNBC English MA program must follow the admission requirements outlined in *General Admission* of the Graduate Academic Calendar. Entrance to the MA is competitive; only applicants with a record of excellence are admitted. Therefore, applicants must provide the following information with their applications:

- a senior-level undergraduate research paper as a writing sample;
- undergraduate transcripts;
- strong letters of academic recommendation;
- strong letter of intent;
- evidence of interest in the MA's areas of research specialization (Literature, Culture, Place);
- the name of the faculty member who is willing to supervise their thesis work or major research paper (if possible).

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The English MA program accepts students for the September Semester.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Requirements

The course of study is composed of a minimum total of 30 credit hours.

Thesis-Based MA

Students are required to complete five graduate courses (15 credit hours) plus ENGL 799-15: English MA Thesis. In the required courses, students have the opportunity to engage in close intellectual dialogue and debate with fellow graduate students and professors, thereby cultivating the productive collegial relationships crucial to a dynamic graduate student culture. With the exception of ENGL 699-3 (Advanced Independent Study in Literature, Visual Media, or Creative Writing, which faculty members supervise on an individual basis), all courses are offered as seminar courses. Students are required to produce both a detailed thesis proposal and bibliography at the beginning of their second year of study, and to defend, in a formal oral examination, a 15 credit-hour thesis of approximately 100 pages in length.

Required Courses for MA with Thesis

ENGL 690-3	Research and Professionalization
ENGL 700-3	Studies in Literature, Culture, and Place
ENGL 799-15	English MA Thesis

Plus 9 credit hours of elective courses at the 600 level.

The supervisory committee ensures the appropriate selection of elective courses. All English graduate courses approved by Senate should be considered as potential electives.

Creative Writing Thesis Option

The English Department offers a limited number of MA candidates the opportunity to complete a 15 credit-hour creative thesis in lieu of an academic thesis. Successful applicants who wish to pursue this option are admitted on the same basis and fulfill the same course and thesis requirements as other English Thesis-based MA candidates. Permission to undertake a creative thesis is at the discretion of the Department, and requires that students submit proposals along with a substantial portfolio of previous creative work (e.g., 8-10 pages of original poetry or 20-25 pages of prose such as a short story or novel excerpt, or a dramatic script or screenplay, or a combination of these genres). The proposal should outline the form, scope, and subject matter of the Creative Writing thesis. In addition, students must demonstrate some critical and theoretical awareness of the approach they plan to take for the creative thesis. The finished thesis includes an introduction of no fewer than 15 pages delineating this critical and theoretical awareness. Because of the high standards expected for the creative project and the Department's limited faculty resources in the area of creative writing, a limited number of students are permitted to undertake this alternative. Students should therefore note that admission to the MA program in English does not guarantee permission to write a creative thesis.

Course-Based MA

Course-based MA students take six graduate courses (18 credit hours), plus ENGL 770-12: Major Research Paper/Creative Project (12 credit hours). In the required courses, students have the opportunity to engage in close intellectual dialogue and debate with fellow graduate students and professors, thereby cultivating the productive collegial relationships crucial to a dynamic graduate student culture. With the exception of ENGL 699-3 (Advanced Independent Study in Literature, Visual Media, or Creative Writing, which faculty members supervise on an individual basis), all courses are offered as seminar courses. The major paper or major creative project in ENGL 770 is graded by the student's supervisor.

Required Courses for Course-Based MA

ENGL 690-3	Research and Professionalization
ENGL 700-3	Studies in Literature, Culture, and Place
ENGL 770-12	Major Research Paper/Creative Project

Plus 12 credit hours of elective courses at the 600 level.

The supervisory committee ensures the appropriate selection of elective courses. All English graduate courses approved by Senate should be considered as potential electives.

First Nations Studies (MA Program)

Margaret Anderson, Professor Emerita
Ross Hoffman, Professor Emeritus
Antonia Mills, Professor Emerita

Nancy Stevens, Associate Professor and Chair
Rheanna Robinson, Associate Professor
Daniel Sims, Associate Professor
Tara Joly, Assistant Professor
Tina Fraser, Adjunct Professor
Earl Henderson, Adjunct Professor
Travis Holyk, Adjunct Professor
Jessie King, Adjunct Professor
Tyler McCreary, Adjunct Professor
Deanna Nyce, Adjunct Professor

Website: www.unbc.ca/first-nations-studies

The UNBC MA program in First Nations Studies establishes the points of view of First Nations people and communities as the starting point for description and analysis, and contextualizes issues from this perspective. Courses orient students to question underlying assumptions of everyday study. A special emphasis is placed on creating opportunities for students to learn from and about the First Nations of the north. This program includes courses taught in First Nations communities, internships, and community-based research projects. Each student's program culminates in completion of either a thesis or major project.

In addition to the high priority given to the First Nations of northern British Columbia, offerings include topics relevant to the Aboriginal Peoples of Canada and indigenous peoples of the world. The areas of study within the program are: First Nations Issues and Approaches, emphasizing the development of theory and method for the understanding of contemporary issues; Northern Nations, which facilitates with the development of skills, knowledge, and experience in the study of the languages and cultures of northern British Columbia; and Aboriginal Health and Healing. Relationships with faculty in other graduate programs at UNBC enrich the options for interdisciplinary work in areas such as Health Sciences, Education, Political Science, Gender Studies, English, History, Environmental Studies, and Geography.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The First Nations Studies MA Program admits students for the September Semester only. Admission occurs on a two year cycle.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Requirements

Students normally complete the 30 credit hours of the MA in First Nations Studies within 36 months of entry into the program. The first 20 months of the program are devoted to coursework and the development of a research proposal for a thesis or a project. Students spend the last 16 months of the program completing their theses or projects.

In the first year of the program, all students must take the following courses:

FNST 600-3	Foundations of First Nations Studies: Theory and Practice
FNST 602-3	The Practice of Research
FNST 605-3	The State of the Discipline
FNST 650-3	Special Topics

In the second year of the program students must take FNST 795-3 Research Seminar which extends over the September and January semesters. Students must also register in either FNST 799-15 (Graduate Thesis) or FNST 797-15 (MA Project).

The classroom segment of the FNST MA program is delivered to a cohort of students, face-to-face, in a block format. The program offers two-day sessions spanning one weekend once a month, from September to April. All the students in the cohort take the same required courses, and focus on their individual coursework and their research on their own particular area of interest. In-person attendance is mandatory.

Students are expected to demonstrate a general knowledge of the Aboriginal Peoples of Canada. At a minimum, this knowledge must be comparable in scope and depth to the material covered in FNST 100-3 The Aboriginal Peoples of Canada.

Language Requirement

There are no language requirements. However, students should be aware that command of one or more languages other than English may be necessary in order to pursue particular types of research.

Gender Studies (MA Program)

Maryna Romanets, Professor and Coordinator
Kristen Guest, Professor (English)
Jacqueline Holler, Professor (Global and International Studies)
Fiona MacPhail, Professor (Economics)
Catherine Nolin, Professor (Geography)
Angèle Smith, Professor (Anthropology)
Dana Wessell Lightfoot, Professor (History)
Gabrielle Daoust, Assistant Professor (Global and International Studies)
Annie Duchesne, Assistant Professor (Psychology)
Sara Farhan, Assistant Professor (History)
Luna KC, Assistant Professor (Global and International Studies)
Loraine Lavallee, Assistant Professor (Psychology)
Theresa Healy, Adjunct Professor
Dawn Hemingway, Adjunct Professor

Website: www.unbc.ca/gender-studies

The Gender Studies MA program at UNBC offers the opportunity to work with scholars in a variety of disciplines who share a focus on women and/or gender as a category of analysis.

The program has particular strengths in areas such as gender, literature, and cultural studies; gender, history, and anthropology; gender, colonialism, and postcolonialism; gender and globalization; feminism, justice, and ethics; gender and health; and gender and international studies. Gender Studies MA students have the opportunity to design a course of study that incorporates gender- or feminism-based methodologies and interdisciplinarity while developing expertise in an area of concentration. While providing a transnational frame of reference, we also pay attention to the national and regional; students will therefore emerge from the program with both a broad analytical framework and a well-developed focus.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The Gender Studies MA Program accepts students for the September and January Semesters.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Requirements

MA with Thesis

The MA with thesis is 24 credit hours in total, normally taking up to two years.

Fifteen credit hours (five courses) plus GNDR 700-9 (Gender Studies Thesis) are required. Students may take a maximum of four courses per semester. The thesis includes a written text (maximum of 100 pages) and is defended in an oral examination. Students interested in alternative forms of presentation must obtain special permission from the Chair of the program and Dean.

MA thesis work is expected to be original, and make a substantive contribution to knowledge and the means of expressing that knowledge.

Students are required to include in their credit hours GNDR 611-3 (Contemporary Feminist Theories). Students working in the field of Social Science research are required to include in their credit hours GNDR 611-3 (Contemporary Feminist Theories) and GNDR 609-3 (Advanced Feminist Methods).

MA without Thesis

The MA with coursework only is 24 credit hours, and can be completed in one year.

Twenty-one credit hours (seven courses) plus GNDR 701-3 (Gender Studies Major Research Paper) are required. Students may take a maximum of four courses per semester. The major research paper is expected to be 30 to 40 pages, and to extend from an original research project already initiated in coursework.

Students are required to include in their credit hours GNDR 611-3 (Contemporary Feminist Theories). Students working in the field of Social Science research are required to include in their credit hours GNDR 611-3 (Contemporary Feminist Theories) and GNDR 609-3 (Advanced Feminist Methods).

Students taking either the MA with Thesis or MA without Thesis may take courses in other graduate programs with the approval of the Chair or the Coordinator of the Gender Studies Program and the Dean. The interdisciplinary component in the Gender Studies program encourages students to articulate their studies with other interdisciplinary graduate programs such as International Studies, Environmental Studies, and First Nations Studies. Students may also choose to take graduate courses in the regular disciplinary fields such as History, Biology, and Political Science.

Health Sciences (MSc Program)

For potential supervisors, please visit our website: www.unbc.ca/health-sciences

The MSc in Health Science offers a combined student-centred and community-oriented approach. The MSc strengthens students' capacity to progress their research interests and equips a new generation of researchers to understand and respond to contemporary health challenges, especially those faced by northern, rural, remote, and Indigenous communities. The interdisciplinary program provides opportunities for those interested in health within a changing health system to explore and research and to benefit from the diverse health research strengths in the School of Health Sciences and across UNBC.

Students pursue health research approaches that fit with their interests, learning from a range of research expertise spanning, but not limited to, biomedical, epidemiological, community health, and ecohealth approaches. Our students also benefit from active research partnerships across and beyond the university that create opportunities for applied and community-oriented research, with direct experience working with and learning from a range of community partners.

The research-based Master's degree equips students for a thriving career in health research (including applications for PhD programs), and is well suited for established health professionals seeking a research-oriented program that builds on existing practice and skills.

Admission

Application deadlines can be found online at www.unbc.ca/admissions/graduate.

The Health Sciences MSc program accepts students for the September Semester.

In addition to meeting the admission application requirements outlined in *General Admission* of the Graduate Admissions and Regulations, all applicants to the Health Sciences MSc program are required to submit a Criminal Record Check search prior to the first day of classes in their entry semester.

Domestic applicants must supply a Criminal Record Check search result after receiving an offer of admission and before the first day of classes; the search result is not required with the application. International applicants must submit a Criminal Record Check search result completed by their local police authority upon application, and are also required to submit a British Columbia Criminal Record Check if offered admission. The Office of the Registrar provides instructions on how to complete a British Columbia Criminal Record Check to domestic and international applicants who have accepted offers of admission.

Prerequisites

Applicants must have completed an undergraduate course in statistics or biostatistics. In addition to courses taught in departments of Mathematics or Statistics, courses that are included in social sciences programs such as psychology or sociology, and in the curricula of undergraduate health professions, meet this requirement.

Applicants must have completed an undergraduate course in research methodology. Appropriate courses include those found in social science undergraduate programs, and in the curricula of undergraduate health professions.

Requirements

Students must complete 32 credit hours, which include five courses (14 credit hours) at the graduate level, 6 credit hours of elective/additional courses, and a thesis (12 credit hours).

The following courses must be completed by ALL students as part of their program.

HHSC 601-3 Principles of Epidemiology
HHSC 700-3 Advanced Techniques in Epidemiology
or HHSC 703-3 Qualitative Research Approaches in Health and Human Sciences
or a course as chosen in consultation with the supervisory committee, and approved by the Chair of the School of Health Sciences
HHSC 795-3 Graduate Seminar in Health Sciences
HHSC 796-1 Health Research Seminar Series
PSYC 600-4 Univariate Statistics
or another graduate-level statistics course chosen in consultation with the supervisory committee, and approved by the Chair of the School of Health Sciences

Additional Course Requirements

Students must choose two courses (6 credit hours) in consultation with the supervisor.

Examples of courses taken by Health Sciences MSc students are:

BCMB 702-3 Chemical Biology Theory and Techniques
BIOL 625-3 Applied Genetics and Biotechnology
DISM 609-3 Professional Ethics in Health Care Management

ECON 610-3	Health Economics
HHSC 602-3	Organization and Financing of Canadian Health Care
HHSC 603-3	Community Research Methods
HHSC 606-3	Health Promotion
NURS 604-3	The Healing and Well-being of Indigenous Peoples
NURS 701-6	Advanced Clinical Practice Nursing
POLS 603-3	Social and Health Policy in the Context of Health and Health Care
PSYC 605-4	Multivariate Statistics
PSYC 609-3	Health Psychology
SOCW 610-3	Holistic Trauma-Informed Expressive Arts Therapies

Other courses may be substituted or added with the approval of the student's supervisory committee.

Thesis

The thesis (HHSC 790-12) is assigned 12 credit hours.

Transfer Credit

A maximum of two courses (6 credit hours) completed with at least a B standing at a recognized University may be transferred with the approval of the advisor and the Chair of the School of Health Sciences.

Health Sciences (PhD Program)

For potential supervisors, please visit our website: www.unbc.ca/health-sciences

The PhD in Health Sciences offers students the opportunity to develop an advanced level of understanding and training in any one scientific discipline, or a combination of scientific disciplines, related to human health and the processes (e.g., sociological, biological, chemical, physical) that influence human health. The PhD in Health Sciences promotes an integration of social, ethical, political, and cultural dimensions, and an understanding of basic biological, ecological and physical determinants of health. Students are expected to acquire a familiarity with the scope of disciplines that contribute to knowledge and practice in health sciences while developing expertise in a specific disciplinary area. Graduates from this program have an area of concentration, and a familiarity with other disciplines and are able to work constructively and show leadership within the increasingly complex multidisciplinary frameworks that are evolving across all parts of the health continuum.

Students must complete two mandatory interdisciplinary graduate seminar courses: HHSC 800-3 and HHSC 801-3. The seminar courses cover the areas of critical thinking, research skills development, debate and exchange of ideas on key issues important for health sciences with emphasis on specific research themes relevant to the student cohort and faculty, peer learning through presentations and peer feedback, as well as the importance of team science and communication skills, leadership, and the process of knowledge mobilization.

Students must also complete a 12 credit hour dissertation: HHSC 890-12 PhD Dissertation to the satisfaction of their committee. In addition, they must take a minimum of 6 credit hours in elective courses relevant to their area of concentration as determined by their supervisor. At the discretion of their supervisory committee, students may be required to take additional courses within their area of concentration.

Students must pass three separate assessments of their academic progress towards a PhD: a qualifying exam, a defense of the dissertation proposal, and a defense of the dissertation. The qualifying exam is tailored to ensure a cross-disciplinary aptitude and tests the student's grasp of the core interdisciplinary materials presented in the seminar series as well as core concepts of their area of concentration derived from elective coursework. The dissertation proposal defense ensures students have a grasp of their area of concentration and therefore examines the level of

knowledge within that area of concentration.
Upon successfully passing both the qualifying examination and the dissertation proposal defense, students are granted candidate status and embark upon the dissertation work under the supervision of their supervisor. Following completion of the research, candidates must defend their dissertation before an examination committee.

Summary

HHSC 800-3 Graduate Seminar I	3 credit hours
HHSC 801-3 Graduate Seminar II	3 credit hours
Elective Courses	6 credit hours
HHSC 890-12 PhD Dissertation	12 credit hours
Total Required	24 credit hours

Admission

Students are normally expected to hold a Master's degree from an accredited post-secondary institution. Normally, applicants must hold a cumulative GPA of 3.67 (A-) from the Baccalaureate and Master's degree, to be calculated over the last 30 gradable credit hours.

In addition to a completed UNBC Graduate Application Form, applicants must provide official transcripts from all post-secondary institutions attended, a statement of intent indicating the student's research interests, possible future career aspirations, and perceived fit within the Faculty mandate and research directions; three letters of reference; and a sample of written academic work. GRE scores are optional. Only students with high GPAs and innovative research interests are likely to be successful in their applications.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The Health Sciences PhD Program accepts students for the September semester.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Recommended Progression

First Year: Mandatory Interdisciplinary Seminars, Elective Graduate Courses, Qualifying Exam

During the first two semesters, students take the mandatory graduate seminar courses HHSC 800-3 and HHSC 801-3. Prior to entry into the program or in the first semester, students should consult with their supervisors about selection of elective courses.

Second Year: Area of Concentration, Defense of Dissertation Proposal

If students are required to take additional courses to address deficiencies within their area of concentration, they may select courses from relevant course offerings within the UNBC programs, or from other accredited graduate programs in other post-secondary institutions. In addition, students normally conduct some exploratory research in their area of concentration. Students in their second and third years are expected to present on their area of concentration to the interdisciplinary seminar series as an exercise in communicating their research field to a more general audience.

At the end of their coursework, PhD students normally take a qualifying exam consisting of written and oral components. The general part of the exam should demonstrate the student's ability to synthesize and extrapolate from the core interdisciplinary materials presented in the seminar courses. The specialty part of the exam assesses the student's background knowledge and familiarity with the theory and methodology associated with their dissertation topic. Students normally take the qualifying exam upon completion of the 12 credit hours of required core courses.

Once coursework is complete, students work towards finalizing a dissertation proposal, which should demonstrate academic rigour and be of publishable quality. Students are expected to present the dissertation proposal before their committee, and to demonstrate their knowledge within their area of concentration. Normally, this defense is scheduled either at the end of the third semester or at the beginning of the fourth semester of study.

Third to Fifth Year: Dissertation

Upon successful completion of coursework, and the successful completion of the qualifying exam and the defense of the dissertation proposal, the student is officially designated as a PhD candidate, and proceeds to full-time work on the dissertation under the direct supervision of the supervisor and any other designated committee members. Once the dissertation proposal has been approved by the committee, any major changes made to the dissertation proposal require further approval of the committee.

Under normal circumstances, students are expected to complete their research and the writing of the dissertation within three years of becoming a Doctoral candidate.

History (MA Program)

Theodore Binnema, Professor Emeritus
Charles Jago, Professor Emeritus
Gordon Martel, Professor Emeritus
William Morrison, Professor Emeritus
Jonathan Swainger, Professor Emeritus

Dana Wessell Lightfoot, Professor and Chair
Jacqueline Holler, Professor
Barrie Blatchford, Assistant Professor
Sara Farhan, Assistant Professor
Max Hamon, Assistant Professor

Website: www.unbc.ca/history

The Department of History offers the opportunity for graduate study leading to the MA degree. The program's regional specifications are Canada, Britain and its empire, and the Iberian world. Gender, legal, environmental, and indigenous histories are particular areas of strength. Students will be accepted subject to the availability of an appropriate supervisor.

The MA program comprises two streams. Thesis students complete 15 credit hours of graduate coursework and a 100-page thesis based on original research. Project students complete 18 credit hours of coursework and a substantial project.

Upon admission to the MA program, each student is assigned a supervisor who is responsible for the student's program and progress. There are two components to the MA program: coursework and thesis/project. Students are normally expected to complete their coursework in two semesters, and the total program in four semesters.

Admission

In addition to the admission application requirements outlined in *General Admission* of the Graduate Academic Calendar, applicants must also supply a sample of written work (thesis or paper) as part of their application.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The History MA Program accepts students for the September Semester.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-programs.

Requirements

Candidates for the MA degree must satisfy the following requirements.

Thesis or Project

HIST 750-15 MA Thesis or Project

Thesis or Project students take five graduate courses (15 credit hours) and HIST 750-15. Students are required to take HIST 700, HIST 745, and three other courses selected in consultation with the student's supervisor. With approval of their supervisors, students may take up to two courses in a related program. Students decide on their thesis or project topic, sources, and approach as part of HIST 745-3, which is normally taken in their second semester. The thesis must be based on original research, and demonstrate an understanding of historical writing and practice, as well as independent, critical thought.

Alternatively, students may complete a project of comparable weight to a thesis. Projects may include knowledge transmission, museum exhibits, documentary films, creative writing, digital history initiatives, and/or projects based on substantial historical research.

Course-Based MA

HIST 760-12 History Master's Major Research Paper

Course-based MA students take six graduate courses (18 credit hours) and HIST 760-12. Students are required to take HIST 700, HIST 745, and four other courses selected in consultation with the student's supervisor. With approval of their supervisors, students may take up to two courses in a related program.

Required Courses

HIST 700-3	Seminar in Historical Methodology and Research
HIST 745-3	Historical Methods and Approaches

Elective Courses

HIST 701-3	Themes in the History of Gender
HIST 702-3	Themes in Indigenous History
HIST 704-3	Themes in Environmental History
HIST 705-3	Themes in the History of International Relations
HIST 707-3	Themes in Cultural History
HIST 708-3	Themes in Social History
HIST 799-3	Independent Study

Integrated Wood Design (MEng Program)

Website:
www.unbc.ca/engineering/meng-integrated-wood-design

Wood is the world's most common and sustainable building material. Known for its aesthetic beauty, durability, and ease of machinability, wood is becoming the leading building material in a new paradigm of sustainable and healthy building practices. Significant renewable wood resources in British Columbia and an international wood culture provide a strong impetus for UNBC, the province, and industrial partners to develop a leading education program centered on sustainable, healthy building practices using wood.

In order to meet the needs of the profession, the Master of Engineering, Integrated Wood Design develops students' understanding of wood as a versatile and sustainable building component that can be used in applications far beyond what could be achieved using concrete and steel. Students investigate wood at the micro and macro levels and explore the science and art of designing and building wood structures.

The one-year interdisciplinary Master's program is built on four main pillars:

1. Wood Mechanics and Timber Structures: Students gain a deep understanding of wood. Starting with an understanding of the supply chain, students come to appreciate the sustainable nature of wood, its unique structure, its living nature, and its strengths and weaknesses, in relationship to other commonly used building materials.

2. Hands-on Experience: The only way to experience wood is to work with it, as it is one of the most complex building materials. Students build small-scale structures to explore the versatility and complexity of wood structures. Community or industry internships may be included.

3. Team Work: At the core of successful design teams is the ability to communicate effectively and integrate different points of view. Students undertaking this program are immersed in the science and art of design team work. Multi-disciplinary teams work together throughout the program to build effective communication skills by working with individuals with diverse backgrounds and a wide range of experts such as technical experts, professional engineers, architects, and community members.

4. Sustainability: Students study and come to appreciate a range of state-of-the-art sustainable designs and how those designs fit within the broader social and political context of sustainability.

Admission Requirements

In addition to the admission application requirements outlined in *General Admission* of the Graduate Academic Calendar, applicants are required to hold a four-year (120 credit hours) baccalaureate degree in Civil Engineering from a recognized institution.

For entry into the Master of Engineering, Integrated Wood Design degree program, students who do not meet the exemptions indicated in *English Language Requirements* in Admissions and Regulations must fulfill the English Language Requirements outlined below.

Score requirements must meet one of the following criteria:

IELTS (International English Language Testing System) score of at least 7.0 overall, with not less than 6.5 in any of the four modules;

TOEFL (Test of English as a Foreign Language) score of 100 in the internet-based test, with not less than 25 in any of the Reading, Listening, Writing or Speaking components; or equivalent other TOEFL score;

or the equivalent Master of Engineering, Integrated Wood Design level on other test score accepted by the University

Exceptional Admission

Applicants who have a four-year (120 credit-hour) baccalaureate degree (or equivalent) may be granted admission to the program if sufficient related engineering content can be demonstrated.

The Pre-Entry program as outlined in *Pre-Entry Program* in Admissions and Regulations is not applicable for applicants to gain entry to the Master of Engineering, Integrated Wood Design Program.

Requirements

IENG 611-3	Introduction to Wood as a Building Material
IENG 613-3	Wood Design I
IENG 624-3	Envelope Design
IENG 722-3	Project Design II
IENG 723-3	Wood Design II
IENG 727-3	Prefabrication and Digital Manufacturing in Wood Construction
IENG 731-6	Master of Engineering Project

Electives

Two of the following:

ENGR 639-3	Advanced Structural Fire Engineering
IENG 614-3	Engineering Vibration and Acoustics
IENG 626-3	Sustainable Design I
IENG 650-3	CAD/BIM in the Construction Industry
IENG 729-3	Structural Dynamics and Seismic Design
IENG 738-3	Finite Element Analysis and Computational Engineering

Interdisciplinary Studies (MA and MSc Programs)

IDIS Program Chair – Dr. Hartley Banack

Website: www.unbc.ca/interdisciplinary-studies

The Interdisciplinary Studies (IDIS) program covers the scope of multiple disciplines, enabling faculty from other graduate programs to participate in this program. Therefore, the IDIS Graduate Program welcomes all faculty members eligible to be supervisors to participate in the IDIS Graduate Program.

Not all advances in knowledge, or in creativity, take place within established disciplines. In fact, innovative thinking and creativity may be unleashed by diminishing, bridging, or deliberately removing the boundaries between disciplines. The University of Northern British Columbia provides two options for interdisciplinary inquiry.

The MA option in Interdisciplinary Studies is specifically designed to enable students to pursue intellectual development outside the constraints of traditional disciplines in the Humanities and Social Sciences. The MSc option in Interdisciplinary Studies is specifically designed to enable students to go beyond the constraints of traditional disciplines in the Physical and Life Sciences. Applicants interested in interdisciplinary studies should consult the Chair of the IDIS program directly for advice on which option would be most appropriate for their research interests, and on how to tailor a course of study appropriate to their interests.

The MA option in Interdisciplinary Studies is available in two forms: a course-based program and a thesis-based program. MA students are normally admitted into the course-based program. MA students wishing to transfer to a thesis-based program may apply to do so in accordance with program rules after completing 15 credit hours of coursework. The MSc in Interdisciplinary Studies is available as a thesis-based program.

The Interdisciplinary Studies MA (thesis and course-based) and MSc (thesis) programs are each composed of a minimum of 27 credit hours and can typically be completed within 24 months of study.

Applicants may undertake an Interdisciplinary Studies Program only under the following circumstances:

- Applicants to a course-based program (MA):
  - The intellectual rationale of the research paper must be interdisciplinary; that is, it must draw from at least two of the university programs described in the UNBC Graduate Calendar; and
  - The applicant has a well-conceived idea of a possible research paper topic that the applicant wishes to pursue.
- Applicants to a thesis-based program (MA and MSc):
  - The intellectual rationale for the thesis must be interdisciplinary; that is, it must draw from at least two of the university programs described in the UNBC Graduate Calendar; and
  - The applicant has a well-conceived idea of the thesis topic that the applicant wishes to pursue.

Requirements

Summary of MA Course-Based Option

IDIS 704-3 Graduate Seminar	3 credit hours
Elective Courses*	21 credit hours
IDIS 797-3 Research Paper	3 credit hours
Total required	27 credit hours

Summary of MA Thesis Option

IDIS 704-3 Graduate Seminar	3 credit hours
Elective Courses*	12 credit hours
IDIS 799-12 MA Thesis	12 credit hours
Total required	27 credit hours

Summary of MSc Thesis Option

IDIS 704-3 Graduate Seminar	3 credit hours
Elective Courses*	12 credit hours
IDIS 798-12 MSc Thesis	12 credit hours
Total required	27 credit hours

***Note:** Elective courses must be selected across two or more academic disciplines offered at UNBC. Students may not take all courses, nor all but one course, from the same program. Selection of these courses is normally undertaken with the assistance of a student's program supervisor and supervisory committee. Additional coursework may be required at the discretion of the student's supervisor and supervisory committee.

Steps to Take in Arranging an Interdisciplinary Graduate Program

All applicants wishing to enter the MA (thesis or course-based) programs or MSc program, require a supervisor willing and able to oversee their research.

To assist in the preparation of the needed documentation, applicants should follow these steps:

1. Determine that you meet the general graduate admission requirements at the University of Northern British Columbia by reviewing the admission requirements in the calendar. See Graduate Programs Admissions and Regulations;
2. Determine that your research topic is interdisciplinary in nature;
3. Consult the graduate advisors from the academic units relevant to your proposal to obtain specific information on course requirements and prerequisites;
4. Prepare a one-page research statement to give to potential supervisors (for assistance, see the section on Guidelines for Preparing a Research Proposal presented below);
5. Select/confirm potential supervisors using the faculty listings in the University Calendar as well as the program websites. Arrange meetings or contact supervisors whose research interests are similar to your own. Choose only the appropriate contacts;
6. Program willingness to participate in your academic program is required, necessitating signatures on the Interdisciplinary Graduate Program Proposal Coversheet as follows:
    - Student applicant signs form and gives it to the Supervisor who then obtains signatures from the Supervisor's Chair, the Interdisciplinary Studies Program Chair, and the Dean of the Faculty of Indigenous Studies, Social Sciences, and Humanities (FISSSH).
7. Submit your completed Application for Admission and the Interdisciplinary Graduate Program Proposal Coversheet, along with your research statement, to the Graduate Administration Office; and
8. Arrange for official transcripts and three reference letters (at least two of the letters are to be academic) to be sent directly to the Office of the Registrar.

Admission

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The Interdisciplinary Studies MA (course-based and thesis) and MSc Program accepts students for the September, January, and May Semesters.

For additional information about graduate admissions, or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Students seeking admission to the Interdisciplinary Studies Program should apply directly to the Office of the Registrar.

Guidelines for Preparing a Research Proposal for an Interdisciplinary Program

In the one-page research statement, you must identify the topic you wish to research and your supervisor. Please include rationale for choosing this particular supervisor. You also must explain why your research requires an interdisciplinary approach.

The guidelines that follow are designed to assist you in preparing a properly documented application. You should put together an outline of your ideas, so that you can share this with potential supervisors. Once you have the agreement of a potential supervisor, you can seek their assistance in refining and completing the application.

I. Research Statement

1. Please specify the working title of your research. This should describe the topic and its key elements (e.g., time period, place, texts/authors, research methods, etc.).
2. Provide a statement of your research question(s) or research objective(s). The statement should be a clear, brief description of the topic area, with emphasis on the particular issue or question to be investigated. Make sure to define terms and use language accessible to a non-specialist audience.
3. Identify what makes your research statement interdisciplinary.
    - Identify the academic courses and the experiences that have prepared you to undertake the proposed research project. Include information on skills obtained (e.g., language or technology) or community connections you may have that will help you succeed in your proposed program of study.
    - Specify the prospective courses that you wish to include in your program of study.
4. For students applying to a thesis-based program, consider the members of your proposed supervisory committee and the relevant expertise they will bring to the project.

Any eligible faculty member at UNBC may supervise students in the Interdisciplinary Studies Program.

Specialization in Métis and Canadien Studies

This specialization within the Interdisciplinary MA (thesis and course-based) program provides students with the means to pursue a detailed analysis of the social and cultural history of British Columbia and adjacent territories to better understand the history of Métis and Canadiens in the province, country, and continent during and after the fur trade. Students combine expertise in a number of disciplines to better understand the past as well as contemporary communities.

International Studies (MA Program)

Graduate supervisors are normally drawn from the Departments of Economics and International Studies.

Paul Bowles, Professor Emeritus
Fiona MacPhail, Professor Emerita

Jacqueline Holler, Professor and Chair
Tristan Pearce, Professor and Canada Research Chair in Cumulative Impacts of Environmental Change
Jalil Safaei, Professor
Angèle Smith, Professor
Heather Smith, Professor
Gary Wilson, Professor
Karima Fredj, Associate Professor
Fiona MacDonald, Associate Professor
Agnieszka Pawlowska-Mainville, Associate Professor
Gabrielle Daoust, Assistant Professor
Leandro Freylejer, Assistant Professor
Luna KC, Assistant Professor
Liam Kelly, Assistant Professor

Website:
www.unbc.ca/international-studies-graduate-program

UNBC's innovative and interdisciplinary Master's degree in International Studies focuses on two of the most pressing and interlinked issues of our time: Global Development and Environment. The program draws on courses from 11 different graduate programs and is managed jointly by the Department of Economics and the Department of Global and International Studies.

Broadly understood as processes that affect people(s), regions and/or countries in the Global South and northern areas including the Arctic, global development is examined from multiple perspectives. These perspectives include those of international agencies and civil society organizations. Both mainstream and critical approaches to development studies are examined. The challenges facing the global environment and potential solutions are analysed. Interactions between global development and the environment and between local and global scales are examined.

Financial assistance in the form of teaching assistantships is available to some full-time students, in accordance with University regulations.

Requirements

All students are normally admitted into a course-based program. Students wishing to transfer to a thesis- or a research paper-based program may apply to do so in accordance with program rules after completing 12 credit hours.

Students are required to take courses that satisfy requirements as listed below in Global Development: Theory and Institutions; Research Methods; and Global Environment: Policies and Practices. Two elective courses are also required. Courses may be taken in any order.

Required Courses:

Global Development: Theory and Institutions

One of the following:

ECON 601-3	Global Economy and Development
ECON 604-3	Poverty, Inequality and Development
POLS 615-3	Comparative Northern Development

Research Methods

INTS 700-3	Research Methods in Global Studies

Global Environment: Policies and Practices

One of the following:

ANTH 613-3	Environmental Anthropology
ECON 625-3	Trade and the Environment
HIST 704-3	Themes in Environmental History
INTS 621-3	The Political Economy of Natural Resource Extraction

Electives:

Two of the following:

ANTH 601-3	Anthropological Perspectives on Inequality
ANTH 604-3	Comparative Study of Indigenous Peoples of the World
ECON 610-3	Health Economics
ECON 611-3	Cost-Benefit Analysis
ENVS 602-3	Environmental and Natural Resources Issues and Ethics
GEOG 603-3	Indigenous Geographies of Climate Resilience
GEOG 626-3	Geographies of Culture, Rights and Power
GNDR 611-3	Contemporary Feminist Theories
GNDR 613-3	Themes in Aboriginal Women's Studies
HIST 702-3	Themes in Indigenous History
POLS 613-3	Democracy and Diversity

Additional courses from the Global Development and Global Environment options can also be selected as electives.

In addition, students are required to pass:

INTS 702-0.5 Graduate Colloquia*

*All students must complete INTS 702-0.5 Graduate Colloquia twice during their program of study.

Students then complete one of the following:

i) a course-based program consisting of 9 credit hours of further graduate coursework. Students in the course-based program must complete at least 6 credit hours of coursework from the Global Development options, 6 credit hours from the Global Environment options, and have courses from at least three different subject areas;

ii) a research paper-based program consisting of 6 credit hours of further graduate coursework from all courses listed above (at least 3 credit hours of which must be from the Global Development or Global Environment options) and a 3 credit hour Research Paper;

iii) a thesis-based program consisting of a 12 credit hour thesis (INTS 799-12)

All course selections and course substitutions require Chair approval.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The International Studies MA Program accepts students for the September Semester.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Mathematics (MSc Program)

Lee Keener, Professor Emeritus

Dan Ryan, Associate Professor and Chair
Jennifer Hyndman, Professor
Kevin Keen, Professor
Pranesh Kumar, Professor
David Casperson, Associate Professor
Mohammad El Smaily, Associate Professor
Alia Hamieh, Associate Professor
Edward Dobrowoski, Assistant Professor
Chunyi Gai, Assistant Professor
Stanley Xiao, Assistant Professor
Samuel Walters, Adjunct Professor

Website: www.unbc.ca/math-statistics

Thesis and project options are available. The thesis option prepares graduate students for careers in research or further academic study by requiring the design and completion of an original research program and preparation of a thesis. The project option provides training across disciplines particularly suitable to individuals with more defined career objectives, as well as providing a mechanism for non-traditional students (e.g., working students, teachers, and professionals) to upgrade their skills.

All students must participate in a Graduate Seminar course (MATH 704-1.5) for at least two semesters during their course of studies.

Thesis Option

The Master of Science thesis option is designed for candidates who wish to develop career interests related to scientific research or who intend to pursue further academic research degrees. MSc students within the Mathematics or Statistics stream are required to complete 3 credit hours of Graduate Seminar (two semesters), a minimum of 12 credit hours of approved graduate-level electives (i.e., at or above the 600 level), and a 12 credit-hour thesis (MATH 794-12 or STAT 794-12). It is expected that the electives consist of mathematically- and/or statistically-oriented courses and the thesis involves an independent investigation resulting in an original contribution to the discipline.

A maximum of 6 credit hours from independent studies can be counted towards the elective requirement. Specific details of coursework are determined by the research area undertaken by the student. The supervisory committee ensures the selection of appropriate elective courses, and may require a student to complete more than 12 elective credit hours if, for example, weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

Students are required to (a) make an oral presentation of the thesis proposal to the supervisory committee, (b) write an original thesis based on the research completed (in accordance with established UNBC guidelines), and (c) present a public oral defence of the thesis to the examining committee. All course requirements must have been satisfied prior to the oral defence.

Summary of Thesis Option

Graduate Seminar	3 credit hours
Elective Courses	12 credit hours
MSc Thesis	12 credit hours
Total Required	27 credit hours

Project Option

The Master of Science project option is designed for candidates who wish to upgrade their skills, or who are constrained in their ability to undertake a traditional research thesis. MSc students within the project stream are required to complete 3 credit hours of Graduate Seminar (two semesters), a minimum of 18 credit hours of approved electives, and a 6 credit hour project (MATH 793-6 or STAT 793-6). Given the course-intensive nature of this option, MSc projects are limited, subject to sufficient teaching resources and a critical mass of faculty within an area of defined specialization. It is expected that the electives consist of scientifically-oriented courses, and that the project involves an independent investigation resulting in a scientific contribution, although this contribution need not include original research. Because of the number of courses required for this option, it is restricted to designated specializations that have been decided upon within each program area.

The 18 elective credit hours must be graduate-level study (i.e., at or above the 600 level) selected from the mathematics and statistics courses available within the designated specialization. A maximum of 6 credit hours from independent studies can be counted towards the elective requirement. Specific details of coursework are determined by the nature of the project undertaken by each student. The supervisory committee ensures the selection of elective courses, and may require a student to complete more than 18 credit hours if weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

In order to complete an MSc project successfully, a student is required to (a) make a presentation of the project proposal to the supervisory committee, (b) write a project report, and (c) present a public oral defence of the project

to the examining committee. All core and elective course requirements must have been satisfied prior to the oral presentation of the project.

Summary of Project Option

Graduate Seminar	3 credit hours
Elective Courses	18 credit hours
MSc Project	6 credit hours
Total Required	27 credit hours

Recommended Progression

The normal time for completion of the MSc is two academic years. While this is the recommended timeline, it may be adjusted at the discretion of the supervisory committee to suit a particular student's research and program needs.

The Graduate Seminar courses are offered during all September and January Semesters. Students are expected to enrol in a seminar course at least two times during their degree program.

Electives may be taken at any time during Years I and II. The sequencing of electives is determined by the student in discussion with the supervisory committee. Over the September and January Semesters of Year I, the student, under the direction of the supervisory committee, develops a thesis or project proposal. By the end of the second semester, the student should have successfully defended their proposal to the supervisory committee. It is expected that the student has successfully defended the thesis or completed the evaluation phase of the project by the end of Year II.

Admission Requirements

In addition to the admission application requirements outlined in *General Admission* of the Graduate Academic Calendar, acceptance to the MSc program is contingent upon the prospective student finding a member of the faculty to serve as their supervisor. Normally, three letters of recommendation are required, two being from individuals who are able to comment on the applicant's academic and research potential.

Additional information about graduate admissions, including application deadlines, is available on the website www.unbc.ca/admissions/graduate.

Normal Time Required for Completion

Normally, the degree should be completed in two years or less. Students may take longer to complete the degree depending on their personal circumstances and the nature of their research or project involvement.

Natural Resources and Environmental Studies (MA Program)

Natural Resources and Environmental Studies Graduate Program Coordinator: Dr. Zoë Meletis

ESM: Ecosystem Science and Management
GEES: Geography, Earth, and Environmental Sciences
ORTM: Outdoor Recreation and Tourism Management
SPS: School of Planning and Sustainability

Environmental Studies

Annie Booth, Professor (SPS)
David Connell, Professor (ESM)
Michael Murphy, Professor (Political Science)
Tristan Pearce, Professor and Canada Research Chair in Cumulative Impacts of Environmental Change (GEES)
Tara Lynne Clapp, Associate Professor (SPS)
Balbinder Deo, Associate Professor (Business Management)
Sinead Earley, Associate Professor (SPS)
Karima Fredj, Associate Professor (Economics)
Zoë Meletis, Associate Professor (GEES)
Philip Mullins, Associate Professor (ORTM)
Catherine Whalen, Associate Professor (Education)
Hartley Banack, Assistant Professor (Education)
Barrie Blatchford, Assistant Professor (History)
Rylan Graham, Assistant Professor (SPS)
Lauren Harding, Assistant Professor (ESM)
Loraine Lavallee, Assistant Professor (Psychology)
John Rex, Adjunct Professor (GEES)

Geography

Sarah de Leeuw, Professor and Canada Research Chair in Humanities and Health Inequities (Northern Medical Program)
Greg Halseth, Professor and Canada Research Chair in Rural and Small Town Studies (GEES)
Neil Hanlon, Professor (GEES)
Catherine Nolin, Professor (GEES)
Margot Parkes, Professor (Health Sciences and Northern Medical Program)
Tristan Pearce, Professor and Canada Research Chair in Cumulative Impacts of Environmental Change (GEES)
Roger Wheate, Professor (GEES)
Mark Groulx, Associate Professor (SPS)
Zoë Meletis, Associate Professor (GEES)
Hartley Banack, Assistant Professor (Education)
Lauren Harding, Assistant Professor (ESM)

Outdoor Recreation, Conservation and Tourism

Mark Groulx, Associate Professor (SPS)
Philip Mullins, Associate Professor (ORTM)
Catherine Whalen, Associate Professor (Education)
Hartley Banack, Assistant Professor (Education)
Barrie Blatchford, Assistant Professor (History)
Lauren Harding, Assistant Professor (ESM)
Jennifer Wigglesworth, Assistant Professor (ORTM)

Website: www.unbc.ca/nres-graduate-program

The Master of Arts in Natural Resources and Environmental Studies [MA (NRES)] offers students the opportunity to pursue studies of the social dimensions of human-environment interactions, from a community-based or regional perspective. The degree is distinguished by its focus on human perspectives on historical and contemporary resource and environmental issues. It encourages the study of the social, cultural, ethical, economic and political dynamics of resource and land use, and environmental change in northern ecosystems.

Students must choose from the following areas of study:

- Geography
- Environmental Studies
- Outdoor Recreation, Conservation and Tourism

All students must complete Graduate Colloquia NRES 701-0.5 twice during their course of studies, NRES 700-3 and a research methods course approved by their supervisor and the Chair of the NRES graduate program. These required courses will provide students with an informed, integrated base for understanding multi-faceted resource and environmental issues. Elective courses will provide students with the option to pursue their specialized interests.

Candidates must complete a minimum of 6 elective credit hours at the graduate level (i.e., at or above the 600 level) that emphasize the human dimensions of resource or environmental issues. A maximum of 3 credit hours from independent studies can be counted towards the elective requirement. Specific details of coursework are determined by the research area chosen by each student. The supervisory committee will ensure the appropriate selection of elective courses, and may require a student to complete more than 6 credit hours if weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

The MA (NRES) degree also requires students to write and defend an independent research thesis (NRES 794-12).

Summary

Core Courses	4 credit hours
Methods Course	3 credit hours
Elective Courses	6 credit hours
MA Thesis	12 credit hours
Total Required	25 credit hours

Students must meet UNBC's residency requirements.

Recommended Progression

The normal time for completion of the MA (NRES) is two academic years. While this is the recommended timeline, it may be adjusted at the discretion of the supervisory committee to suit a particular student's research and program needs.

Research in Natural Resources and Environmental Studies (NRES 700-3) is offered annually in the September Semester. Students normally enroll in this course in Year I of their program. This timing allows students to pursue their area of specialization with a methods course or elective courses during the September Semester, in order to develop an interest-specific framework within which to pose methodological questions for the thesis proposal.

The Graduate Colloquia (NRES 701-0.5) is offered during the September and January Semesters. Students are required to enroll in this course, which lasts two semesters, once during their degree program.

Electives and the required methods course may be taken at any time during Years I and II. The sequencing of electives is determined by the student in discussion with the supervisory committee. Over the September and January Semesters of Year I, the student, under the direction of the supervisory committee, develops a thesis proposal. By the end of the second semester, the student should have successfully defended the thesis proposal to the supervisory committee, allowing the student to undertake the collection of data during the summer of Year I. The student is expected to have successfully defended the thesis by the end of Year II.

Admission, Regulations and Committee Structures

Admission Requirements

In addition to the admission application requirements outlined in *General Admission* of the Graduate Academic Calendar, acceptance to the MA program will be contingent upon the prospective student finding a member of the faculty to serve as their supervisor. Applicants must also provide a completed Teaching Assistantship Application and a completed Funding Worksheet. Both forms are included with the application material for this program. Normally, at least two of the three letters of recommendation, exclusive of any letter provided by an intended supervisor, must be from individuals who are able to comment on the applicant's academic and research potential.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The Natural Resources and Environmental Studies MA Program accepts students for the September, January and May Semesters.
For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Transfer Students

On the recommendation of the program concerned, the Dean may accept courses taken at other institutions for credit toward a UNBC graduate program.

Normal Time Required for Completion

Normally, the degree should be completed in two years. Part-time students would usually take longer to complete the degree depending on their personal circumstances and the nature of their research involvement.

Committee Structure

Students will be advised by a supervisory committee consisting of at least three members, including the academic supervisor who will serve as the Chair of the committee. At least one of the committee members must be from outside the student's program. The committee will be struck during the student's first term of study.

Natural Resources and Environmental Studies (MNRES Program)

Natural Resources and Environmental Studies Graduate Program Coordinator: Dr. Zoë Meletis

ESM: Ecosystem Science and Management
GEES: Geography, Earth, and Environmental Sciences
ORTM: Outdoor Recreation and Tourism Management
SPS: School of Planning and Sustainability

Annie Booth, Professor (ESM)
David Connell, Professor (ESM)
Darwyn Coxson, Professor (ESM)
Stephen Déry, Professor (GEES)
Greg Halseth, Professor and Canada Research Chair in Rural and Small Town Studies (GEES)
Ian Hartley, Professor (ESM)
Peter Jackson, Professor (GEES)
Chris Johnson, Professor (ESM)
Jianbing Li, Professor (Engineering)
Margot Parkes, Professor (Health Sciences and Northern Medical Program)
Tristan Pearce, Professor and Canada Research Chair in Cumulative Impacts of Environmental Change (GEES)
Ellen Petticrew, Professor and FRBC Endowed Chair in Landscape Ecology (GEES)
Mark Shrimpton, Professor (ESM)
Youmin Tang, Professor (GEES)
Thomas Tannert, Professor and Canada Research Chair in Tall Wood and Hybrid Structures Engineering (Engineering)
Roger Wheate, Professor (GEES)
Tara Lynne Clapp, Associate Professor (SPS)
Sinead Earley, Associate Professor (SPS)
Jamie Gorrell, Associate Professor (ESM)
Mark Groulx, Associate Professor (SPS)
Steve Helle, Associate Professor (Engineering)
Asif Iqbal, Associate Professor (Engineering)
Eduardo Martins, Associate Professor (ESM)
Zoë Meletis, Associate Professor (GEES)
Philip Mullins, Associate Professor (ORTM)
Catherine Whalen, Associate Professor (Education)
Jianhui Zhou, Associate Professor (Engineering)
Theresa Adesanya, Assistant Professor (GEES)
Barrie Blatchford, Assistant Professor (History)
June Garcia-Becerra, Assistant Professor (Engineering)
Rylan Graham, Assistant Professor (SPS)
Fei Tong, Assistant Professor (Engineering)
Jennifer Wigglesworth, Assistant Professor (ORTM)
Lisa Wood, Associate Professor (ESM)
Wenbo Zheng, Assistant Professor (Engineering)

Website: www.unbc.ca/nres-graduate-program

The Master of Natural Resources and Environmental Studies (MNRES) is designed to integrate the complementary aspects of resource and environmental issues. It focuses on an interdisciplinary approach to melding traditional science with social science perspectives, and resource planning and management. This degree is designed to attract students with a diverse range of backgrounds and aspirations who share an interest in looking beyond traditional disciplinary boundaries.

The MNRES degree is one Master's degree route within the Natural Resources and Environmental Studies Graduate Program (the others are an MA and an MSc). The MNRES is the only one of the three degrees that fully embraces the interdisciplinary philosophy of the faculty. There are three factors that determine whether a student pursues the MNRES degree: 1) student's background; 2) elective courses undertaken at UNBC; and 3) thesis topic. Depending on individualized learning objectives, the MNRES degree allows flexibility in choosing a research emphasis in the social, planned or natural environments from an interdisciplinary perspective.

All students must complete Graduate Colloquia (NRES 701-0.5) twice during their course of studies, as well as Research in NRES (NRES 700-3), an integrated natural resources course (identified from annual course offerings), and a research methods course approved by their supervisor and the coordinator of the NRES Graduate Program. These required courses provide students with an informed, integrated base for understanding multi-faceted resource and environmental issues. Elective courses provide students with the opportunity to pursue their specialized interests within an interdisciplinary context. The MNRES degree also requires the completion of an independent research thesis (NRES 792-12) or project (NRES 793-6).

Thesis Option

Students pursuing the MNRES thesis route must write and defend an independent research thesis (NRES 792-12) which incorporates research design and implementation addressing an integrated research problem. Candidates must complete a minimum of 3 elective credit hours at the graduate level (i.e., at or above the 600 level) that emphasize an integrated approach to natural resource issues. A maximum of 3 credit hours from independent studies can be counted towards the elective requirement. Specific details of coursework are determined by the research area chosen by each student. The supervisory committee will ensure the appropriate selection of elective

courses, and may require a student to complete more than 3 credit hours if weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

Summary of Thesis Option

Core Courses		16 credit hours
	NRES 700-3	Research in Natural Resources and Environmental Studies
	NRES 701-0.5	Graduate Colloquia (taken twice)
	NRES 792-12	Master of Natural Resources and Environmental Studies Thesis
Methods Course		3 credit hours
Integrated Natural Resources Course		3 credit hours
Elective Courses		3 credit hours
Total Required		**25 credit hours**

Project Option

The project option is designed primarily for students who wish to enhance their professional career skills. Students pursuing this option must complete a project (NRES 793-6) — an extended position paper, report, or plan — that addresses a major problem or issue relevant to the field of natural resources and environmental studies. Candidates must complete a minimum of 9 credit hours of approved elective courses at graduate level (i.e., at or above the 600 level) that result in a broad, well-informed, and integrated exposure to natural resources and environmental issues. A maximum of 3 credit hours from independent studies can be counted towards the elective requirement. The supervisory committee will ensure appropriate elective course selection, and may require a student to complete more than 9 credit hours if weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

Students are required to pass an evaluation of the project set by the supervisory committee.

Summary of Project Option

Core Courses		10 credit hours
	NRES 700-3	Research in Natural Resources and Environmental Studies
	NRES 701-0.5	Graduate Colloquia (taken twice)
	NRES 793-6	Master of Natural Resources and Environmental Studies Project
Methods Course		3 credit hours
Integrated Natural Resources Course		3 credit hours
Elective Courses		9 credit hours
Total Required		**25 credit hours**

Recommended Progression

The normal time for completion of the MNRES is two academic years. While two years is the recommended timeline, it may be adjusted at the discretion of the supervisory committee to suit a particular student's research and program needs.

Research in Natural Resources and Environmental Studies (NRES 700-3) is offered annually in the September Semester. Students will normally enroll in this course in Year I of their program. This timing allows students to pursue their area of specialization with method course or elective courses during the September Semester, in order to develop an interest-specific framework within which to pose methodological questions for the thesis or project proposal.

The Graduate Colloquia (NRES 701-0.5), taken twice, is offered during the September and January Semesters. The electives, methods course, and integrated natural resource course are recommended to be taken at any time during Years I and II. The sequencing of courses is determined by the student in discussion with the supervisory committee.

Over the September and January Semesters of Year I, the student, under the direction of the supervisory committee, develops a thesis or project proposal. By the end of the second semester, the student should have successfully defended the thesis or project proposal to the supervisory committee, allowing the student to undertake the collection of data during the summer of Year I. The student is expected to have successfully defended the thesis by the end of Year II.

Admission, Regulations and Committee Structures

Admission Requirements

In addition to the admission application requirements outlined in *General Admission* of the Graduate Academic Calendar, acceptance to the MNRES program is contingent upon the prospective student finding a member of the faculty to serve as their supervisor. Applicants must also provide a completed Teaching Assistantship Application and a completed Funding Worksheet. Both forms are included with the application material for this program. Normally, at least two of the three letters of recommendation, exclusive of any letter provided by an intended supervisor, must be from individuals who are able to comment on the applicant's academic and research potential.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The Natural Resources and Environmental Studies MNRES Program accepts students for the September, January and May Semesters.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Transfer Students

On the recommendation of the program, the Dean may accept courses taken at other institutions for credit toward a UNBC graduate program.

Normal Time Required for Completion

Normally, the degree should be completed in two years. Part-time students may take longer to complete the degree depending on their personal circumstances, and the nature of their research involvement.

Committee Structure

Students are advised by a supervisory committee consisting of at least three members, including the academic supervisor who serves as the Chair of the committee. At least one of the committee members must come from outside the student's program. The committee is struck during the student's first term of study.

Natural Resources and Environmental Studies (MSc Program)

Natural Resources and Environmental Studies Graduate Program Coordinator: Dr. Zoë Meletis

ESM: Ecosystem Science and Management
GEES: Geography, Earth, and Environmental Sciences
ORTM: Outdoor Recreation and Tourism Management
SPS: School of Planning and Sustainability

Biology

Darwyn Coxson, Professor (ESM)
Russell Dawson, Professor (ESM)
Ché Elkin, Professor, and FRBC/Slocan Endowed Chair in Mixedwood Ecology and Management (ESM)
Dezene Huber, Professor (ESM)
Christopher Johnson, Professor (ESM)
Nicola Koper, Professor (ESM)
Brent Murray, Professor (ESM)
Ken Otter, Professor (ESM)
Ellen Petticrew, Professor and FRBC Endowed Chair in Landscape Ecology (GEES)
Deborah Roberts, Professor (Engineering)
Mark Shrimpton, Professor (ESM)
Oscar Venter, Professor and FRBC/West Fraser Endowed Chair in Conservation Solutions (ESM)
Erin Baerwald, Associate Professor (ESM)
Heather Bryan, Associate Professor, and Ian McTaggart Cowan Muskwa-Kechika Research Professor (ESM)
Daniel Erasmus, Associate Professor (ESM)
Jamie Gorrell, Associate Professor (ESM)
Jasmine Janes, Associate Professor (ESM)
Eduardo Martins, Associate Professor (ESM)
Roy Rea, Associate Professor (ESM)
Lisa Wood, Associate Professor (ESM)
Samuel Bartels, Assistant Professor (ESM)
Jonathan Cale, Assistant Professor (ESM)
Erin Crockett, Assistant Professor (ESM)
Michael Preston, Assistant Professor (ESM)
Diogo Spinola, Assistant Professor (ESM)
Jacob Walsh, Assistant Professor (Chemistry)
Tom Pypker, Adjunct Professor (ESM)

Environmental Science

Annie Booth, Professor (ESM)
Darwyn Coxson, Professor (ESM)
Stephen Déry, Professor, and Rio Tinto Research Chair in Climate Change and Water Security (GEES)
Mauricio Dziedzic, Professor (Engineering)
Ché Elkin, Professor and FRBC/Slocan Endowed Chair in Mixedwood Ecology and Management (ESM)
Peter Jackson, Professor (GEES)
Jianbing Li, Professor (Engineering)
Brian Menounos, Professor (GEES)
Philip Owens, Professor, and FRBC Endowed Chair in Landscape Ecology (GEES)
Tristan Pearce, Professor and Canada Research Chair in Cumulative Impacts of Environmental Change (GEES)
Ellen Petticrew, Professor and FRBC Endowed Chair in Landscape Ecology (GEES)
Deborah Roberts, Professor (Engineering)
Jueyi Sui, Professor (Engineering)
Youmin Tang, Professor (GEES)
Thomas Tannert, Professor and Canada Research Chair in Tall Wood and Hybrid Structures Engineering (Engineering)
Ron Thring, Professor (Engineering)
Oscar Venter, Professor and FRBC/West Fraser Endowed Chair in Conservation Solutions (ESM)
Todd Whitcombe, Professor (Chemistry)
Karima Fredj, Associate Professor (Economics)
Steve Helle, Associate Professor (Engineering)
Hossein Kazemian, Associate Professor (GEES)
Eduardo Martins, Associate Professor (ESM)
Joseph Shea, Associate Professor (GEES)
Theresa Adesanya, Assistant Professor (GEES)
Faran Ali, Assistant Professor (GEES)
Erin Crockett, Assistant Professor (ESM)
June Garcia-Becerra, Assistant Professor (Engineering)
Oliver Iorhemen, Assistant Professor (Engineering)
Siraj ul Islam, Assistant Professor (GEES)
Michael Preston, Assistant Professor (ESM)
Jacob Walsh, Assistant Professor (Chemistry)
Wenbo Zheng, Assistant Professor (Engineering)
Tom Pypker, Adjunct Professor (ESM)

Forestry

Ché Elkin, Professor and FRBC/Slocan Endowed Chair in Mixedwood Ecology and Management (ESM)
Ian Hartley, Professor (ESM)
Dezene Huber, Professor (ESM)
Christopher Johnson, Professor (ESM)
Thomas Tannert, Professor and Canada Research Chair in Tall Wood and Hybrid Structures Engineering (Engineering)
Ron Thring, Professor (Engineering)
Oscar Venter, Professor and FRBC/West Fraser Endowed Chair in Conservation Solutions (ESM)
Roger Wheate, Professor (GEES)
Erin Baerwald, Associate Professor (ESM)
Asif Iqbal, Associate Professor (Engineering)
Roy Rea, Associate Professor (ESM)
Lisa Wood, Associate Professor (ESM)
Jianhui Zhou, Associate Professor (Engineering)
Theresa Adesanya, Assistant Professor (GEES)
Samuel Bartels, Assistant Professor (ESM)
Jonathan Cale, Assistant Professor (ESM)
Erin Crockett, Assistant Professor (ESM)
Diogo Spinola, Assistant Professor (ESM)
Fei Tong, Assistant Professor (Engineering)
Jacob Walsh, Assistant Professor (Chemistry)
Violet Zhao, Assistant Professor (ESM)
Wenbo Zheng, Assistant Professor (Engineering)
Tom Pypker, Adjunct Professor (ESM)

Geography

Stephen Déry, Professor, and Rio Tinto Research Chair in Climate Change and Water Security (GEES)
Peter Jackson, Professor (GEES)
Brian Menounos, Professor (GEES)
Philip Owens, Professor and FRBC Endowed Chair in Landscape Ecology (GEES)
Margot Parkes, Professor (Health Sciences and Northern Medical Program)
Tristan Pearce, Professor and Canada Research Chair in Cumulative Impacts of Environmental Change (GEES)
Ellen Petticrew, Professor and FRBC Endowed Chair in Landscape Ecology (GEES)
Jueyi Sui, Professor (Engineering)
Youmin Tang, Professor (GEES)
Roger Wheate, Professor (GEES)
Joseph Shea, Associate Professor (GEES)
Faran Ali, Assistant Professor (GEES)
Siraj ul Islam, Assistant Professor (GEES)
Diogo Spinola, Assistant Professor (ESM)
Fei Tong, Assistant Professor (Engineering)
Wenbo Zheng, Assistant Professor (Engineering)
Raquel Portes, Senior Research Scientist

Outdoor Recreation, Conservation and Tourism

Philip Mullins, Associate Professor (ORTM)
Catherine Whalen, Associate Professor (Education)
Lauren Harding, Assistant Professor (ESM)
Jennifer Wigglesworth, Assistant Professor (ORTM)

Website: www.unbc.ca/nres-graduate-program

Natural Resources and Environmental Studies (NRES) is one stream of the Master of Science degree in the Faculty of Environment. This degree is designed for candidates whose research interests have a scientific emphasis and students from science disciplines such as biology, forestry, environmental science, and physical geography, as well as other scientifically oriented areas of resource management. Students studying within the NRES stream will, upon successful completion of the degree requirements outlined herein, obtain a MSc (NRES).

Students must choose from the following areas of study:

- Biology
- Environmental Science
- Forestry
- Geography
- Outdoor Recreation, Conservation and Tourism

All students must complete Graduate Colloquia NRES 701-0.5 twice during their course of studies, NRES 700-3 and a research methods course approved by their supervisor and the coordinator of the NRES graduate program.

Candidates must complete a minimum of 6 elective credit hours at the graduate level (i.e., at or above the 600 level), selected from the science courses available at UNBC or courses that emphasize a scientific orientation to natural resource issues. A maximum of 3 credit hours from independent studies can be counted towards the elective requirement. Specific details of coursework are determined by the research area chosen by each student.

The supervisory committee will ensure the appropriate selection of elective courses, and may require a student to complete more than 6 elective credit hours if, for example, weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

The MSc (NRES) also requires the completion of a research thesis (NRES 790-12) in which the student makes a scientific contribution to a traditional science field or to an applied understanding of resources and the environment. Students are required to (a) make an oral presentation of the thesis proposal to the supervisory committee, (b) write an original thesis based on the research completed (in accordance with established UNBC guidelines), (c) give a public lecture on the completed thesis, and (d) present an oral defense of the thesis to the examining committee. All core and elective course requirements must have been satisfied prior to the oral defense.

Summary

Core Courses	4 credit hours
Methods Course	3 credit hours
Elective Courses	6 credit hours
MSc Thesis	12 credit hours
Total Required	25 credit hours

Recommended Progression

The normal time for completion of the MSc is two academic years. While this is the recommended timeline, it may be adjusted at the discretion of the supervisory committee to suit a particular student's research and program needs.

Research in Natural Resources and Environmental Studies (NRES 700-3) is offered annually in the September Semester. Students normally enroll in this course in Year I of their program. This timing allows students to pursue their area of specialization with a methods course or elective courses during the September Semester, in order to develop an interest-specific framework within which to pose methodological questions for the thesis proposal.

The Graduate Colloquia (NRES 701-0.5) is offered during all September and January Semesters. Students are expected to enroll in this course, which lasts two semesters, once during their degree program.

Electives and the required methods course may be taken at any time during Years I and II. The sequencing of electives is determined by the student in discussion with the supervisory committee. Over the September and January Semesters of Year I, the student, under the direction of the supervisory committee, will develop a thesis proposal. By the end of the second semester, the student should have successfully defended their thesis proposal to the supervisory committee, allowing the student to undertake the collection of data during the summer of Year I. The student is expected to have successfully defended the thesis by the end of Year II.

Admission, Regulations and Committee Structures

Admission Requirements

In addition to the admission application requirements outlined in *General Admission* of the Graduate Academic Calendar, acceptance to the MSc program will be contingent upon the prospective student finding a member of the faculty to serve as their supervisor. Applicants must also provide a completed Continuing Teaching Assistantship Application and a completed Funding Worksheet. Both forms are included with the application material for this program. Normally, at least two of the three letters of recommendation, exclusive of any letter provided by an intended supervisor, must be from individuals who are able to comment on the applicant's academic and research potential.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The Natural Resources and Environmental Studies MSc Program accepts students for the September, January and May Semesters.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Transfer Students

Upon the recommendation of the program concerned, the Dean may accept courses taken at other institutions for credit toward a UNBC graduate program.

Normal Time Required for Completion

Normally, the degree should be completed in two years or less. Students may take longer to complete the degree depending on their personal circumstances, and the nature of their research.

Committee Structure

Students will be advised by a supervisory committee consisting of at least three members, including the academic supervisor who will normally serve as the Chair of the committee. At least one of the committee members must be from outside of the student's program. The committee will be struck during the student's first term of study.

Natural Resources and Environmental Studies (PhD Program)

Natural Resources and Environmental Studies Graduate Program Coordinator: Dr. Zoë Meletis

ESM: Ecosystem Science and Management
GEES: Geography, Earth, and Environmental Sciences
ORTM: Outdoor Recreation and Tourism Management
SPS: School of Planning and Sustainability

Annie Booth, Professor (SPS)
David Connell, Professor (ESM)
Darwyn Coxson, Professor (ESM)
Russell Dawson, Professor (ESM)
Stephen Déry, Professor and Rio Tinto Research Chair in Climate Change and Water Security (GEES)
Mauricio Dziedzic, Professor (Engineering)
Ché Elkin, Professor and FRBC/Slocan Endowed Chair in Mixedwood Ecology and Management (ESM)
Kristen Guest, Professor (English)
Greg Halseth, Professor and Canada Research Chair in Rural and Small Town Studies (GEES)
Neil Hanlon, Professor (GEES)
Ian Hartley, Professor (ESM)
Dezene Huber, Professor (ESM)
Peter Jackson, Professor (GEES)
Christopher Johnson, Professor (ESM)
Nicola Koper, Professor (ESM)
Jianbing Li, Professor (Engineering)
Brian Menounos, Professor (GEES)
Michael Murphy, Professor (Political Science)
Brent Murray, Professor (ESM)
Catherine Nolin, Professor (GEES)
Ken Otter, Professor (ESM)
Philip Owens, Professor and FRBC Endowed Chair in Landscape Ecology (GEES)
Margot Parkes, Professor (Health Sciences and Northern Medical Program)
Tristan Pearce, Professor and Canada Research Chair in Cumulative Impacts of Environmental Change (GEES)
Ellen Petticrew, Professor and FRBC Endowed Chair in Landscape Ecology (GEES)
Deborah Roberts, Professor (Engineering)
Mark Shrimpton, Professor (ESM)

Jueyi Sui, Professor (Engineering)
Youmin Tang, Professor (GEES)
Thomas Tannert, Professor and Canada Research Chair in Tall Wood and Hybrid Structures Engineering (Engineering)
Ron Thring, Professor (Engineering)
Oscar Venter, Professor and FRBC/West Fraser Endowed Chair in Conservation Solutions (ESM)
Roger Wheate, Professor (GEES)
Gary Wilson, Professor (Political Science)
Erin Baerwald, Associate Professor (ESM)
Heather Bryan, Associate Professor, and Ian McTaggart Cowan Muskwa-Kechika Research Professor (ESM)
Tara Lynne Clapp, Associate Professor (SPS)
Mohab El-Hakim, Associate Professor (Engineering)
Karima Fredj, Associate Professor (Economics)
Steve Helle, Associate Professor (Engineering)
Asif Iqbal, Associate Professor (Engineering)
Jasmine Janes, Associate Professor (ESM)
Hossein Kazemian, Associate Professor (GEES)
Eduardo Martins, Associate Professor (ESM)
Zoë Meletis, Associate Professor (GEES)
Philip Mullins, Associate Professor (ESM)
Roy Rea, Associate Professor (ESM)
Catherine Whalen, Associate Professor (Education)
Lisa Wood, Associate Professor (ESM)
Jianhui Zhou, Associate Professor (Engineering)
Hartley Banack, Assistant Professor (Education)
Jean-Sebastien Bernier, Assistant Professor (Physics)
Chinchu Cherian, Assistant Professor (Engineering)
Oliver Iorhemen, Assistant Professor (Engineering)
Mohammad Kamali, Assistant Professor (Engineering)
Loraine Lavallee, Assistant Professor (Psychology)
Mohammad Raoufi, Assistant Professor (Engineering)
Jacob Walsh, Assistant Professor (Chemistry)
Wenbo Zheng, Assistant Professor (Engineering)

Website: www.unbc.ca/nres-graduate-program

The PhD in Natural Resources and Environmental Studies [PhD (NRES)] offers students the opportunity to develop an advanced level of understanding and training in any one or a combination of scientific discipline(s) related to natural environments, the processes (e.g., biological, chemical, physical) that govern them, or the human dimensions (e.g., social, economic, political, cultural) that interact with them. The PhD (NRES) promotes an integration of the linkages between social, ethical, political, and cultural dimensions, and an understanding of basic ecological, biological, and physical attributes of natural resources. Emphasis is placed upon the student to acquire an interdisciplinary base upon which to found a "disciplinary" area of concentration. Graduates from this program who have an area of concentration and a familiarity with how other disciplines can contribute toward solving environmental problems should be capable of addressing a variety of natural resources and environmental issues from a number of perspectives.

Students must complete 9 credit hours of interdisciplinary core courses: NRES 801-3, NRES 802-3, and NRES 803-3. These courses will provide all students with a framework, balanced in science and human dimensions, upon which a specific PhD program may be built. Also required is a compulsory seminar course (NRES 804-3), and a PhD thesis (NRES 890-12). Students may be required, at the discretion of their supervisory committee, to take additional courses within their area.

Students must pass three separate checks on their academic progress towards a PhD: a qualifying exam, a defense of thesis proposal, and a defense of the thesis. The qualifying exam is tailored to ensure a cross-disciplinary aptitude, and tests the student's grasp of the interdisciplinary nature of natural resource and environmental issues. The thesis proposal defense is tailored to ensure that a student has a grasp of their area of concentration, and therefore examines the level of knowledge within the area of concentration. Upon successfully passing both the qualifying examination and the thesis proposal defense, a student is granted candidate status, and embarks upon the thesis work under the supervision of their faculty advisor. Following completion of the research, the candidate must defend their thesis to an examination committee.

Summary

Required Core Courses	9 credit hours
Graduate Seminar	3 credit hours
PhD Thesis	12 credit hours
Total Required	24 credit hours

Recommended Progression

First Year: Core Courses, Qualifying Exam

During the first two semesters, the common set of three required core courses (NRES 801-3 Integrated Environmental Systems I, NRES 802-3 Integrated Environmental Systems II, and NRES 803-3 Integrated Environmental Systems III) will be taken. In addition, the graduate seminar (NRES 804-3) will be taken by all PhD students.

At the end of the second semester, PhD students will normally take a qualifying exam consisting of written and oral components. The general part of the exam should demonstrate the student's ability to synthesize and extrapolate from the interdisciplinary perspectives of natural resource management and environmental studies, at an integrative level and scope consistent with the core PhD courses (NRES 801-3, NRES 802-3, and NRES 803-3). The specialty part of the exam will assess the student's background knowledge and familiarity with the theory and methodology associated with their thesis topic.

Second Year: Area of Concentration, Defense of Thesis Proposal

If students are required to take additional courses to address deficiencies within their area of concentration, they will be able to select courses from relevant course offerings within the Natural Resources and Environmental Studies Graduate Program, as well as other UNBC programs, or from other accredited graduate programs in other post-secondary institutions. In addition, students will normally conduct some exploratory research in their area of concentration.

Once coursework is substantially complete, the students will work towards finalizing a thesis proposal, a document demonstrating academic rigor, and of publishable quality. Students will be expected to present the thesis proposal before their committee, and to demonstrate their knowledge within their area of concentration. Normally, this defense will be scheduled either at the end of the third semester or at the beginning of the fourth semester of study.

Third to Fifth Year: Thesis

Upon successful completion of coursework, and the successful completion of the qualifying exam and the defense of thesis proposal, the student is officially designated as a PhD candidate, and proceeds to full-time work on the thesis under the direct supervision of the advisor and any other designated committee members. Any major changes made to the thesis proposal after approval by the committee will require the approval of the committee.

Under normal circumstances, a student is expected to complete their research and the writing of the thesis within three years of becoming a Doctoral candidate.

Any student requiring more than three years (six semesters) to complete a thesis must request an extension from their advisor and the Dean.

Oral Defense of the Thesis

When the student's advisor and committee have determined that the student has reached an acceptable level of completion on the thesis, the student will defend the research during an oral exam with the full examining committee. This defense, with the exception of committee deliberations, will be open to the public.

Admission, Regulations and Committee Structures

Admission Requirements

Students will normally be expected to hold a Master's degree from an accredited post-secondary institution. In exceptional cases, individuals with significant and relevant life experience may be admitted on probation. Normally, applicants must hold a cumulative GPA of 3.33 (B+) from the Baccalaureate and Master's degree, to be calculated over the last 30 credit hours of graded academic work. Acceptance to the PhD program will be contingent upon the prospective student finding a member of the faculty to serve as their advisor.

In addition to a completed UNBC Graduate Application Form, applicants must provide official transcripts from all post-secondary institutions attended; a statement of intent indicating the student's research interests, possible future career aspirations, and perceived fit within the Faculty mandate and research directions; a recent Curriculum Vitae; three letters of reference (including two from faculty members familiar with the prospective student's academic work); a completed Teaching Assistantship Application; a completed Funding Worksheet; and a sample of written academic work. GRE scores are optional. Only students with high GPAs and innovative research interests are likely to be successful in their applications.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The Natural Resources and Environmental Studies PhD Program accepts students for the September, January, and May Semesters.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Normal Time Required for Completion

The completion time for the PhD between initial admittance and final defense will normally range from three to five years.

Supervisory Committee Structure

The PhD Committee will consist of the designated advisor and a minimum of three additional faculty members, at least one of whom will be chosen from outside the Natural Resources and Environmental Studies Graduate Program. The outside faculty member may be chosen from post-secondary institutions accredited in Canada and the United States. Under exceptional circumstances, and with approval from the Dean, additional members may be added at the request of the student or the advisor. The expertise represented on the committee should reflect interdisciplinarity. The committee should be assembled by the beginning of the student's second semester of study (i.e., the January Semester) to facilitate the student preparing for the required Candidacy Exams.

Nursing MScN (FNP) and MScN Programs

Master of Science in Nursing: Family Nurse Practitioner Program (MScN (FNP))
- **Master of Science in Nursing Program: Thesis or Project Option (MScN)**

Sylvia Barton, Professor Emerita
Martha MacLeod, Professor Emerita

Catharine Schiller, Associate Professor and Chair
Davina Banner-Lukaris, Professor
Caroline Sanders, Professor
Shannon Freeman, Associate Professor
Erin Wilson, Associate Professor
Aderonke Agboji, Assistant Professor
Viviane Josewski, Assistant Professor
Tina Fraser, Adjunct Professor
Kelly Gunn, Adjunct Professor
Allan Lai, Adjunct Professor
Brandin Lilgert, Adjunct Professor
Cindy Milner, Adjunct Professor
Robert Pammett, Adjunct Professor
Lauren Irving, Senior Lab Instructor
Rebecca Irving, Senior Lab Instructor
Kristine Rowswell, Senior Instructor
Linda van Pelt, Senior Instructor
Heidi Dunbar, Instructor

Website: www.unbc.ca/nursing/graduate-programs
www.unbc.ca/nursing/family-nurse-practitioner-mscn-fnp

The Master of Science in Nursing: Family Nurse Practitioner Program is a practice-oriented, theory-based degree that prepares graduates to be autonomous practitioners, leaders, role models, and educators in primary health care. The focus of the Family Nurse Practitioner Program is general family practice—that is care for individuals, families, groups, and communities across all life stages. Family Nurse Practitioners are health professionals who have achieved advanced nursing practice competencies at the graduate level of nursing education. Nurse Practitioners, who are regulated by the British Columbia College of Nurses and Midwives, provide health care services from a holistic nursing perspective, integrated with the autonomous diagnosis and treatment of acute and chronic illness, including ordering diagnostic tests and prescribing medications.

The Master of Science in Nursing Program (Thesis or Project) leads to an advanced nursing practice degree that focuses on preparing graduates across a range of areas and specialties to act as autonomous practitioners. In addition, this program aims to prepare graduates as interprofessional collaborators, nurse researchers, leaders, educators, change agents, and role models. Graduates of this program work in a variety of health care settings as clinical nurse specialists, educators, administrators, and researchers, and work with diverse populations across all age groups.

Both programs focus on the preparation of graduates for advanced nursing practice in rural and northern communities. Courses address the following: community and program development and evaluation; debates influencing health care policy; application of research and evidence-based practice; promotion of the health of Indigenous Peoples; and development of nursing knowledge in relation to advanced practice nursing.

Required courses for the MScN (FNP) and MScN are available by distance, with some on-site (face-to-face) requirements and required clinical practice in the MScN (FNP) Program.

Clinical Practica Scheduling and Expectations

The MScN (FNP) Program focuses on practice in rural and northern settings. Clinical practica at sites across British Columbia are arranged by the School of Nursing. Students must be prepared to complete clinical hours where and when assigned.

Clinical practica sites are based on availability as well as student learning needs towards achieving Entry-Level Competencies for Nurse Practitioners in Canada.

Attendance for all 752 clinical hours is required through 12 credit hours of practicum and 9 credit hours of consolidating internship. Students who do not complete their total required hours in each semester are at risk of failure. Students who are unable to attend their practicum for any reason must contact their clinical faculty and preceptor with as much notice as possible.

For those in the MScN (Thesis or Project option): NURS 701-6 Advanced Clinical Practice Nursing clinical hours and practice sites are tailored to the specific clinical focus.

Students who are away from the program for more than 12 months are assessed on an individual basis to determine whether there is a need for remediation to allow a return to a clinical practice setting. This may include repeating all components of courses taken previously, regardless of whether the student successfully completed the course, and dependent on the timing of the absence related to the program sequence.

Program Costs

Costs associated with study in the MScN (FNP) Program or the MScN Program—Thesis or Project Option are the responsibility of the individual student, including transportation costs, and any expenses involved in academic studies, lab, and clinical practica. These expenses may include travel, accommodation, and living expenses associated with required clinical practice or travel to campus for required face-to-face (on campus) coursework. See the Fees section in this calendar.

Criminal Records Search

All students in the Master of Science in Nursing program are required to submit a Criminal Record Check search prior to the commencement of their first clinical courses.

Immunizations

All students undertaking clinical learning experiences must submit records of current status of the following immunizations prior to commencement of clinical courses: diphtheria, tetanus, poliomyelitis, measles, mumps, rubella, hepatitis B, varicella, COVID-19 , and any other immunization that may become required for practice by order of the Provincial Health Officer. A Mantoux test (PPD) for tuberculosis is also recommended within one month of entering the clinical setting. Failure to have up-to-date immunizations may result in the student not being permitted to practice in a clinical setting.

CPR Certification

All students undertaking clinical learning experiences must provide proof of current CPR certification, level C, prior to commencement of the clinical courses.

British Columbia College of Nurses and Midwives Requisite Skills and Abilities

All students who apply to the UNBC MScN (FNP) and MScN Programs must demonstrate the capacity to meet British Columbia College of Nurses and Midwives (BCCNM) Requisite Skills and Abilities, and sign the BCCNM form attesting to that capacity.

Standards of Professional Conduct

In addition to fulfilling all University and Program expectations, all students are expected to abide by professional standards as set forth in the current BCCNM Professional Standards for Registered Nurses and Nurse Practitioners and the Canadian Nurses Association (CNA) Code for Ethics for Registered Nurses. Violation of professional standards may result in suspension or dismissal from the program or the educational institution.

Misconduct

Any conduct that violates the ethical or legal standards of UNBC or BCCNM, particularly those related to academic dishonesty and professional conduct, are considered serious offenses. Academic misconduct and/or professional misconduct may result in the student being required to withdraw from the MScN Program and possibly the University. Satisfactory academic performance is not the sole criterion for progression or graduation. The UNBC School of Nursing reserves the right to require a student to withdraw from their program if the student is considered to be unsuited to proceed with the study or practice of advanced practice nursing.

Academic Performance

All MScN students must adhere to all Graduate Program Admissions and Regulations as outlined in the UNBC Graduate Calendar. Students may be removed from a clinical learning experience or setting due to "unsafe or unprofessional" performance or conduct and may receive a final grade of F in that course.

MScN (FNP) Family Nurse Practitioner Program

Admission to Family Nurse Practitioner Program

In addition to the application requirements outlined in *General Admission* of the Graduate Academic Calendar, applicants for the Family Nurse Practitioner Program are required to submit the following for consideration of admission:

- Two Assessment Reports on Applicant for Admission to Graduate Studies. Letters of reference may accompany the Assessment Reports. At least one of the assessments/letters must be from a health professional from the prospective student's most recent practice setting;
- An academic transcript showing undergraduate courses in nursing theory, health assessment, community health nursing, and research;
- Nursing practice résumé or curriculum vitae;
- Successful completion of the San'yas Indigenous Cultural Safety Training within the previous two years prior to the semester of admission to the MScN (FNP) Program;
- Evidence of at least two years' full-time practice experience, or equivalent, following completion of the Baccalaureate Nursing degree;
- Evidence of active registration as a nurse in British Columbia. Note that annual documentation of current, practicing BCCNM licensure is required while enrolled in the program.

Application deadlines can be found online at www.unbc.ca/admissions/graduate.

The MScN (FNP) Program accepts students for the September Semester.

Family Nurse Practitioner Program Requirements

A minimum of 51 credit hours of MScN and Nurse Practitioner courses is required. A final project completes the degree.

NURS 602-3	Pathophysiology
NURS 603-3	Health Assessment and Diagnostic Reasoning
NURS 604-3	The Healing and Well-being of Indigenous Peoples
NURS 605-3	Pharmacological Management and Therapeutic Interventions
NURS 606-3	Developing Nursing Knowledge
NURS 607-3	Appraising and Synthesizing Evidence for Practice
NURS 608-3	Nurse Practitioner Professional Practice
NURS 703-3	Health Program Planning, Community Development and Evaluation
NURS 704-3	Leadership in Health Care and Practice
NURS 720-6	Practicum: Integrating Primary Health Care I
NURS 730-6	Practicum: Integrating Primary Health Care II
NURS 790-9	Nurse Practitioner Internship
NURS 798-3	Nurse Practitioner Project

MScN Program - Thesis or Project Option

Admission to MScN Program

In addition to the application requirements outlined in *General Admission* of the Graduate Academic Calendar, applicants for the Academic Master's Program are required to submit the following for consideration of admission:

- Two Assessment Reports on Applicant for Admission to Graduate Studies. Letters of reference may accompany the Assessment Reports. At least one of the assessments/letters must be from a health professional from the prospective student's most recent practice setting.
- An academic transcript showing undergraduate courses in nursing theory, health assessment, community health nursing, and research.
- Nursing practice résumé or curriculum vitae.
- Evidence of active registration in the jurisdiction in which the student resides while taking the program. Note that annual documentation of current licensure is required while enrolled in the program.

Application deadlines can be found online at www.unbc.ca/admissions/graduate.

The MScN Program accepts students for the September Semester.

Thesis Option Requirements

18 credit hours of MScN courses are required, as well as 3 credit hours of electives. Students must also complete a 12-credit-hour independent research thesis, for a total of 33 credit hours.

NURS 604-3	The Healing and Well-being of Indigenous Peoples
NURS 606-3	Developing Nursing Knowledge
NURS 607-3	Appraising and Synthesizing Evidence for Practice
NURS 618-3	Research Approaches for Nursing and Health
NURS 619-3	Qualitative Research in Nursing and Health
or NURS 620-3	Quantitative Research in Nursing and Health
NURS 704-3	Leadership in Health Care and Practice

Electives

At least 3 credit hours of graduate-level study at or above the 600 level are required. The purpose of the elective(s) is to broaden the student's depth and scope of learning on a particular topic of interest. The supervisory committee will ensure the appropriate selection of relevant elective course(s).

Thesis

NURS 799-12 MScN Thesis

MScN Thesis students must write and defend an independent research thesis. The thesis entails research in a topic area developed in consultation with the student's supervisory committee. Oral examination is required as per University regulations.

Project Option Requirements

18 credit hours of MScN courses are required, as well as 9 credit hours of electives. Students must also complete a 6-credit-hour independent project, for a total of 33 credit hours.

NURS 604-3	The Healing and Well-being of Indigenous Peoples
NURS 606-3	Developing Nursing Knowledge
NURS 607-3	Appraising and Synthesizing Evidence for Practice

NURS 618-3	Research Approaches for Nursing and Health
NURS 703-3	Health Program Planning, Community Development and Evaluation
NURS 704-3	Leadership in Health Care and Practice

Electives

At least 9 credit hours of graduate-level study at or above the 600 level are required. The purpose of the electives is to broaden the student's depth and scope of learning on a particular topic of interest. The supervisory committee ensures the appropriate selection of relevant elective course(s).

Project

NURS 797-6 MScN Project

MScN Project students must write and defend an independently completed project. The project entails addressing a topic of concern within nursing practice, education, administration or policy, such as clinical or patient focused outcomes, evidence-informed practice, quality improvement, knowledge translation, or theoretical investigation.

Physics (MSc Program)

Ahmed Hussein, Professor Emeritus
Elie Korkmaz, Professor Emeritus
Mark Shegelski, Professor Emeritus

Erik Jensen, Professor and Chair
Ian Hartley, Professor
Margot Mandy, Professor
Matthew Reid, Professor
Jean-Sebastien Bernier, Associate Professor
George Jones, Senior Lab Instructor

Website: www.unbc.ca/physics

Thesis and project options are available. The thesis option prepares graduate students for careers in research or further academic study by requiring the design and completion of an original research program and preparation of a thesis. The project option provides training across disciplines particularly suitable to individuals with more defined career objectives, as well as providing a mechanism for non-traditional students (e.g., working students, teachers, and professionals) to upgrade their skills.

All students must participate in the Graduate Seminar course PHYS 701-(1.5,3) for a total of 3 credit hours during their course of studies.

Thesis Option

The Master of Science thesis option is designed for candidates who wish to develop career interests related to scientific research or who intend to pursue further academic research degrees. MSc students are required to complete 3 credit hours of Graduate Seminar, a minimum of 12 credit hours of approved graduate-level electives (i.e., at or above the 600 level), and a 12 credit-hour thesis (PHYS 794-12). It is expected that the electives consist of scientifically-oriented courses and that the thesis involves an independent investigation resulting in a scientific contribution.

A maximum of 6 credit hours from independent studies can be counted towards the elective requirement. Specific details of coursework are determined by the research area undertaken by the student. The supervisory committee ensures the appropriate selection of elective courses and may require a student to complete more than 12 elective credit hours if, for example, weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

Students will be required to (a) make an oral presentation of the thesis proposal to the supervisory committee, (b) write an original thesis based on the research completed (in accordance with established UNBC guidelines), and (c) present a public oral defence of the thesis to the examining committee. All course requirements must have been satisfied prior to the oral defence.

Summary of Thesis Option

Graduate Seminar	3 credit hours
Elective Courses	12 credit hours
MSc Thesis	12 credit hours
Total Required	27 credit hours

Project Option

The Master of Science project option is designed for candidates who wish to upgrade their skills, or who are constrained in their ability to undertake a traditional research thesis. MSc students within the project stream are required to complete 3 credit hours of Graduate Seminar, a minimum of 18 credit hours of approved electives, and a 6 credit-hour project (PHYS 793-6). Given the course-intensive nature of this option, MSc projects are limited, subject to sufficient teaching resources and a critical mass of faculty within an area of defined specialization. It is expected that the electives consist of scientifically-oriented courses, and that the project involves an independent investigation resulting in a scientific contribution, although this contribution need not include original research. Because of the high weighting of course offerings for this option, it is restricted to designated specializations that have been decided upon within each program area. Designation of a specialization implies that sufficient resources are available to ensure that required courses within the specialization can be offered to fulfill the requirements for the degree.

The 18 elective credit hours must be graduate-level study (i.e. at or above the 600 level) selected from the science courses available within the designated specialization. A maximum of 6 credit hours from independent studies can be counted towards the elective requirement. Specific details of coursework are determined by the nature of the project undertaken by each student. The supervisory committee ensures the appropriate selection of elective courses, and may require a student to complete more than 18 credit hours if weaknesses in the student's background exist (including undergraduate prerequisites for graduate courses) or if additional courses are required for professional accreditation.

Students are required to (a) make a presentation of the project proposal to the supervisory committee, (b) write a project report, (c) give a public lecture on the completed project, and (d) present an oral defence of the project to the examining committee. Normally all course requirements must have been satisfied prior to the oral defence.

Summary of Project Option

Graduate Seminar	3 credit hours
Elective Courses	18 credit hours
MSc Project	6 credit hours
Total Required	27 credit hours

Recommended Progression

The normal time for completion of the MSc is two academic years. While this is the recommended timeline, it may be adjusted at the discretion of the supervisory committee to suit a particular student's research and program needs.

The Graduate Seminar courses are offered during all September and January Semesters. Students are expected to enrol in a seminar course for 3 credit hours of their degree program.

Electives may be taken at any time during Years I and II. The sequencing of electives is determined by the student in discussion with the supervisory committee. Over the first two academic semesters of Year I, the student, under the direction of the supervisory committee, develops a thesis or project proposal. By the end of the second academic semester, the student should have successfully defended their proposal to the supervisory committee. It is expected that the student will have successfully defended the thesis or completed the evaluation phase of the project by the end of Year II.

Admission Requirements

In addition to the admission application requirements outlined in *General Admission* of the Graduate Academic Calendar, acceptance to the MSc program is contingent upon the prospective student finding a member of the faculty to serve as their supervisor. Normally, at least two of the three letters of recommendation must be from individuals who are able to comment on the applicant's academic and research potential.

Additional information about graduate admissions, including application deadlines, is available on the website www.unbc.ca/admissions/graduate.

Normal Time Required for Completion

Normally, the degree should be completed in two years or less. Students may take longer to complete the degree depending on their personal circumstances and the nature of their research or project involvement.

Political Science (MA Program)

Alex Michalos, Professor Emeritus

Gary Wilson, Professor and Chair
Michael Murphy, Professor
Boris DeWiel, Associate Professor
Fiona MacDonald, Associate Professor
Jason Lacharite, Senior Instructor

Website: www.unbc.ca/political-science

A Master's degree in Political Science offers students the opportunity to undertake advanced research and course work across the different sub-fields of Political Science. The MA in Political Science can serve as a gateway to further graduate study leading to a PhD, or a pathway to a rewarding career in local government, the federal or provincial civil service, or the private sector. Each student's program of study is designed individually to meet their scholarly interests. Prospective applicants should consult the faculty profiles on the Department of Political Science website to determine whether the focus of their research aligns with existing areas of faculty interest and expertise.

Admission

Entrance to the MA in Political Science is highly competitive, and only applicants with a record of excellence gain admission. In addition to the admission application requirements outlined in General Admission of the Graduate Academic Calendar, applicants to the program must have obtained a minimum GPA of 3.33 (B+). To be considered for admission, applicants must hold a recent four-year baccalaureate in Political Science that includes a significant number of upper-division (3rd and 4th year) Political Science courses. Exceptional students with a recent four-year baccalaureate from a related discipline will be considered at the discretion of the program.

The MA Political Science requires that students demonstrate advanced English language skills. For applicants who do not meet the exemptions indicated in the Admissions and Regulations, applicants must meet the English Language score requirements published on the Program Requirements section of the Graduate Admissions website.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The Political Science MA Program accepts students for the September Semester.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Requirements

Students may choose either a Thesis, a Project or a Course-based option.

Thesis Option

The requirements for the thesis option are four graduate courses, a thesis proposal, and a 12 credit-hour thesis. At least three of the four required graduate courses must be from the discipline of Political Science and must include POLS 702-3 Scope and Methods of Political Science or a suitable alternative chosen in consultation with the student's supervisor.

Project Option

The requirements for the project option are five graduate courses and a 9 credit-hour project. At least three of the five required graduate courses must be from the discipline of Political Science and must include POLS 702-3 Scope and Methods of Political Science or a suitable alternative chosen in consultation with the student's supervisor.

Course-based Option

The requirements for the course-based option are eight graduate courses. At least five of the eight required graduate courses must be from the discipline of Political Science and must include POLS 702-3 Scope and Methods of Political Science or a suitable alternative chosen in consultation with the student's supervisor, and POLS 795-3 Major Research Paper, which is overseen and graded by the student's supervisor.

Course Offerings

POLS 603-3	Social and Health Policy in the Context of Health and Health Care
POLS 613-3	Democracy and Diversity
POLS 614-3	Comparative Federalism
POLS 615-3	Comparative Northern Development
POLS 616-3	Gender and Politics
POLS 627-3	Ethics and Public Affairs
POLS 672-3	Seminar in Political Philosophy
POLS 698-3	Special Topics in Political Science
POLS 702-3	Scope and Methods of Political Science
POLS 704-3	Independent Study
POLS 795-3	Major Research Paper
POLS 797-9	Graduate Project
POLS 799-12	Master's Thesis

Counselling (MEd Program)

John Sherry, Associate Professor and Chair
Linda O'Neill, Professor
Jennifer Roters, Assistant Professor

Website: www.unbc.ca/psychology/counselling

The Counselling program is designed to prepare counsellors to provide professional services and leadership in counselling and psycho-educational programs offered in schools, post-secondary institutions, social service agencies, and community health organizations. Students have the opportunity to choose the type(s) of counselling they wish to focus upon, and to complete periods of supervised clinical practice in practicum settings that are relevant to their interests, based on availability. The program includes an integrated core of required courses, elective courses, and a thesis, project, or comprehensive examination. Counselling students are required to complete eleven required courses, three elective courses, and a comprehensive examination. Application can be made to the Department of Psychology to enter a thesis or project route after completion of at least 12 credit hours of coursework. If approved, the thesis route would consist of eleven required courses, one elective, and the thesis, while a project route would consist of eleven required courses, two electives, and a project.

Admission

Application deadlines can be found online at www.unbc.ca/admissions/graduate.

Admission to the MEd Counselling program at the Prince George campus occurs each September; deadline for applications is December 15 of the prior year. Admission to the program at regional campuses does not normally occur each year and will vary in response to demand and resources.

In addition to the admission application requirements outlined in *General Admission* of the Graduate Admissions and Regulations, priority will be given to those applicants applying for the MEd Counselling program who have (a) graduated with a Baccalaureate degree a minimum of two years prior to the admission date to which they are applying, and (b) obtained some paid or unpaid work experience in a helping capacity at a counselling-related or teaching-related setting since receiving their Baccalaureate degree.

Applicants are also required to submit a Curriculum Vitae or résumé that indicates the number of hours in each employment or volunteer position. A list of any scholarships or publications should also be included.

Criminal Record Review

In addition to meeting the admission application requirements outlined in *General Admission* of the Graduate Admissions and Regulations, all applicants to the MEd Counselling program are required to submit a Criminal Record Check search prior to the first day of classes in their entry semester.

Domestic applicants must supply a Criminal Record Check search result after receiving an offer of admission and before the first day of classes; the search result is not required with the application. International applicants must submit a Criminal Record Check search result provided by their local police authority upon application, and will also be required to submit a British Columbia Criminal Record Check if offered admission. The Office of the Registrar will provide instructions to domestic and international applicants who have accepted offers of admission on how to complete a British Columbia Criminal Record Check.

Requirements

Provided that such courses have not been associated with the receipt of either a degree or diploma from UNBC or another educational institution, students may apply to the Dean for up to 6 credit hours of previously completed graduate-level coursework that is equivalent to that completed in the MEd program. Where equivalent courses have been associated previously with the receipt of either a degree or diploma, students are permitted to elect alternative courses from the MEd program to satisfy the requirements for the degree.

Students in an MEd program may take up to 6 credit hours of elective coursework from UNBC programs other than Counselling or from other institutions under the Western Deans' Agreement (students require permission of their Academic Supervisor and the Chair).

Thesis Requirement

The thesis route emphasizes academic study, research, and the successful completion of a thesis. This program route is designed to develop each student's ability to evaluate theory and practice, and conduct research that contributes to the counselling discipline. The thesis route requires the successful completion of a minimum of 48 credit hours of graduate coursework and includes 9 credit hours of supervised research culminating in the completion of a thesis and the successful defence of it in an oral examination.

Project Requirement

The project route emphasizes the study of theory and practice, and the successful completion of an innovative and applied project that addresses a particular aspect of counselling support and practice. This program route is designed to develop a student's ability to evaluate and improve professional practice in counselling. The project route requires the successful completion of a minimum of 48 credit hours of graduate coursework and includes 6 credit hours of supervised applied research and development culminating in a non-defendable project.

Comprehensive Examination Requirement

The comprehensive examination route requires the successful completion of a comprehensive examination that evaluates a student's knowledge of theory, research, and practice in their field of study. This comprehensive examination route is designed to enhance and reinforce a student's knowledge of both theory and practice, as well as their interrelationship. The comprehensive examination route requires the successful completion of a minimum of 48 credit hours of graduate coursework including 3 credit hours awarded upon the successful completion of a written comprehensive examination at the end of the student's program.

Application can be made to the Counselling program to enter a thesis or project route after having completed at least 12 credit hours of coursework.

Required Courses

COUN 601-3	Research Design and Methodology
COUN 612-3	Trauma Counselling
COUN 613-3	Interpersonal Counselling Skills
COUN 618-3	Family Counselling
COUN 619-3	Counselling for Aboriginal/Indigenous Peoples
COUN 711-3	Counselling Theory
COUN 712-3	Counselling Practice
COUN 714-3	Group Counselling Processes
COUN 717-3	Ethics in Counselling
COUN 719-6	Counselling Practicum

One of the following research courses is required; the other may be taken as elective credit:

COUN 610-3	Qualitative Analysis in Counselling
EDUC 602-4	Quantitative Research Design and Data Analysis

Elective Courses

COUN 633-3	Human Development: Implications for Counselling
COUN 692-3	Special Topics
COUN 693-3	Directed Reading
COUN 715-3	Career Counselling
COUN 716-3	Clinical Counselling
COUN 795-3	Research Seminar
EDUC 603-4	Advanced Quantitative Data Analysis

Thesis, Project or Comprehensive Examination

COUN 797-3	Comprehensive Examination
COUN 798-6	MEd Project
COUN 799-9	MEd Thesis

Psychology (MSc Program)

Steven Cronshaw, Professor Emeritus
Kenneth Prkachin, Professor Emeritus

John Sherry, Associate Professor and Chair
Sherry Beaumont, Professor
Han Li, Professor
Paul Siakaluk, Professor
Annie Duchesne, Associate Professor
Xiaoxue (Sonia) Kong, Assistant Professor
Christopher Kowalski, Assistant Professor
Loraine Lavallee, Assistant Professor
Nick Reid, Assistant Professor
James Climenhage, Adjunct Professor
Tammy Klassen-Ross, Adjunct Professor
Elizabeth Rocha, Adjunct Professor
Anita Shaw, Adjunct Professor
Julie Howard, Senior Lab Instructor IV

Website: www.unbc.ca/psychology

The MSc in Psychology at UNBC provides breadth in the substantive and methodological areas of Psychology, with a focus on health and human psychology. The MSc provides advanced research and experiential training so that graduates gain skills beneficial to academic and related areas.

Admission

Applicants must have an Honours degree in Psychology or an undergraduate degree in Psychology (or a related field) with research experience.

Students interested in applying for the MSc in Psychology are responsible for ensuring that all application materials are received at UNBC by the application deadline. Students are required to submit the following for consideration of admission:

- a completed application form;
- a curriculum vitae;
- a letter of interest;
- official transcripts from all post-secondary institutions;
- three letters of reference from academic referees; and
- a copy of a thesis or paper submitted for coursework.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The Psychology MSc Program accepts students for the September Semester.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Requirements

Students in the MSc Program are required to complete a minimum of 20 credit hours of coursework including two quantitative methods courses:

PSYC 600-4	Univariate Statistics
PSYC 605-4	Multivariate Statistics

and four courses, two of which must be from the following:

PSYC 607-3	Social Psychology
PSYC 608-3	Psychology and Environmental Conservation
PSYC 609-3	Health Psychology
PSYC 611-3	Developmental Psychology
PSYC 618-3	Sensation and Perception
PSYC 621-3	Biopsychology
PSYC 622-3	Positive Psychology
PSYC 627-3	Cross-cultural Psychology
PSYC 631-3	Psychopathology
PSYC 632-3	Cognition
PSYC 685-3	Current Methods in Psychological Research

These courses provide students with the basic foundations upon which to build their MSc research. In addition, all MSc students are required to successfully complete an MSc thesis (PSYC 690-12).

Students must have a Cumulative GPA of 3.33 (B+) or greater by the end of their second semester of registration, and maintain it at B+ or better thereafter.

Students may be required to address deficiencies within their background preparation in Psychology or in their area of concentration that are identified by the Psychology Graduate Committee. Additional courses may be required.

Normally, students present an acceptable thesis proposal to their supervisory committee by the end of their first year in the program. It is expected that defence of the Master's thesis will take place within two years of the commencement of the program.

Psychology (PhD Program)

Steven Cronshaw, Professor Emeritus
Kenneth Prkachin, Professor Emeritus

John Sherry, Associate Professor and Chair
Sherry Beaumont, Professor
Han Li, Professor
Paul Siakaluk, Professor
Annie Duchesne, Associate Professor
Xiaoxue (Sonia) Kong, Assistant Professor
Christopher Kowalski, Assistant Professor
Loraine Lavallee, Assistant Professor
Nick Reid, Assistant Professor
James Climenhage, Adjunct Professor
Tammy Klassen-Ross, Adjunct Professor
Elizabeth Rocha, Adjunct Professor
Anita Shaw, Adjunct Professor
Julie Howard, Senior Lab Instructor IV

Website: www.unbc.ca/psychology

The PhD in Psychology at UNBC provides breadth in the substantive and methodological areas of Psychology, with a focus on health and human psychology. The PhD provides advanced research and experiential training so that graduates gain skills beneficial to academic and related areas.

More specifically, the objectives of the PhD program in Psychology is to develop scholars and researchers who can contribute to the larger body of scientific knowledge of psychology through research and have an advanced level of understanding of the psychological sciences, including comprehensive knowledge of contemporary theory and evidence in Psychology and a high level of methodological expertise.

Admission

Applicants must have both a Bachelor's and Master's degree, at least one of which must be in Psychology with a research-based thesis.

Students interested in applying for the PhD in Psychology are responsible for ensuring that all application materials are received at UNBC by the application deadline:

- a letter of interest;
- official transcripts from all post-secondary institutions;
- three letters of reference from academic referees; and
- a copy of a thesis or paper submitted for coursework.

Application deadlines can be found online at www.unbc.ca/admissions/graduate. The Psychology PhD Program accepts students for September semester admission.

For additional information about graduate admissions or to download application materials, go to the Office of Graduate Administration website at www.unbc.ca/graduate-administration.

Requirements

Students in the PhD program are required to complete a minimum of 12 credit hours of coursework consisting of one graduate seminar:

PSYC 800-3	Graduate Seminar

Three credit hours of research practica:

PSYC 860-(3-6)	Research Practicum

and two courses from the following list:

PSYC 810-3	Cognitive Neuroscience
PSYC 815-3	Social Psychology
PSYC 820-3	Health Psychology
PSYC 825-3	Cognitive Neuropsychological Assessment
PSYC 826-3	Personality Assessment
PSYC 830-3	Psychological Interventions
PSYC 835-3	Cognition and Learning
PSYC 845-3	Developmental Psychology

Required courses in Psychology are offered on a two-year schedule.

These courses provide students with the basic foundations upon which to build their PhD research. In addition, students are required to complete successfully a Doctoral candidacy examination and a PhD dissertation (PSYC 890-12). The Doctoral candidacy examination is tailored to ensure each student is adequately prepared to begin work on the PhD dissertation.

Students must have a Cumulative GPA of 3.33 (B+) or better by the end of their second semester of registration, and maintain it at B+ or better thereafter.

Students may be required to address deficiencies within their background preparation in Psychology or in their area of concentration that are identified by the Psychology Graduate Committee. Additional courses may be required.

Normally, students take a Doctoral candidacy examination by the end of the first year in the program (or 12 credit hours for part-time students). Upon successfully completing the Doctoral candidacy examination, and presenting an acceptable dissertation proposal to their supervisory committee, a student is granted PhD Candidate status, and embarks upon completion of the dissertation under the supervision of a Faculty Academic Supervisor. Normally, it is expected that the defence of the dissertation by full-time PhD Candidates take place within three years of acceptance into the program.

Social Work (MSW Program)

Dawn Hemingway, Professor Emerita
Glen Schmidt, Professor Emeritus

Tammy Pearson, Associate Professor and Chair
Indrani Margolin, Professor
Bruce Bidgood, Associate Professor
Susan Burke, Associate Professor
Gretchen Perry, Associate Professor
Heather Peters, Associate Professor
Si Chava Transken, Associate Professor
Emmanuel Chilanga, Assistant Professor
Tareq Hardan, Assistant Professor
Nancy Jokinen, Adjunct Professor
Christa Sato, Lecturer
Melanie Lansall, Field Director

Website: www.unbc.ca/social-work

The Master of Social Work program is available on a full- or part-time basis and can be completed by thesis or practicum. The MSW builds on the BSW by offering students an integrated research/policy/practice concentration in one of the key thematic areas: social work in northern and remote areas; Indigenous peoples; women and the human services; and community practice and research. The aim of the MSW is to provide students with advanced social work research, policy, and practice skills. It is designed to enable students to pursue independent studies that will help them undertake a variety of responsibilities in management, policy formulation, program consultation, planning, advanced social work, clinical practice, and research within the human services.

Admission

Enrollment in the MSW is strictly limited.

In addition to the admission application requirements outlined in *General Admission* of the Graduate Academic Calendar, all students in the Social Work MSW program are required to submit a Criminal Record Check search prior to the first day of classes in their entry semester.

Domestic applicants must supply a Criminal Record Check search result after receiving an offer of admission and before the first day of classes; the search result is not required with the application. International applicants must submit a Criminal Record Check search result provided by their local police authority upon application, and will also be required to submit a British Columbia Criminal Record Check if offered admission. The Office of the Registrar will provide instructions to domestic and international applicants who have accepted offers of admission on how to complete a British Columbia Criminal Record Check.

Completion of the MSW Supplementary Application form is also required in order to be considered for admission. The MSW Supplementary Application form is included with the application material for this program. Two academic letters of reference and one professional letter of reference must be submitted.

Application deadlines can be found online at www.unbc.ca/admissions/graduate.

The Social Work MSW program accepts students for the September Semester.

The MSW program at UNBC emphasizes a pro-active orientation that aims to provide informed theoretical, empirical, and substantive choices for improvements in human service programs, policies, education, and social work practice. This approach to social work and social policy is known as social administration.

The key elements in this social administration approach as they relate to the thematic areas of the MSW at UNBC consist of the following:

- the description and analysis of the operation of human services in northern and remote regions;
- the study of social policies and social work practices, and their individual and social consequences for the people and communities in the interior and northern British Columbia;
- the examination of global, historical, social, and economic changes, and the way these affect the living conditions and the people served by human service agencies and organizations in northern and remote areas; and
- the recognition of the values central to the responsibility of human service professionals to work with socially disadvantaged and powerless groups, and to expand the power and resources of these groups through social work practice.

Within this social administration approach courses are arranged so students develop skills that integrate the research/policy/practice domains of social work. A major emphasis of the MSW is to foster critical intervention skills that link the domains of social policy, social work research, and social work practice. For example, if one chooses to develop a specialty in community practice and research, or social policy, the program of studies will emphasize the linkages between these domains or dimensions of social work.

Requirements

Human service experience is required before candidates

can be considered for the MSW program. Please see descriptions for Entry Routes 1 and 2 (below). To be admitted, a grade point average of at least 3.00 (B) in the work of the last 60 credit hours (approximately the last two years) leading to the Baccalaureate degree is required. Letters of reference, as well as a written statement of the candidate's research and practice interests and reasons for pursuing a MSW, are also required. A personal interview may be requested. Applicants who do not meet the above requirements may still be admitted under the provisions of affirmative action.

Taking a MSW at UNBC

There are two entry routes into the MSW.

Entry from a CASWE-accredited Bachelor of Social Work leads into the Advanced Year of the MSW program.

For full-time students entering from a BSW, this MSW program consists of 33 credit hours, including completion of a thesis or practicum report.

Thesis students are required to successfully complete a minimum 21 credit hours of five required courses and two electives, as well as a thesis to complete 33 credit hours in total. Practicum students are required to successfully complete a minimum of 24 credit hours of five required courses and three electives, as well as a practicum to complete 33 credit hours in total.

Entry with a Bachelor's degree in a related field or discipline, and two years (24 months full-time equivalent) human service experience. Entry at this level begins with an MSW Foundation Year of studies.

For full-time students entering from a Bachelor's degree in a related field, this MSW program consists of a minimum two-year (24 month) program of courses and practica. A thesis or practicum report is required following completion of coursework. An oral defense is required for the thesis. This route normally includes 66 credit hours, consisting of 33 credit hours in each of the two years.

MSW

Requirements

Thesis students must take the following required courses:

HHSC 703-3	Qualitative Research Approaches in Health and Human Sciences
SOCW 601-3	Current Issues in Northern/Remote Social Work
SOCW 602-3	Indigenous Peoples: Advanced Social Work Practice
SOCW 609-3	Quantitative Research Methods
SOCW 700-12	MSW Thesis
SOCW 704-3	MSW Integrative Seminar

Practicum students must take the following required courses:

HHSC 703-3	Qualitative Research Approaches in Health and Human Sciences
SOCW 601-3	Current Issues in Northern/Remote Social Work
SOCW 602-3	Indigenous Peoples: Advanced Social Work Practice
SOCW 609-3	Quantitative Research Methods
SOCW 704-3	MSW Integrative Seminar
SOCW 732-9	MSW Practicum II

Electives

SOCW 603-3	Women: Policy/Practice Issues
SOCW 604-3*	Directed Readings
SOCW 605-3	Community Work/Politics of Change
SOCW 610-3	Holistic Trauma-Informed Expressive Arts Therapies
SOCW 613-3	Clinical Social Work Practice
SOCW 640-3	Social Work Supervision and Leadership
SOCW 670-3	Indigenous Peoples in Canada: Past/ Present/Future
SOCW 671-3	Reflections on Practice: Indigenous Child/ Youth Mental Health
SOCW 672-3	Social Work/Counselling Skills with Indigenous Children/Youth
SOCW 673-3	Mental Illness and Addictions Among Indigenous Children/Youth
SOCW 674-3	Crisis Work with Indigenous Children/Youth: Restoring Balance
SOCW 675-3	Community-Based Prevention with Indigenous Peoples: Creating Balance
SOCW 698-3	Special Topics
SOCW 701-3	Research Practicum

Thesis students are required to take two electives. These electives may be taken from the two lists immediately above, and/or from other UNBC graduate programs, and/or from other accredited Canadian universities via approved transfer agreements (e.g., the Western Deans' Agreement).

Practicum students are required to take a total of three electives, one of which must come from the two lists of courses immediately above. The other elective may come from the above lists and/or be taken from other UNBC graduate programs and/or from other accredited Canadian universities via approved transfer agreements (e.g., the Western Deans' Agreement).

*Students may only take SOCW 604-3 Directed Readings once for 3 credit hours.

MSW Foundation Year

For those with baccalaureate degrees in related areas and two years of full-time previous human service experience, the MSW normally consists of 66 credit hours (two years) of study. The foundation year consists of six 600-level courses, two 600-level social work electives, plus SOCW 632-9 (MSW Practicum I).
The 600-level courses are:

SOCW 630-3	Communication Skills
SOCW 631-3	Critical Social Work Practice
SOCW 632-9	MSW Practicum I
SOCW 633-3	Critical Social Policy
SOCW 634-3	Social Work Research/Policy/Practice
SOCW 635-3	Social Work Philosophy and Ethics
SOCW 637-3	Advanced Practice

MSW students in their Foundation Year must successfully complete SOCW 634-3 prior to registration in SOCW 609-3 and HHSC 703-3.

Indigenous Child and Youth Mental Health Graduate Certificate

The Certificate is designed for students who seek to practice in the area of Indigenous child and youth mental health in northern and remote communities, with a focus on working with children and youth who are experiencing significant mental health issues or who are at high risk. The certificate consists of 18 credit hours of 600-level coursework.

Admission

The Indigenous Child and Youth Mental Health Graduate Certificate program is open to Bachelor of Social Work and Bachelor of Child and Youth Care graduates. Those with related Bachelor-level degrees may also be eligible to apply, subject to the approval of the Chair of the School of Social Work. Those with a Master of Social Work or related Master's-level degree are also eligible to apply.

Graduate students in Social Work and other disciplines may take individual certificate courses as electives subject to approval of the Chair of the School of Social Work. Students wishing to audit coursework in the Certificate program may do so subject to the approval of the Chair of the School of Social Work and subject to UNBC admitting and auditing regulations and policies set out in the graduate academic calendar. Courses taken for audit only do not earn academic credit. Note: Students are required to undergo a criminal records search prior to being admitted as set out in the regulations and policies of the graduate academic calendar.

Admission into the Certificate program is limited and requires the recommendation of the Chair of the School of Social Work.

Standards of Professional Conduct

All students are expected to abide by professional standards as set forth by the Canadian Association for Social Work Education (CASWE) and the relevant Social Work Codes of Ethics. Violation of professional standards may result in suspension or dismissal from the program or the educational institution.

Qualification for Certificate

To fulfill the requirements of graduation, the student must:

- attain a minimum Cumulative GPA of 2.67 (B-) on courses for credit towards the Certificate; and
- complete all course requirements for the Certificate.

Required Courses

SOCW 670-3	Indigenous Peoples in Canada: Past/ Present/Future
SOCW 671-3	Reflections on Practice: Indigenous Child/ Youth Mental Health
SOCW 672-3	Social Work/Counselling Skills with Indigenous Children/Youth
SOCW 673-3	Mental Illness and Addictions Among Indigenous Children/Youth
SOCW 674-3	Crisis Work with Indigenous Children/Youth: Restoring Balance
SOCW 675-3	Community-Based Prevention with Indigenous Peoples: Creating Balance

Division of Medical Sciences

The Division of Medical Sciences is an academic administrative unit that consists of the UBC MD Undergraduate Program (Northern Medical Program), the distributed UBC Health Professions Degree Programs, and the UBC/UNBC joint Health Professions Degree Programs. The Division of Medical Sciences promotes scholarship and innovation in research and medical education to address societal health needs, specifically in northern and rural communities. It is affiliated with the Faculty of Human and Health Sciences for the purposes of professional academic association and collaboration.

UBC Master of Physical Therapy-North (MPT-N)

The UBC Master of Physical Therapy Program (MPT) is the only fully distributed, entry-to-practice Physical Therapy program in British Columbia. The MPT Program offers students the opportunity to study at one of two locations: UBC's Point Grey campus or at UNBC's Prince George campus.

The MPT-N allows students to complete their academic and clinical learning with a focus on rural and remote communities.

The MPT-N is delivered in partnership with UNBC. This fully distributed model of learning uses technology that allows instructors and students to interact in real-time at multiple locations. Clinical skills assistants are present in labs at both campuses to facilitate learning and clinical skills development.

Clinical Learning

Students experience a wide variety of clinical settings in both public and private sectors with potential to participate in innovative projects and novel clinical experiences. Clinical learning for students takes place anywhere within the province; however, there is a focus on clinical sites within the Northern Health Authority, or at sites across the province that are designated as rural. Rural sites are typically small towns at considerable distance from urban centres. One important goal of the MPT-N is to graduate Physical Therapists who are committed to enhancing rehabilitation services in northern and rural areas. The actual location of clinical learning sites will vary each year.

Affiliate Status and Access to UNBC Student Services

UNBC offers an array of student services designed to foster student success. While academic registrations for all MPT-N students are at UBC, MPT-N students are registered as "affiliate students" at UNBC, enabling them to take advantage of all that UNBC has to offer. Please consult the MPT-N office for a complete and current list.

Academic and Non-Academic Policies, Procedures and Regulations

MPT-N students are subject to the UBC Faculty of Medicine and Department of Physical Therapy's policies, procedures and regulations. For more information, please visit entrada.med.ubc.ca/community/policiesandforms.

While studying at the UNBC campus, MPT-N students are also subject to UNBC's non-academic related policies and procedures. For more information, please visit www.unbc.ca/policy.

How to Apply

Admission to the MPT-N is done through the UBC Graduate School Online Admission and Application System.
For more information, please visit: www.grad.ubc.ca/prospective-students/application-admission/apply-online.

Master of Occupational Therapy-North cohort (MOT-N)

The Master of Occupational Therapy – North cohort (MOT-N) is a UBC program that is provincially-funded. This is a collaborative program between UBC and UNBC, based in Prince George, that supports the recruitment and retention of occupational therapists in northern and rural regions. MOT-N students benefit from real-time instruction by local faculty in Prince George and remote faculty at each of the MOT sites, along with clinical skills assistants who provide hands-on guidance in labs. Students have access to state-of-the-art facilities, including clinical skills labs, a cutting-edge lecture theatre, breakout rooms, and study spaces.

Clinical Learning

As part of this program, students will be able to complete at least one out of five fieldwork placements within the Prince George area. The remaining four placements are not guaranteed to take place in the area; they occur within any health authority and may be in rural or urban locations. Students experience a wide variety of clinical settings in both public and private sectors, with the chance to participate in innovative projects. Clinical learning sites vary each year, but the majority of placements focus on critical sites within the Northern Health Authority, or typically in small towns away from urban centres.

Affiliate Status and Access to UNBC Student Services

UNBC offers an array of student services designed to foster student success. While academic registrations for all MOT-N students are at UBC, MOT-N students are registered as "affiliate students" at UNBC, enabling them to take advantage of all that UNBC has to offer. Please consult the MOT-N office for a complete and current list.

Academic and Non-Academic Policies, Procedures and Regulations

MOT-N students are subject to the UBC Faculty of Medicine and Department of Occupational Science and Occupational Therapy's policies, procedures, and regulations. For more information, please visit https://osot.ubc.ca/current-students.

While studying at the UNBC campus, MOT-N students are also subject to UNBC's non-academic related policies and procedures. For more information, please visit www.unbc.ca/policy.

Application Guidance

Apply for admission to the MOT-N program through the UBC Graduate School Online Admission and Application System at www.grad.ubc.ca/prospective-students/application-admission/apply-online.

Course Prefixes Listed Alphabetically

ANTH	Anthropology
BCMB	Biochemistry and Molecular Biology
BIOL	Biology
CHEM	Chemistry
COMM	Commerce/Business Administration
COUN	Counselling
CPSC	Computer Science
DISM	Disability Management
ECON	Economics
EDUC	Education
ENGL	English
ENGR	Engineering
ENPL	Environmental Planning
ENSC	Environmental Science
ENVS	Environmental and Sustainability Studies
FNST	First Nations Studies
FSTY	Forestry
GEOG	Geography
GNDR	Gender Studies
HHSC	Health Sciences
HIST	History
IENG	Integrated Engineering
IDIS	Interdisciplinary Studies
INTX	International Exchange
INTS	International Studies
MATH	Mathematics
MCPM	Mathematical, Computer, Physical, and Molecular Sciences
NRES	Natural Resources and Environmental Studies
NREM	Natural Resources Management
NURS	Nursing
ORTM	Outdoor Recreation and Tourism Management
PHYS	Physics
POLS	Political Science
PSYC	Psychology
SOCW	Social Work
STAT	Statistics
VRES	Visiting Research Student

Upper Division and Graduate Level Courses

Credit is not granted for both 400- and 600-level courses having the same title, unless otherwise specified in the course description.

Prerequisites

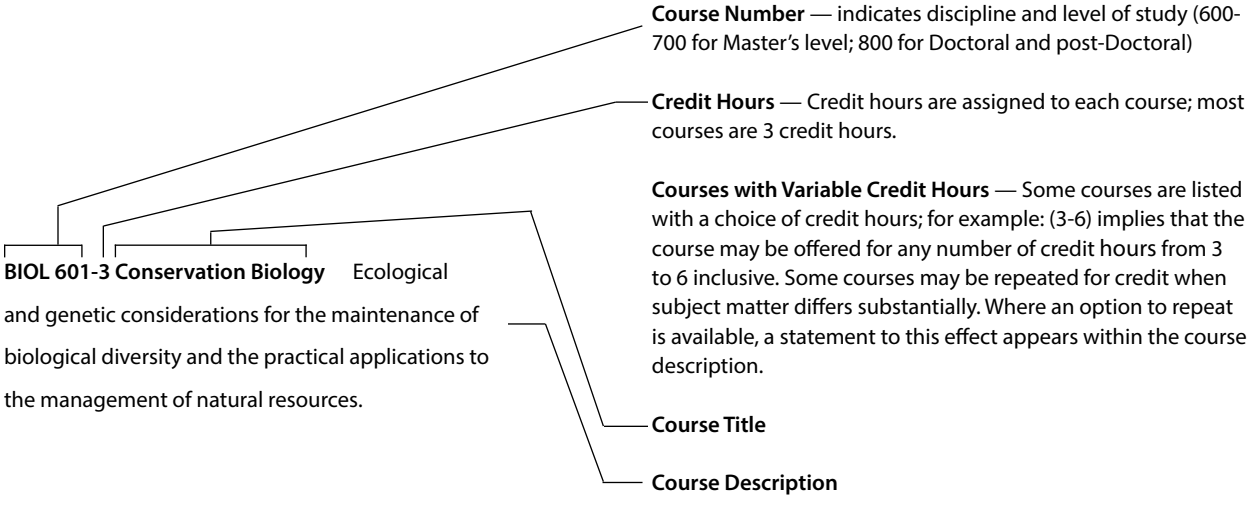
A prerequisite course is an academic requirement that must be successfully completed prior to the student taking a course. Prerequisites are used to ensure that a student has the required background to successfully complete the course. Prerequisites may also have prerequisites. These prerequisites must also be fulfilled.

Course Offerings

Not all courses are offered every year. Check the online course schedule for a list of the courses being offered in each semester.

Course Descriptions

The explanation below will help clarify the terms found in the course descriptions.



Anthropology (ANTH)

ANTH 600-3 Advanced Anthropological Theory This course surveys and critiques selected contemporary approaches to cultural and social theory.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 400-3

ANTH 601-3 Anthropological Perspectives on Inequality An examination of the embedding of inequality in cultural systems, and the intersection of categories such as race, class and gender in systems of hegemony; examples will be selected from a variety of cultural contexts.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 401-3

ANTH 604-3 Comparative Study of Indigenous Peoples of the World A project-based seminar in which students will examine the similarities and differences of selected groups, focusing on issues such as relations with state societies, etc.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 404-3

ANTH 605-3 Landscapes, Place and Culture This course provides an examination and critique of the anthropological approaches to landscape, space and place. Cross-cultural and cross-temporal case studies are used.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 405-3

ANTH 606-3 Feminist Perspectives in Anthropology This course surveys and critiques selected theoretical approaches and ethnographies to examine key areas of interest and debate in the field of feminist anthropology. This course draws from the political ideology in feminism concerned with critical examination of gender relations and cross-cultural anthropological study.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 406-3

ANTH 607-3 British Columbia Ethnography This course is a comparative critique of contemporary ethnographic research of selected cultures or regions.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 407-3

ANTH 609-3 Advanced British Columbia Archaeology This course is a problem-based seminar in which selected issues are examined from several points of view.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 409-3

ANTH 610-3 Theory of Nation and State A critical examination of theories of ethnicity, nationalism and statehood from an anthropological perspective.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 410-3

ANTH 611-3 Biological Anthropology This course is a problem-oriented and project-based seminar examining a selected topic, or topics, in biological anthropology. Credit is available for both ANTH 411 (3-6) and ANTH 611-3, provided the topic is substantially different between offerings.

Prerequisite(s): Permission of the instructor

ANTH 613-3 Environmental Anthropology This course is an examination of the anthropological literature on ecology and environmental practices in which contemporary issues and examples relevant to indigenous practices and northern peoples are developed.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 413-3

ANTH 614-3 Religion, Ideology, and Belief Systems This course provides a review of anthropological approaches to religion, ideology and belief systems using comparative examples from several cultures.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 414-3

ANTH 616-6 Archaeological Survey and Mapping Course participants will learn about archaeological survey, from both the academic perspective, and from the perspective of professional consulting archaeology. Students will become proficient at map reading, compassing, sampling strategies in forest and non-forest environments, and recognizing cultural features pertinent to the area. Participants will learn skills necessary for potential employment with professional archaeology firms; this will include observing protocols with First Nations communities and liaising with government and corporate entities. Where possible, students will have an opportunity to work for a few days with professional consultants.

Prerequisite(s): Permission of the instructor
Corequisite(s): ANTH 617-6 and ANTH 618-3
Preclusion(s): ANTH 416-6

ANTH 617-6 Excavation and Field Interpretation in Archaeology Excavation forms a central aspect of archaeology. As part of this course, students and community members will participate in a 6-8 week excavation of an archaeological locality. This will involve initial set up of the area, excavation and record-keeping, and basic field laboratory procedures. In addition to "hands-on" participation, daily seminar discussion will be mandatory; topics will centre on each day's survey and excavation results. These sessions will be interdisciplinary, reflecting the interests of the instructors, community members, visiting researchers and students. Topics will invariably focus on geomorphology, lithic artifacts, zooarchaeology, paleoethnobotany, paleoecology, oral traditions and traditional use, and the social context of conducting archaeology. The field school will often take place in remote localities in British Columbia and elsewhere, and so students may have to live in a field camp situation. In addition to basic tuition, there may be additional fees to cover camp and transportation costs.

Prerequisite(s): Permission of the instructor
Corequisite(s): ANTH 616-6 and ANTH 618-3
Preclusion(s): ANTH 417-6

ANTH 618-3 Archaeology and First Nations Introduces students to the value of ethnographic information (including oral history, place names documentation, traditional technology, subsistence, and traditional use activities), the interpretation of archaeological data and construction of First Nations (pre) history.

Prerequisite(s): Permission of the instructor
Corequisite(s): ANTH 616-6 and ANTH 617-6
Preclusion(s): ANTH 418-6

ANTH 621-(3-6) Ethnographic Field Methods This course is a project-based seminar in which students actualize field methods in ethnographic research, in addition to closely examining questions of ethical research and community participation in ethnographic research. This course consists of at least three weeks of classroom instruction in a field location and emphasizes the actualization of conventional ethnographic methods and procedures in a field setting. Students are expected to participate in a larger field project and to gain direct experience in field methods while being sensitized to the requirements of ethical research and community involvement in ethnography. Credit may be available for ANTH 421-(3-6) and ANTH 621-(3-6) if the subject matter and course location differ substantially.

Prerequisite(s): Permission of the instructor

ANTH 622-(3-6) Ethnographic Research Project This is a project-based course in which students examine and compare selected aspects of cultures and peoples before integrating this acquired knowledge to design and carry out a major research project arising from the field experience. The ethnographic material covered shall be appropriate to the field school's locality and/or general research topic. Credit may be available for ANTH 422-(3-6) and ANTH 622-(3-6) if the subject matter and course location differ substantially.

Prerequisite(s): Permission of the instructor

ANTH 623-3 Urban Anthropology A review of the anthropological approaches to and the social theory of contemporary urban society in the local, national and global contexts of the modern world. Contemporary issues relevant to the North will be addressed.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 423-3

ANTH 625-5 Introduction to Zooarchaeology This lab course introduces students to the study of animal bones found in archeological contexts. The first part of the course focuses on animal bone identification, while the second part centers on theoretical aspects of animal use by pre-Industrial human societies. As part of the course, students may have to prepare animal skeletons.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 425-3

ANTH 630-3 Stone Tools in Archaeology Stone tools are the most ubiquitous type of artifact found around the world. This lab-seminar course focuses on methods and techniques for analyzing stone tools, and includes a strong theoretical component on stone tool production and use in pre-Industrial societies. Weekly labs focus on analytical procedures, and in addition students are expected to complete assigned readings and participate in discussions.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 430-3

ANTH 651-3 Traditional Use Studies This course is an advanced seminar on traditional use studies, their use, application, and development. The seminar examines the origins and development of this field, reviews case studies and recent applications, and analyzes contemporary policies.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 451-3, FNST 451-3, FNST 651-3

ANTH 698-3 Special Topics in Anthropology Credit available for both ANTH 498-3 and ANTH 698-3 provided topic differs substantively between offerings.

Prerequisite(s): Permission of the instructor
Preclusion(s): ANTH 498-3

ANTH 699-3 Independent Study Credit available for both ANTH 499-3 and ANTH 699-3 provided topic differs substantively between offerings.

Prerequisite(s): Permission of the instructor

Biochemistry and Molecular Biology (BCMB)

BCMB 601-3 Basic Science of Oncology This is a lecture-based course designed to provide insight into our basic understanding of the biological chemistry of cancer. Major topics include chemical carcinogenesis, genomic instability, oncogenes and tumor suppressor genes, cell growth, apoptosis, tumor progression and metastasis, tumor angiogenesis, hormones, viruses, and drug resistance. This course also provides an in-depth look at the advanced technology used in controlling the disease, including immunotherapy and therapeutic approaches in controlling gene expression.

Prerequisite(s): Permission of the instructor
Preclusion(s): BCMB 401-3

BCMB 602-3 Macromolecular Structure This is a lecture-based course designed to provide students an understanding of the theory behind structural techniques used in biochemical laboratories. Topics include X-ray crystallography, nuclear magnetic resonance spectroscopy and electron microscopy; students are expected to develop an understanding of the theory and application of the techniques and technical considerations. Students also learn how to judge the quality of data.

Prerequisite(s): Permission of the instructor
Preclusion(s): BCMB 402-3

BCMB 603-3 Advanced Nucleic Acids This is a lecture-based course designed to provide in-depth knowledge on advanced topics in nucleic acid biochemistry. Topics include mechanistic analysis of nucleic acid metabolism, the RNA world hypothesis and theories of the origin of life, epigenetics, specificity and role of polymerases and repair pathways, replication and recombination mechanisms, RNA structural motifs and physical processing in gene expression, structure and function of non-coding RNA, silencing and micro RNA, catalytic RNA molecules, and applications of RNA molecules.

Prerequisite(s): Permission of the instructor
Preclusion(s): BCMB 403-3

BCMB 605-3 Topics in Biochemistry and Molecular Biology This course considers advanced topics in biochemistry. Topics depend on instructor and student interest and normally focus on material not dealt with in other courses. Note: Credit may be granted for both 400- and 600-level offerings of Topics in Biochemistry and Molecular Biology courses, and either the 400- or 600-level or a combination of both may be repeated to a maximum of 6 credit hours, provided the content of the independent offerings of the courses is sufficiently different (as determined by the Program Chair or Dean).

Prerequisite(s): Permission of the instructor

BCMB 701-3 Cell Biology Theory and Techniques This course focuses on the most advanced topics in cell biology. Students are given the opportunity to learn both the theory and practical aspects of various techniques used in cell biology, including fluorescence microscopy. Students develop relevant expertise in cell biology methods as part of the course requirement.

Prerequisite(s): Permission of the instructor

BCMB 702-3 Chemical Biology Theory and Techniques This course focuses on a new discipline, spanning the fields of chemistry and biology, that forms the basis of current pharmaceutical research. Chemical biology uses the techniques and tools of chemistry to study and manipulate biological systems, often using small molecules produced synthetically or derived from natural sources. Both in vitro and in vivo systems that are probed with small molecules are covered in this course. Emphasis is placed on the theoretical and experimental strategies used to design or discover molecules with useful properties, including biochemical and cell-based screens.

Prerequisite(s): Permission of the instructor

BCMB 703-3 Molecular Biology Theory and Techniques This course focuses on the most advanced topics in molecular biology. Emphasis is placed on the development of expertise in the relevant molecular biology techniques used to study DNA, RNA, and proteins.

Prerequisite(s): Permission of the instructor

BCMB 704-1.5 Graduate Seminar Students investigate and present ideas and results pertaining to current research in Biochemistry and Molecular Biology. The offerings may include presentations of current literature, research methodology, and topics related to students' own research or project work. This is a PASS/FAIL course.

Prerequisite(s): Permission of the instructor

BCMB 705-3 Advanced Topics in Biochemistry and Molecular Biology This course focuses on selected advanced topics in biochemistry and molecular biology.

Prerequisite(s): Permission of the instructor

BCMB 706-3 Bioinformatics Tools This course focuses on the use of bioinformatics tools in biochemistry and molecular biology research. Students are given the opportunity to learn the most widely used as well as more advanced bioinformatics tools to study bio-molecules.

Prerequisite(s): Permission of the instructor

BCMB 790-3 Special Topics This course focuses on selected special topics in advanced biochemistry, molecular biology and/or cell biology.

Prerequisite(s): Permission of the instructor

BCMB 793-6 Master of Science (Biochemistry) Project The MSc project requires the completion of an extended position paper, report, plan or program making a contribution to, or addressing a major issue in, a scientific field. The development of the project requires the application of original thought to the problem or issue under investigation. The non-thesis project does not require the development of a research design or research methodology, and need not involve the collection or generation of an original data. This is a PASS/FAIL course.

Prerequisite(s): Acceptance in the Masters of Science (Biochemistry) program

BCMB 794-12 Master of Science (Biochemistry) Thesis The MSc thesis documents a scientific contribution to the field of Biochemistry. Students are expected to conduct original research involving a literature review, development of a research design and methodology, testing and analysis of data, and development of conclusions. Successful defence of the thesis is required for graduation in the Master of Science (Biochemistry) thesis stream. This is a PASS/FAIL course.

Prerequisite(s): Acceptance in the Masters of Science (Biochemistry) program

Biology (BIOL)

BIOL 601-3 Conservation Biology Ecological and genetic considerations for the maintenance of biological diversity and the practical applications to the management of natural resources.

Preclusion(s): BIOL 411-3

BIOL 602-3 Fisheries Management Management of freshwater and anadromous fish of British Columbia.

Preclusion(s): BIOL 414-3

BIOL 603-3 Population and Community Ecology Structure and dynamics of populations; theoretical and applied aspects of population and community ecology.

Preclusion(s): BIOL 410-3

BIOL 604-3 Wildlife Ecology The general ecology and biology of wildlife species, including physiology, behaviour, nutrition and endocrinology.

Preclusion(s): BIOL 412-3

BIOL 605-3 Wildlife Management Management criteria for reptiles, amphibians, birds and mammals. Emphasis on the socio-economic aspects of management. Communication processes are addressed.

Preclusion(s): BIOL 413-3

BIOL 606-3 Fish Ecology The general life history, ecology, zoogeography and habitats of freshwater, anadromous and marine fishes.

Preclusion(s): BIOL 406-3

BIOL 609-3 Conservation of Aquatic Ecosystems Aquatic ecosystems face many challenges requiring diverse conservation approaches. This course introduces students to the structure and functioning of aquatic ecosystems and exposes them to the myriad of conservation challenges being faced by these systems. The course presents common approaches used to address conservation issues in aquatic ecosystems and uses a series of case studies to illustrate successes and failures.

Prerequisite(s): BIOL 201-3
Preclusion(s): BIOL 409-3

BIOL 611-3 Insects, Fungi and Society The historical, social and economic importance of insects and fungi to human society, including underlying biological and ecological principles.

Preclusion(s): BIOL 421-3

BIOL 620-3 Animal Behaviour Adaptive significance and evolutionary basis of behaviour patterns exhibited by the major animal phyla.

Preclusion(s): BIOL 420-3

BIOL 623-3 Molecular Evolution and Ecology A lecture and laboratory based course that focuses on the evolution of macromolecules, the reconstruction of the evolutionary history of species, populations, or genes, and the use of genetic information to gain insights into the ecology of species.

Preclusion(s): BIOL 423-3, BIOL 709-3

BIOL 624-3 Plant Ecology Principles of ecology as they relate to plants. Structure, classification and analysis techniques, and the dynamic behaviour of plant communities.

Preclusion(s): BIOL 404-3

BIOL 625-3 Applied Genetics and Biotechnology
Familiarization with advanced genetic laboratory techniques and processes. Lectures will cover applications of genetic techniques and biotechnology as well as ethics issues regarding the use of these technologies. Specific topics will include: animal forensics, recombinant and transgenic theory, quantitative/molecular genetics, biotechnology and molecular ecology.

Prerequisite(s): Permission of the instructor
Preclusion(s): BIOL 425-3

BIOL 632-3 Aquatic Plants Classification, physiology, ecology, and environmental implications of aquatic plants. Both marine and freshwater systems are covered with emphasis on the aquatic plants of British Columbia.

Preclusion(s): BIOL 402-3

See NRES course listing for additional 700-level Biology courses.

Chemistry (CHEM)

CHEM 602-3 Topics in Organic Chemistry Credit may be granted for both 400- and 600-level offerings of Topics in Chemistry courses, provided the content of the independent offerings of the courses is sufficiently different (as determined by the Program Chair or Dean).

Prerequisite(s): Permission of the instructor

CHEM 604-3 Topics in Physical Chemistry Credit may be granted for both 400- and 600-level offerings of Topics in Chemistry courses, provided the content of the independent offerings of the courses is sufficiently different (as determined by the Program Chair or Dean).

Prerequisite(s): Permission of the instructor

CHEM 610-3 Topics in Analytical Chemistry An advanced treatment of selected topics in analytical chemistry such as spectroscopy, separation technology and analytical instrumentation. Credit may be granted for both 400- and 600-level offerings of Topics in Chemistry courses, provided the content of the independent offerings of the courses are sufficiently different (as determined by the Program Chair or Dean).

Prerequisite(s): CHEM 310-3
Preclusion(s): CHEM 410-3

CHEM 699-(3-6) Independent Study Concentration on particular topic(s) agreed upon by the students and a member of the Chemistry faculty. May be repeated for a maximum of 6 credit hours. Credit may be granted for both 400- and 600-level offerings of the course provided the content is sufficiently different as determined by the Program Chair or Dean.

Prerequisite(s): Permission of the Program Chair

CHEM 704-3 Advanced Topics in Physical Chemistry
Selected advanced topics in physical chemistry.

Prerequisite(s): Permission of the instructor

CHEM 714-1.5 Graduate Seminar Students investigate and present ideas and results pertaining to current research in Chemistry. The offerings may include presentations of current literature, research methodology, and topics related to students' own research or project work. This is a PASS/FAIL course.

CHEM 742-3 Organic Structure Determination This course is an advanced treatment of organic chemistry, and is designed to provide complete training in the practical aspects of modern structure determination. Students have the opportunity to make informed decisions about experimental design and execution for structure elucidation employing theoretical and practical aspects, and utilizing the latest NMR, MS, and spectroscopic methods to determine constitution and configuration (relative and absolute) of organic compounds.

CHEM 790-3 Special Topics Selected special topics in advanced chemistry.

Prerequisite(s): Permission of the instructor

CHEM 793-6 Master of Science (Chemistry) Project The MSc project requires the completion of an extended position paper, report, plan or program making a contribution to, or addressing a major issue in, a scientific field. The development of the project requires the application of original thought to the problem or issue under investigation. The non-thesis project does not require the development of a research design or research methodology, and need not involve the collection or generation of an original data. This is a PASS/FAIL course.

Prerequisite(s): Acceptance in the Masters of Science (Chemistry) program

CHEM 794-12 Master of Science (Chemistry) Thesis The MSc thesis documents a scientific contribution to the field of Chemistry. Students are expected to conduct original research involving a literature review, development of a research design and methodology, testing and analysis of data, and development of conclusions. Successful defence of the thesis is required for graduation in the Master of Science (Chemistry) thesis stream. This is a PASS/FAIL course.

Prerequisite(s): Acceptance in the Masters of Science (Chemistry) program

Commerce (COMM)

COMM 603-3 Business and Corporate Strategy The goal of the first module of this course is to introduce students to the strategy formulation process and to the pursuit of competitive advantage in the single market or industry context. The second section of this course builds on the strategic planning concepts introduced in the Business Strategy module. At the corporate level, firms ranging from small to large in size operate in multiple markets and/or industries. The purpose of this module is to analyze how various corporate strategy approaches can create a whole that is greater than the sum of the parts.

COMM 610-3 Accounting Using financial information for decisions and control is an important skill for managers. This course explores selected topics within the realms of financial and management accounting using a combination of lectures and case studies. More specifically, the financial accounting segment focuses on the structure and interpretation of financial accounts prepared primarily for external users. Management accounting focuses on the internal users and includes such topics as budgeting, cost-volume-profit analysis, activity-based costing, planning and control, the balanced scorecard, relevant costs and variable costing versus full-absorption costing.

COMM 620-3 Corporate Finance This course establishes the theory and practice foundations of financial management. The central concerns of the financial manager, namely capital budgeting, capital structure, working capital management and financial planning are studied extensively using quantitative and qualitative inquiry. These concerns of the financial manager are applicable not only to corporate settings but more broadly to not-for-profit and governmental organizations.

COMM 632-3 Organizational Behaviour The ability to successfully manage people is a critical skill for managers who want to create and manage high-performing organizations. This course focuses on helping students develop people management skills and the knowledge and skills needed to transform the organization. There is an emphasis on leadership as it relates to motivating people, building effective teams and interpersonal relations, managing change, creating learning organizations and developing the organization.

Preclusion(s): COMM 630-3

COMM 637-3 Research in Human Resources Management/ Organization Behaviour 1 This course reviews and critiques research methods, analysis, and strategies within a specialized area of human resources management and organization behaviour drawing upon faculty expertise. The course is delivered by individual faculty members on a revolving basis, drawing on their active program of research.

Preclusion(s): COMM 437-3

COMM 638-3 Research in Human Resources Management/ Organization Behaviour 2 This course reviews and critiques research methods, analysis, and strategies within a specialized area of human resources management and organization behaviour drawing upon faculty expertise. The course is delivered by individual faculty members on a revolving basis, drawing on their active program of research.

Preclusion(s): COMM 438-3

COMM 640-3 Marketing This course focuses on developing and executing effective marketing strategies and plans. Students develop an understanding of major marketing concepts and their applications. These include developing a customer-focus organization, identifying marketing opportunities, forecasting demand, product/service development, buyer behaviour, market segmentation, targeting, pricing, communication and distribution.

COMM 650-3 Operations Management This course helps students to understand the nature of problems and to find solutions in manufacturing and service operations conducted in profit and not-for-profit organizations. It includes the application of quantitative tools and techniques of analysis for making managerial decisions about operations. It covers topics such as; productivity and its measurement in organizations, operations strategy, decision making, forecasting, product and service design, design of operation systems, management of quality, production planning and control of operations, project management, e-commerce, lean and just-in-time systems. The use of case studies, projects, and class presentations are emphasized to promote interaction among individuals and teams.

COMM 652-3 Business Analytics This course provides students with the opportunity to learn about the basics of business analytics, specifically, how to extract information from large amounts of data in order to perform business functions and make business decisions. Topics include techniques for data sourcing, data cleaning, qualitative and quantitative analysis, and data visualization. These techniques are also applied to specific business areas such as marketing, accounting and finance.

COMM 662-3 Research Methodology This course emphasizes the development and implementation of the quantitative and qualitative research designs most frequently used in applied and field settings, including case studies, archival research, experimental and quasi-experimental designs, survey research, and observational research. The topic of research ethics is also covered in this course.

COMM 690-3 Economic and Business Development This course focuses on how businesses are situated in the local economy and the development of businesses to flourish in those economies. The topics include business viability, market validation, impact evaluation, competition analysis, and zoning. The course focuses on the practical side of working with local economic actors such as trade commissions, economic development offices, and innovation hubs. Each cohort in the MBA program has unique content brought into the course through practitioners found in the local economic and business development ecosystems.

COMM 698-3 Special Topics in Business Administration This course seeks to enhance and broaden the analytical and research skills of students by providing curriculum in special areas of research in management (like behavioural research and analysis, mathematical finance, project management, quantitative methods in business) based on the research agenda of faculty and emerging areas of research.

COMM 701-3 Strategy Implementation This course is designed to advance students' understanding of how to turn strategic thinking into decisions, actions and the attainment of strategic objectives. Strategic plans often fail to achieve their potential due to implementation problems. The goal of this course is to assist students to integrate learning and experience in order to avoid these pitfalls. This integrative course assumes a working familiarity with all major functional areas, as well as a foundation in strategic analysis and strategy formulation.

Prerequisite(s): COMM 603-3 or permission of the instructor

COMM 702-3 Sustainability Management This course introduces students to the concept of sustainability (from an environment, social, and governance perspective) in a business context, and the conceptual tools and analytical skills used to improve sustainability in organizations. Students are exposed to cases and applications of sustainability in the local context in which they are studying. This course helps students become more aware of sustainability opportunities and challenges in their workplaces and furthers their careers by providing skills that are important now and crucial in the future.

COMM 703-3 International Business The goal of this course is to provide a framework for analyzing and managing key international business issues. Students gain an understanding of the role played by the international manager in balancing responsiveness to local conditions against the challenges of planning and integrating global operations.

COMM 735-3 Law, Governance and Ethics Managers require a fundamental understanding of the network of legal and ethical responsibilities that connect stakeholders with organizations. The philosophy and principles of law, corporate governance and ethics are discussed, with class investigation of case examples used to study selected topics within each field of study.

COMM 736-3 Human Resource Management and Industrial Relations This course has a dual emphasis on human resources management and industrial relations. In the area of human resources management, students learn how to develop human resource strategies, and how to manage compensation, performance evaluation and diversity. In the industrial relations area, students learn about the Canadian industrial relations system, the legal environment and collective bargaining with an emphasis on the negotiation process.

COMM 737-3 Leadership Practice and Development This course helps students to shape and develop their leadership practices, covering topics such as humility, servant leadership, authentic leadership, and cultural intelligence. Students are taught about e-leadership and how it influences followers' performance. In this course, strategic leadership skills are linked with the practical demands of current economies.

COMM 738-3 Change Management This course introduces change management theories and frameworks. Students have the opportunity to develop skills to effectively solve and communicate key issues relating to managing change in organizations. This course enables students to analyse why organizations change, assess the readiness of organizations to undergo change, diagnose change, identify resistance to change, and conduct comprehensive change impact analysis.

Pre- or Corequisite(s): COMM 632-3

COMM 751-3 Project Management The course content includes project life cycle, project planning, budgeting, resource loading, resource leveling and planning, cost estimation and crashing. It also includes project evaluation, auditing, communication, and termination; and includes the use of basic statistical tools and project management related software for project management related exercises and for practical case studies.

Prerequisite(s): COMM 650-3

COMM 755-3 Management of Technology This course helps students to understand the nature of technology and innovations, effect of technology on businesses and business processes, development of new products and services for businesses by making use of innovations and technology. It includes topics such as: diffusion of products and process innovations in industry, business and technology, new product development and its introduction in the market, management of technological change process in organizations, management of research and development, technology forecasting, technology transfer, technology strategy and planning for growth and sustainable development. Case studies, seminars, class presentations are emphasized to promote interaction among participants.

COMM 760-3 Seminar in Business Administration This course includes a basic introduction to scholarship in business and reviews the current state of theory, research, and practice across the range of topics in business administration. Faculty members within specialized areas of business administration (accounting, finance, human resources management/organizational behaviour, marketing, operations management/international business) present 2-3 week modules in their areas of specialization.

COMM 762-3 Independent Research in Business Administration Working individually or in a small group, students conduct research under the supervision of a faculty member within a specialized area of business administration.

Prerequisite(s): COMM 662-3 and COMM 760-3, or permission of the instructor

COMM 763-12 Master's Thesis Designed and executed by the student, the MSc thesis involves an original empirical investigation in the chosen specialized area of business administration. This is a PASS/FAIL course.

COMM 799-6 MBA Project The capstone of the MBA program, the MBA project demonstrates the student's ability to undertake practical business research with limited guidance from a member of faculty. Students normally complete their research during the second year of the program. This is a PASS/FAIL course.

Counselling (COUN)

COUN 601-3 Research Design and Methodology This course provides an introduction to the paradigms of research, the formulation of research questions, the consideration of ethical issues, the principal types and methods of research in counselling, the preparation of research proposals, and the reporting of research results. Students are encouraged and assisted to utilize this course to develop either a thesis or project proposal that satisfies the research requirement of the MEd degree program.

Preclusion(s): EDUC 601-3

COUN 610-3 Qualitative Analysis in Counselling This course provides an introduction to the conceptual underpinnings of qualitative research and to qualitative data analysis methods, including case study, discourse analysis, grounded theory, action research, phenomenology, narrative inquiry, and ethnography. Students have the opportunity to learn hand coding and analysis.

Preclusion(s): EDUC 610-3

COUN 612-3 Trauma Counselling This course is designed as the foundation for counsellors and clinicians to provide trauma-informed support to people who have experienced adversity. This course presents the basic neurobiology of trauma, including implications for memory, learning, and emotional regulation. The connection between trauma and addictions is explored. Various interventions and strength-based approaches are included, guided by the importance of safety in all aspects of clients/patients' lives and in service provision.

Preclusion(s): EDUC 612-3, EDUC 692-3 when offered as Trauma Counselling

COUN 613-3 Interpersonal Counselling Skills This course explores the theory and practice of interpersonal communication and helping skills in counselling. It provides opportunity within the classroom setting to practice and receive feedback on basic helping and communications skills.

Preclusion(s): EDUC 613-3
Restriction(s): This course is restricted to MEd Counselling or DISM students, or by permission of the instructor

COUN 618-3 Family Counselling This course is an introduction to classic and postmodern theories of family counselling including Bowen, Structural, Strategic, and Experimental Family Therapies. Application of theory to practice is included.

Preclusion(s): EDUC 618-3
Restriction(s): This course is restricted to MEd Counselling students or permission of the instructor

COUN 619-3 Counselling for Aboriginal/Indigenous Peoples This course examines the place of counselling in the holistic context of Aboriginal/Indigenous approaches to health and healing. In particular, it examines the counselling processes that are inherent in traditional healing practices, such as the sweat lodge, concentric circle, talking circle, and vision quest.

Preclusion(s): EDUC 619-3

COUN 633-3 Human Development: Implications for Counselling Contemporary theories of human development are examined along with their implications for counselling children, adolescents, and adults.

Preclusion(s): EDUC 633-3

COUN 692-3 Special Topics Topics to be determined by the special interests of students and the availability of faculty members to teach those topics. This course may be retaken any number of times, provided all topics are distinct.

Preclusion(s): EDUC 692-3 when topic is the same

COUN 693-3 Directed Reading This course is an independent study under the direction of a faculty member, and provides an opportunity for students to study a topic relevant to their program of studies if additional study is either desirable or necessary to correct possible deficiencies in their preparation for graduate study.

Preclusion(s): EDUC 693-3

COUN 711-3 Counselling Theory This course is an examination of the theoretical foundations of counselling. Topics reviewed include analytic, behavioural, cognitive, existential, person-centred, gestalt, feminist, and postmodern therapies.

Preclusion(s): EDUC 711-3

COUN 712-3 Counselling Practice This course is an integrative exploration of information on counselling skills, strategies, techniques, and client issues required for effective practice. It includes an overview of current versions of Brief Therapy (Solution-Focused), Narrative Therapy, and Cognitive Behavioural Therapy. Individual clinical supervision of video-recorded sessions is a major component of this course.

Prerequisite(s): COUN 613-3
Preclusion(s): EDUC 712-3
Restriction(s): This course is restricted to MEd Counselling students

COUN 714-3 Group Counselling Processes This course addresses the theory and practice of group counselling. Opportunities are provided to participate in and conduct group sessions.

Preclusion(s): EDUC 714-3

COUN 715-3 Career Counselling This course is an evaluative survey of the counselling theories and practices employed to facilitate career decision-making in a variety of community agency settings.

Preclusion(s): EDUC 715-3

COUN 716-3 Clinical Counselling This course is an examination of specific areas of clinical counselling such as behaviour disorders, mental subnormality, learning disabilities, mood disorders, anxiety disorders, and personality disorders.

Preclusion(s): EDUC 716-3

COUN 717-3 Ethics in Counselling This course examines the ethical and legal issues found in counselling practice with individuals, couples, families, and groups. It also presents an ethical decision-making process and model for application to counselling practice dilemmas. Students become familiar with counselling codes of ethics.

Preclusion(s): EDUC 717-3

COUN 719-6 Counselling Practicum This course includes a practicum placement in at least one community agency setting, scheduled seminars, and individual supervision. Students are required to complete 150 hours of direct client contact time at their practicum. This course is PASS/FAIL.

Prerequisite(s): COUN 613-3, COUN 711-3, COUN 712-3, and COUN 714-3 and one Counselling elective course
Preclusion(s): EDUC 719-6
Restriction(s): This course is restricted to MEd Counselling students

COUN 795-3 Research Seminar This course is a seminar focused on supporting students' ongoing work on their theses or projects. In particular, the course identifies and explains the various tasks that are typically involved in the development of a thesis or project; for example, design, implementation, analysis, interpretation, and writing. Cooperative problem solving is employed to assist students to develop their theses or project plans. This course is PASS/FAIL.

Prerequisite(s): COUN 601-3 and EDUC 602-3 or equivalent
Preclusion(s): EDUC 795-3

COUN 797-3 Comprehensive Examination The comprehensive examination evaluates a candidate's knowledge of theory and practice in their field of counselling. This examination is designed to enhance and reinforce a student's knowledge of both counselling theory and practice as well as their interrelationship. This course is PASS/FAIL.

Prerequisite(s): successful completion of all other degree requirements
Preclusion(s): EDUC 797-3

COUN 798-6 MEd Project In this course, students are asked to develop theoretical innovations in the field of counselling. These may include program development, psychoeducational strategies, or counselling practices. The efficacy of the innovations must be evaluated and the results reported as a part of a formal report. The completed project report must be submitted to the student's supervisory committee for evaluation. This course is PASS/FAIL.

Preclusion(s): EDUC 798-6

COUN 799-9 MEd Thesis In this course, students are asked to identify a significant question in the field of counselling and implement a research strategy that addresses the question. The completed thesis must be submitted to the student's supervisory committee for evaluation. This course is PASS/FAIL.

Preclusion(s): EDUC 799-9

Computer Science (CPSC)

CPSC 600-3 Software Engineering Project This course provides students, working in groups, with an opportunity to apply the principles of software engineering, learned in previous courses, in a controlled and yet realistic project environment. They gain a significant integral project experience involving various project phases, such as requirements elicitation, system design, and prototyping, as well as team organization, human factors, professionalism, and project management.

Prerequisite(s): Permission of the instructor
Preclusion(s): CPSC 400-3

CPSC 624-3 Advanced Database Systems This course introduces advanced concepts in database design and applications. Topics include transaction management, concurrency control, query processing and optimization, recovery and security, data warehousing and data mining, handling of special data types such as multimedia, spatial data, and XML documents. An introduction to object-oriented and object-relational models, parallel and distributed databases, and special purpose databases is also provided. Support for complex applications, information retrieval and data analysis is examined.

Prerequisite(s): Permission of the instructor
Preclusion(s): CPSC 424-3

CPSC 641-3 Distributed Systems This course covers the fundamental principles and paradigms underlying the design of distributed computing systems. The coverage includes the definition and types of distributed systems, communication, processes, naming, synchronization, consistency and replication, fault tolerance, and security. Term projects focus on case studies of specific systems representing web-based, peer-to-peer, mobile, grid, and other modern paradigms.

Prerequisite(s): Permission of the instructor
Preclusion(s): CPSC 441-3

CPSC 642-3 Parallel Computing This course introduces students to concepts in high performance computing. Topics include classification of parallel architectures, basic communications operations, interconnection networks, topologies of dynamic and static networks, performance issues and techniques for optimization, and dynamic programming. Parallel algorithm design for high-performance computing—such as applications in computational biology, finite-element and finite-difference methods for numerical simulations, dense/sparse matrix algorithms, and multidimensional data structures—is also discussed. Message passing (MPI and OpenMP) is used for implementation of algorithms on high performance cluster computers.

Prerequisite(s): Permission of the instructor
Preclusion(s): CPSC 442-3

CPSC 644-3 Computer Networks This course explores essential topics in computer networks including TCP protocol, TCP reliable transport service, Internet protocol IP addresses, IP datagram and datagram forwarding, IPv6, network applications, real time interactive applications protocols (RTP, RTCP, SIP, H.323), security in computer networks, and network management. Network applications discussed include client-server interaction, naming and domain name system DNS, multimedia networking, VoIP, audio and video streaming.

Prerequisite(s): Permission of the instructor
Preclusion(s): CPSC 444-3

CPSC 650-3 Bioinformatics This course introduces computational techniques for solving biological problems and presents an overview of the tools and methods used to analyze large biological data sets. After introducing molecular biology for computer scientists—cells and organelles, chromosome, gene, DNA, RNA, proteins, transcription and translation—the course explores pairwise and multiple sequence alignment, sequence database searches, pattern identification of genes, promoters and transcription factor binding sites, as well as secondary and tertiary structure prediction for RNA and proteins. Markov models for gene prediction are introduced.

Prerequisite(s): Permission of the instructor
Preclusion(s): CPSC 450-3

CPSC 661-3 Applied Machine Learning This advanced course explores key areas of machine learning and data mining, focusing on the best ways to apply these concepts in actual systems. This course focuses supervised machine learning methods, but it also touches on unsupervised learning. Key subjects include essential algorithms like linear and logistic regression, decision trees, support vector machines, and clustering, along with neural networks. Students also delve into important methods for choosing the right features in data, reducing data complexity, estimating errors, and practical testing of these methods.

Prerequisite(s): Permission of the instructor
Preclusion(s): CPSC 461-3

CPSC 672-3 Knowledge Based Systems This course introduces students to Expert Systems. The two major topics addressed are Rule-based systems and Fuzzy Logic systems. Goal-driven forward-chaining and backward-chaining paradigms are introduced. Automatic theorem provers, inference engines and problems of knowledge representation and knowledge acquisition are discussed. Approaches to reasoning about uncertainty, including Bayesian probabilities, certainty factors, non-monotonic logics and reasoning with beliefs, are covered. A Fuzzy Logic system is implemented and an application is developed and tested.

Prerequisite(s): Permission of the instructor
Preclusion(s): CPSC 472-3

CPSC 673-3 Introduction to Data Mining This course introduces algorithms and paradigms that allow computers to discover previously hidden patterns in databases or datasets. Main topics include discovery of frequent patterns, analysis of different types of data (static, dynamic, sequential, uncertain, etc.) clustering and classification. Other topics may include data visualization, social network mining, real-life applications, and parallel/distributed data mining. Students work on assignments, term tests and an individual course project.

Preclusion(s): CPSC 473-3

CPSC 675-3 Multiagent Systems An introduction to the theoretical and practical aspects of intelligent agents and multiagent systems, this course is open to graduate students in different areas and fosters creative multidisciplinary interaction. Coverage includes the basic concepts, agent architectures, deductive and practical reasoning agents, reactive and hybrid agents, multiagent interactions, human-agent interactions, agreements, communication, and teamwork. Individual or team projects allow students to explore specific topics in their areas of interest through theoretical or laboratory work.

Prerequisite(s): Permission of the instructor
Preclusion(s): CPSC 475-3

CPSC 676-3 Social Robotics This advanced course offers a comprehensive introduction to the field of social robotics, emphasizing a human-centered approach and real-world applications. It covers the fundamentals, principles, and theories involved in designing, developing, and deploying robots capable of fostering meaningful social interactions with humans across diverse contexts, such as robots as tools in education or robot-assisted therapy. Through a combination of lectures, discussions, and critical analyses of human-robot interaction, the course provides opportunities to engage with key methodologies, and practical applications, equipping students with a thorough understanding of this rapidly evolving discipline.

Prerequisite(s): CPSC 101-4
Preclusion(s): CPSC 476-3

CPSC 682-3 Data Structures II External sorting and merging, best case, worst case, and average case estimates, time and space estimates for algorithms studied in CPSC 200-3 and CPSC 281-3.

Prerequisite(s): CPSC 281-3 and CPSC 340-3, or permission of the instructor
Preclusion(s): CPSC 482-3

CPSC 690-3 Computing Project I This course consists of a large computing project undertaken by the student or by teams of students. Projects will be geared to industrial or research needs and designed to give the senior students first-hand experience in applying their knowledge and skills to the design and implementation of medium to large software systems. Students will employ standard software engineering practices. Regular project team meetings will be held to review project milestones.

Prerequisite(s): Permission of the instructor

CPSC 699-3 Special Topics The topics for this course vary, depending on student interest and faculty availability. The course may be repeated any number of times, provided all topics are distinct from one another.

Prerequisite(s): Permission of the instructor
Preclusion(s): CPSC 499-3 on the same topic

CPSC 704-1.5 Graduate Seminar in Computer Science The course comprises weekly seminar sessions. Students will investigate and present ideas and results pertaining to current computer science research. The offerings may include presentations of current literature, research methodology, and topics related to students' own research or project work. Students will participate in discussions and critique of the work presented. MSc students are required to attend and participate in all seminar sessions to obtain credit for the course. This is a PASS/FAIL course. (All MSc students must register in a seminar course twice during their program of studies. It is expected that all MSc students will attend the seminar each semester they are available.)

CPSC 706-3 Topics in Computer Science Research and Methodology This course is designed to expose graduate students to research methods, principles and design techniques in computer science, which may include evolution of fundamental ideas in computer science, theoretical foundations, formal techniques in the areas of system specification, design, verification, validation and performance analysis. The course aims to offer methods and principles widely applicable in computer science. Specific applications studied will vary.

Prerequisite(s): Permission of the instructor

CPSC 720-3 - Advanced Programming Languages Topics for this course may include advanced study of general programming language design concepts, formal reasoning about programs and languages, pragmatic evaluation of language properties, and case studies of specific languages. The course may be used to communicate programming language theory and practice specific to students' project or thesis research needs.

CPSC 741-3 Advanced Topics in Distributed Computing This course focuses on exploration of principles of distributed computing through a study of selected advanced topics of research interest to faculty and students.

Prerequisite(s): Permission of the instructor

CPSC 760-3 Modelling and Simulation This course covers fundamental modelling and simulation concepts and discrete-event systems in particular. The course introduces systems modelling and simulation concepts, basic probability distributions and random numbers, queuing models, and an overview of relevant object oriented concepts. The fundamental concepts and practical simulation techniques for modelling different types of systems are covered. An in-depth study of modelling elements, simulation protocols, and their relationships including verification and validation are discussed. Various distributed systems are introduced as case studies and a significant part of the course and hand-on experience is through simulation projects. Understanding of distributed systems and object oriented programming concepts and basic probability theory is required.

Prerequisite(s): Permission of the instructor

CPSC 790-3 Graduate Seminar

CPSC 791-3 Advanced Special Topics I This course introduces selected advanced special topics in computer science. The content may vary.

CPSC 792-3 Advanced Special Topics II This course introduces selected advanced special topics in computer science. The content may vary.

CPSC 793-6 Master of Science (Computer Science) Project The MSc Project is an extended position paper, report, plan or program that makes a contribution to, or addresses, a major problem or issue in the field of computer science. The development of the project requires the application of original thought to the problem or issue under investigation. The project does not require the development of a research design or research methodology and need not involve the collection of original data. Successful completion of the project is required for graduation in the Master of Science (Computer Science stream) project option. This is a PASS/FAIL course.

Prerequisite(s): Acceptance in the Masters of Science program

CPSC 794-12 Master of Science (Computer Science) Thesis The MSc thesis documents a scientific contribution to the field of computer science. Students are expected to conduct original research involving a literature review, development of a research design and methodology, testing and analysis of data, and development of conclusions. Successful defence of the thesis is required for graduation in the computer science thesis stream. This is a PASS/FAIL course.

Prerequisite(s): Acceptance in the Masters of Science program

Disability Management (DISM)

DISM 609-3 Professional Ethics in Health Care Management This course addresses the ethical practice of health care management. Students are exposed to ethical dilemmas inherent to our health care system and are provided with the skills and knowledge to resolve these dilemmas. Students become familiar with several health care professionals' codes of ethics and learn how to apply various ethical decision-making models.

Prerequisite(s): Graduate standing

DISM 710-3 Foundations in Disability Management This course will provide a comprehensive overview of the principles and practices of disability management in the workplace. The course begins with an introduction to the interdisciplinary nature of return to work services and interventions, theoretical foundations of disability management and benchmark models or approaches used, and the typical issues and needs among persons challenged by return to work barriers. The application of management skills in resolving disability management problems will also be covered including traditional management skills in the areas of budgeting, human resources, service provision and problem-solving skills.

Preclusion(s): HHSC 710-3

DISM 711-3 Disability Management: Legislation, Policy and Procedures This course will provide the skills and knowledge required to develop organizational policy and procedures that are based on societal values, legislation and regulation, collective bargaining agreements, and the specific organizational culture.

Preclusion(s): HHSC 711-3

DISM 712-3 Disability Management Interventions The primary goal of disability management is to help workers with limitations and restrictions return to work at the optimum point in their rehabilitation and recovery. This course will cover the skills, knowledge and attitudes required for effective disability interventions. Additional topics covered include: working with the supervisor, the individual and the shop steward to develop, implement and monitor a successful transitional work plan.

Preclusion(s): HHSC 712-3

DISM 794-6 Disability Management Major Paper The Major Paper (MP) option is for those students who have written a letter outlining their experience in the disability management field and obtained permission allowing them to prepare a Major Paper in place of a Practicum (6 credit hours). It is the aim of the MP to acquaint students with the practice of scholarship. Such acquaintance normally entails a critical treatment of relevant academic literature using theoretical or philosophical methods. If the student wishes to pursue empirical research, either quantitative or qualitative, the thesis option must be selected.

Prerequisite(s): Completion of all the Disability Management required courses

DISM 795-6 Disability Management Practicum Students participate in field-based learning activities for the purpose of pursuing and developing research/policy administration/practice skills within a related employment area. The duration of this component is equivalent to three months' full-time employment. This is a PASS/FAIL course.

Preclusion(s): HHSC 795-6

DISM 796-3 Disability Management Comprehensive Examination The comprehensive examination option of study requires the successful completion of a comprehensive examination that evaluates a candidate's knowledge of theory, research, and practice in their field of study. This is a PASS/FAIL course.

Prerequisite(s): Completion of all coursework

DISM 798-(3-6) Directed Studies

Preclusion(s): HHSC 798-(3-6)

DISM 799-9 Disability Management Thesis This is a PASS/FAIL course.

Economics (ECON)

ECON 601-3 Global Economy and Development This course analyzes the evolution, and assesses competing theories, of the global economy. The prospects for developing countries within the global economy are examined.

Preclusion(s): ECON 401-3 and ECON 701-3

ECON 604-3 Poverty, Inequality and Development This course examines the dimensions and causes of poverty and inequality. It analyzes development strategies aimed at reducing poverty and inequality.

Preclusion(s): ECON 404-3 and ECON 704-3

ECON 608-3 Managerial Economics This course examines the economic basis of managerial decision-making. The focus is on demand analysis, production and costs, and price determination in different market structures. Other topics covered include pricing strategies, decision-making under risk, and the economic rationale for business regulation. Case studies and events reported in the business press inform the course.

ECON 610-3 Health Economics Economic analysis applied to health and health care. Topics include identifying the nuances of the health sector such as uncertainty, information asymmetry, and externalities, as well as economic evaluation of health care services and policies.

Preclusion(s): ECON 410-3

ECON 611-3 Cost-Benefit Analysis Techniques and problems in cost-benefit analysis. Case studies of projects in the areas of natural resources, the environment, human resources, public services and transportation.

Preclusion(s): ECON 411-3

ECON 623-(3, 6) Economics Field Study This course allows students to learn about the application of economics in specific contexts. Course location varies with instructor and year taken. This course may be repeated to a maximum of 6 credit hours if the course content differs.

Prerequisite(s): Graduate student standing and permission of the Chair

ECON 625-3 Trade and the Environment This course considers the relationship between different international trade regimes and environmental issues.

Preclusion(s): ECON 425-3

ECON 635-3 Financial Economics and Quantitative Methods This course explores the theoretical and conceptual foundations of financial economics. The course also includes quantitative methods for testing some of the basic financial propositions in finance.

Prerequisite(s): Graduate student standing and permission of the Chair
Preclusion(s): ECON 435-3

ECON 651-3 Microeconomic Theory and Applications This course provides an understanding of microeconomics at an advanced level. The emphasis is on understanding microeconomic theory and its applications to selected issues.

ECON 698-3 Special Topics in Economics

ECON 700-0.5 Graduate Colloquia Students attend colloquia on a range of research conducted on global issues. Students must register twice in this course. The course is offered during the September and January semesters. This is a PASS/FAIL course.

ECON 710-3 Macroeconomic Policy for Development This course provides a critical understanding of macroeconomic models used in International Monetary Fund stabilization programs. Structuralist and other heterodox approaches are also considered. Topics covered include exchange rate policies, inflation, interest rate policies and financial liberalization.

ECON 712-3 Applied Econometrics This course provides an introduction to econometric methods. Topics covered include simple and multiple regressions, hypothesis and diagnostic testing, and time series models. Students are expected to become familiar with one or more course-related software packages.

ECON 798-9 Economics Project The project is a policy and/or applied paper relevant to one or more developing countries. Proposals for projects and the projects themselves are evaluated by the supervisory committee. An oral defence is required. This is a PASS/FAIL course.

ECON 799-12 Master's Thesis The MA thesis should pose and examine a significant development question in a way that demonstrates critical thinking, an understanding of the relevant literature, and the ability to conduct systematic research. In preparation for the thesis, a research proposal is to be drafted for approval by a supervisory committee. An oral defence of the thesis is required. This is a PASS/FAIL course.

Education (EDUC)

EDUC 601-3 Educational Research Design and Methodology An introduction to the paradigms of educational inquiry, the formulation of research questions, the consideration of ethical issues, the principal types and methods of educational research, the preparation of research proposals, and the reporting of research results. Students will be encouraged and assisted to utilize this course to develop either a thesis or project proposal that will satisfy the research requirement of the MEd degree program.

EDUC 602-4 Quantitative Research Design and Data Analysis (Lecture/Lab) This course is an introduction to the descriptive and inferential univariate statistics commonly used to quantitatively analyze social sciences research data. Topics include graphing, central tendency and dispersion measures, standard scores, data cleaning, hypothesis testing, correlation, simple linear regression, nonparametric statistics, and an introduction to ANOVA, including factorial ANOVA, with multiple comparisons. Research methodology is integrated throughout the course. The student is given instruction in common word processing and spreadsheet programs for the purpose of statistical analysis and reporting.

Pre-or Corequisite(s): EDUC 601-3

EDUC 603-4 Advanced Quantitative Data Analysis (Lecture/Lab) This course provides an examination of a variety of advanced (generally multivariate) methods of quantitatively analyzing social science research data. Selected topics include: introductory matrix algebra, a review and an extension of ANOVA techniques introduced in EDUC 602-4 including ANCOVA, MANOVA, and MANCOVA, multiple linear, and logistic regression, and factor analysis. Additional methodological and/or analytic topics are included in accord with the expressed research interests and needs of students. The student is given instruction in one or more common statistical programs.

Prerequisite(s): EDUC 602-4 or equivalent

EDUC 606-3 Leading for Change This course reviews contemporary management and organizational theory emphasizing the role that leaders can play in facilitating and managing change. Other areas of focus include developing a learning organization, organizational responsiveness, processes of organizational change and improvement, strategic planning, and program evaluation. By highlighting the accountability policy trends in BC and Canadian schools, this course emphasizes the links between theory and practice.

EDUC 609-3 Aboriginal/Indigenous Learners: History, Culture, and Ways of Knowing This course explores the difficult history Aboriginal/Indigenous people have had with Western education. It also explores Indigenous ways of knowing, contemporary educational theory, and instructional practices in relation to the needs and resources of Aboriginal/Indigenous students in rural and urban northern communities. Students are encouraged to examine achievement data and to explore cultural assumptions around definitions of Aboriginal/Indigenous student success. Students will consider the cultural relevance of teaching resources, assessment tools, and school improvement interventions. Issues of Aboriginal/Indigenous access, retention, and participation in education systems are emphasized, along with the need for rebuilding trust among educational institutions and Aboriginal/Indigenous communities.

Preclusion(s): EDUC 646-3

EDUC 610-(3, 4) Qualitative Analysis in Education This course provides an introduction to the conceptual underpinnings of qualitative research and to qualitative data analysis methods, including case study, discourse analysis, grounded theory, action research, phenomenology, narrative inquiry and ethnography. Students have the opportunity to learn hand coding and analysis.

Pre- or Corequisite(s): EDUC 601-3

EDUC 615-3 The School Principalship This course explores the skills, knowledge and personal attributes central to effective school leadership in British Columbia. It emphasizes the legal and policy context for schools by examining school law (legal duties and responsibilities), collective bargaining and school finance; and it explores effective interpersonal and supervisory skills in the workplace. Examples from the field experiences of participants and the instructor permit opportunities for developing personal praxis.

EDUC 616-3 Policy and Politics in Public Education This course examines the politics of education at the local, provincial and national levels by considering the governance structures, patterns or trends in education and political influences on educational decision makers. Emphasis is placed on the policy process. Both the theory and practice of policy development are explored including agenda setting, stakeholder influence, bureaucratic systems, policy design, implementation and evaluation, and the principles and processes of inclusive decision making.

EDUC 617-3 Leading for Learning: Teacher Leadership and Principal Preparation This course provides an overview of the skills, knowledge, and personal attributes central to effective teacher leadership and principal leadership in schools in British Columbia. It features a current emphasis on distributed leadership and on various kinds of influence within schools that function as sustainable learning communities. The course explores collegial relationships as a background for instructional improvement and invites identification of personal leadership goals as well as plans for implementation.

Preclusion(s): EDUC 615-3

EDUC 622-4 Psychoeducational Assessment This course provides an overview of individualized assessment, including formal standardized instruments, informal tests, and classroom-based tools and instruction on the administration and interpretation of Level B tests. There is also a field application involving the design, administration, and interpretation of an individual assessment for learning.

EDUC 626-3 Inclusive Education: Learning for All This course presents "inclusive education" as a transition toward the predominance of a "success for all" educational philosophy. Components of inclusion include but are not limited to integration of exceptional students and examination of achievement data for minority groups. Issues of quality and equity of educational opportunity for all genders, orientations, cultures, religions, and socioeconomic groups are also explored. Connections are made to current instructional concepts such as culturally relevant practice and differentiated instruction. Students are expected to apply course content to develop action inquiry projects designed to improve equity in their own professional settings.

Preclusion(s): EDUC 535-3 and EDUC 635-3

EDUC 632-3 Language Development: Implications for Education An exploration of theories of language development across the lifespan, drawn from Linguistics, Psycholinguistics, Sociolinguistics, and Educational Psychology. Links between language development, and cognition, learning, and social development, and their educational implications will be addressed.

EDUC 633-3 Human Development: Implications for Education Contemporary theories of human development are examined along with their implications for teaching and counselling children, adolescents, and adults.

EDUC 634-3 Achievement Motivation Current theories of achievement motivation, grounded in practical classroom examples. Our examination will be research oriented, ranging from a micro level of analysis (e.g., individual case studies) to a macro level of analysis (e.g., school structures). A central issue is how teachers and counsellors can understand and foster students' motivation for school learning.

EDUC 635-3 Educating Exceptional Students An examination of the nature and characteristics of exceptional students and a review of current theory and research concerned with accommodating their special needs in a variety of educational environments; for example, counselling or instructional environments.

EDUC 636-3 Language and Learning Disabilities In this course, we will review current theoretical and research literature on language-based learning disabilities, including disabilities of oral language, reading, and written expression, and their implications for students' learning. Strategies for assessment, planning, teaching, and intervention for preschool, school-aged, and adult learners will be addressed.

EDUC 637-3 Interventions for Literacy Disorders This course provides an overview of diagnostic and inclusive strategies and interventions for literacy disorders. Students are provided with an overview of individualised assessment, including informal tests, and classroom-based tools and instruction on inclusive strategies specific to literacy development. There is also a field application, in which students work in a supervised setting with one child who has or is at risk for a literacy disorder, out of which a final report is produced.

EDUC 638-3 Mathematic Disorders and Remediation This course provides an overview of diagnostic and remedial strategies for mathematics. Students are provided with an overview of individualised assessment, including formal standardised instruments, informal tests, and classroom-based tools and instruction on remedial strategies specific to mathematics errors and deficiencies. There is also a field application, in the form of a brief mathematics clinic in which students work in a supervised setting with one remedial mathematics child, out of which a final report is produced.

EDUC 639-3 School-Based Teams, Consultants, and Families This course is an overview of the strategies, policies, and procedures related to school-based team meetings. Included is a review of the professional literature, a description of the roles and responsibilities of team members such as teachers, administrators, parents, students, and families, and an analysis of the techniques used in school-based team meetings.

EDUC 640-3 Focus on a Selected Disability This course examines a specific special need, with topics determined by the interests of students and the availability of faculty members to teach them. For example, it may focus in depth on educational aspects of a specific disability or range of disabilities, such as FASD, Autism Spectrum Disorder, hearing disability and deafness, or visual impairment. This course may be taken up to two times but with a different disability focus each time.

EDUC 655-3 Collaboration, Communication and Community: Leaders as Community Builders This course examines the need for collaboration and communication as tools for managing the social and cultural complex environment of schools and communities. Areas of focus include the principles of effective communication and inclusive decision making, the principles of diversity and inclusion, media and public relations, and the application of new technologies to promote dialogue.

EDUC 656-3 Instructional Leadership This course explores the principles and practices of designing effective curriculum and instructional systems, while also exploring the role of instructional leaders in creating a positive culture that enhances both teacher and student learning. The course is also useful to the future school principal interested in models of supervision and its relationship to instructional planning and implementation. Other topics include adult development, reflective practice and professional growth models.

EDUC 671-3 Reconciling Space and Practice: Ways of Knowing and Being This course explores the Aboriginal, Indigenous and First Nations curricula development, teaching practices, and methodology within the context of Canadian education and society. Based upon these various perspectives, students foster a personal and professional foundation for education and leadership. An essential part of this course is developing an awareness of the powerful, dynamic aspects of orality and the integration of orality within education and leadership.

EDUC 672-3 Reflective and Transformative Practices in Educational Contexts This course provides examinations of educational perspectives and practices that address conformity and adaptation to realities in today's world. Learners participate in reflections and dialogues to formulate transformative positions in the development of educational programs. The course integrates ideas, concepts and understandings of educational leadership in diverse contexts.

EDUC 673-3 Using Research to Inform Practice and Policy This course explores and discovers the role of literature and research in academic, professional and personal settings. Learners examine how literature serves to inform policy and practice. Learners explore a variety of research approaches informing the work of Public Intellectuals and Thought Leaders. The course provides research approaches consistent with Indigenous and Intercultural research that inform issues, ethics and methods.

EDUC 674-3 Mental Health Disorders in Exceptionality Education This course provides an overview of four common mental health disorders in relation to Exceptionality Education. Students research and evaluate strategies to teach their students with mental health disorders and ways to interact confidently with colleagues, parents, and paraprofessionals about mental health issues.

EDUC 675-3 So You Want to Change the World This course examines the cultural, social, political and economic factors influencing systems and communities. Learners examine self as leader and consider frameworks, models, and theories of transformational leadership, leading for change, and compassionate disruption.

EDUC 676-3 Policy, Governance and Ethical Decision Making This course will investigate and analyze policy and regulations, governance procedures, and ethical decision-making processes that support systems. Coherence and policy alignment are essential for systems to be successful and effective and should be aligned to current beliefs and values.

EDUC 677-3 Decolonizing Education This course focuses on decolonizing systems and practice. How can Indigenous Worldviews and perspectives be visible and embedded in everything that we do? Learners develop an understanding of the colonial history in Canada and Canadian educational systems including but not exclusive to a critical examination of systems and policies. This course offers opportunities to see ways that leadership may shift the course of action for reconciliation.

EDUC 678-3 Leadership for Equity and Inclusion Equity and inequity are systemic. What does it mean to have an inclusive system and inclusive systemic leadership? How do leaders create a more equitable educational system by humanizing pedagogy and practices? This course explores how to know your peers, colleagues, and self. Learners examine understanding of one's biases and preferences while moving to a more heightened and adaptive multi-cultural lens by implementing the First Peoples Principles of Learning.

EDUC 679-3 Small is Beautiful: The Power of Small Small is a relative term. This course engages learners to imagine, realize, and recognize innovation in their local communities. Constructing and conceptualizing transformation within their workplace and community includes cultural, social, and economical components to bring about innovation in practice, in workplaces, and in collaboration with others from multiple learning networks.

EDUC 680-3 'En Cha Huná: Living our Learning This course concludes the learning experiences of the students. Students identify a problem or situation within their professional environments that require significant change or transformation. Drawing from learnings and coursework collected in digital repositories, students explore ways in which to prepare, disseminate and share knowledge as Public Intellectuals and Thought Leaders to an audience identified as relevant to their people, place, and land. Course seminars critique various dissemination options based on desired impact, potential audience, ethical issues, and knowledge mobilization.

EDUC 692-3 Special Topics Topics to be determined by the special interests of students and the availability of faculty members to teach those topics. This course may be retaken any number of times, provided all topics are distinct.

EDUC 693-3 Directed Reading Independent study under the direction of a faculty member. This course provides an opportunity for students to study an educational topic relevant to their program if additional study is either desirable or necessary to correct possible deficiencies in their preparation for graduate study.

EDUC 795-3 Research Seminar A seminar focused on supporting students' ongoing work on their theses or projects. In particular, the course will identify and explain the various tasks that are typically involved in the development of a thesis or project; for example, design, implementation, analysis, interpretation and writing. Cooperative problem solving will be employed to assist students to develop their theses or project plans. This course is PASS/FAIL.

Prerequisite(s): EDUC 601-3 and EDUC 602-3 or equivalent

EDUC 796-3 Portfolio The portfolio route requires the successful completion of a professional portfolio that demonstrates a candidate's knowledge of education research, theory, and practice in his/her field of study (Special Education). This course enhances and reinforces a student's knowledge of educational research, theory, and practice as well as their interrelationship as evidenced by selected artifacts and accompanying rationales. This course is PASS/FAIL.

EDUC 797-3 Comprehensive Examination The comprehensive pattern of study requires the successful completion of a comprehensive examination that evaluates a candidate's knowledge of education theory and practice in their field of study (Counselling or Curriculum and Instruction). This program pattern is designed to enhance and reinforce a student's knowledge of both educational theory and practice as well as their interrelationship. This course is PASS/FAIL.

Prerequisite(s): successful completion of all other degree requirements

EDUC 798-6 MEd Project Students are asked to develop theoretically defensible innovations in educational practice. These may include innovative curricula, instructional strategies, or counselling practices. The efficacy of the innovations must be evaluated and the results reported as a part of a formal report of the project. The completed project report must be submitted to the student's supervisory committee for evaluation. This course is PASS/FAIL.

EDUC 799-9 MEd Thesis Students are asked to evaluate educational theory and practice, identify a significant question and implement a research strategy that addresses the question. The completed thesis must be submitted to the student's supervisory committee for evaluation. This course is PASS/FAIL.

English (ENGL)

Students wishing to take any 600-level graduate English courses as part of an interdisciplinary or other MA program should consult the English Department Chair.

ENGL 600-3 Advanced Contemporary Theory This course offers advanced study of an array of competing constructions of text and culture, drawing on a range of contemporary critical approaches and practices, such as structuralism, poststructuralism, deconstruction, discourse analysis, postmodernism, (post-)Marxism, feminist and gender theory, psychoanalysis, postcolonialism, new historicism, and cultural studies. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 609-3 Advanced Studies in Film or Television This course offers advanced study of an area or genre of film or television. Individual instructors may choose to focus on film or television or include both. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 610-3 Advanced Studies in Women and Literature This advanced course considers contemporary women writers and their work, emphasizing their cultural diversity and considering them in the context of feminist theory. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 620-3 Advanced Studies in Indigenous Literatures Drawing on Indigenous theory, this advanced course examines contemporary Indigenous literatures. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 630-3 Advanced Studies in Canadian Literature This advanced course investigates a particular aspect of contemporary Canadian literature. The focus may be on the works of a specific author or group of authors, a theme, a cultural context, or a particular social or theoretical concern. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 631-3 Advanced Studies in Northern BC Literature This is an advanced course in fiction and poetry by Northern BC authors. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 640-3 Advanced Studies in International Literatures in English This advanced course undertakes an investigation of the central issues of postcolonial international literatures written in English, including postcolonial nationalism, colonial mimicry, imperial versus native languages, and the political and social responsibility of the writer. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 650-3 Advanced Comparative Literary Studies This advanced course in comparative literature focuses on a specific genre, theme, or period. Instructors may compare literature and other media (e.g. film, visual art). This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 660-3 Advanced Studies in Children's Literature This course offers advanced study of a specific theme in children's or young adult literature and culture. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 670-3 Advanced Creative Writing - Poetry This course offers advanced lectures and workshops in the craft of writing poetry. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 671-3 Advanced Creative Writing - Fiction and Creative Nonfiction This course offers advanced lectures and workshops in the craft of writing fiction and/or creative nonfiction. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 680-3 Advanced Studies in Science Fiction This course offers advanced study of the structures and motifs of science fiction. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 683-3 Advanced Studies in Romantic Literature
This advanced course investigates a particular aspect of Romantic literature. The focus may be on the works of a specific author or school of authors, a literary genre, or a particular social or theoretical concern. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 684-3 Advanced Studies in Victorian Literature
This course offers advanced study of a particular aspect of an author (or authors), theme, or genre in Victorian literature and culture. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 685-3 Advanced Studies in Modern and Contemporary Literature in the United States This advanced course in American writing since 1900 emphasizes American cultural contexts. The course may focus on a specific author or authors, on a particular genre, theme, or region, or on ethnic and minority literature. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 686-3 Advanced Studies in Literature of the Fantastic This advanced course explores various periods and aspects of fantastic literature. The course may include film and graphic arts as well as literary texts. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 687-3 Advanced Studies in Animals in Literature or Visual Culture This advanced course invites students to examine the world of human-animal studies through literature or visual media. Individual instructors may choose to focus on literature or visual media (e.g., film) or both. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 690-3 Research and Professionalization This process-based course addresses methods for literary research, requirements of professional scholarship, and professional development.

ENGL 691-3 Advanced Studies in Early Modern Literature in English This advanced seminar offers specialized study of 16th- and 17th-century literature in English, focusing on the works of a specific author, genre, theme, or theoretical framework. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 693-3 Advanced Cultural Studies This advanced course introduces students to the interdisciplinary methodologies of cultural studies, with a focus on definitions of culture and the imbrications of race, class, and gender. The course explores the themes of postmodernism, popular culture, historical cultural formations, social history, and/or the relation between politics and culture. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 698-3 Advanced Topics in Literature, Visual Media, or Creative Writing Consult the Department Chair for details. This course may be repeated to a maximum of 6 credit hours with permission of the instructor and Department Chair if the subject matter of the course differs substantially.

ENGL 699-3 Advanced Independent Study in Literature, Visual Media, or Creative Writing Consult an instructor or the Department Chair for details.

ENGL 700-3 Studies in Literature, Culture, and Place This course investigates theories and representations of culture and place in literary studies. The course may explore intersections of culture and place across literary periods and nationalities, in contemporary popular culture, and in contemporary theory.

ENGL 770-12 Major Research Paper/Creative Project In this course, English MA students choosing the course-based MA path complete a 25-30-page (7500-8500-word) research paper or a comparable creative project. Although the major paper or creative project is not as extensive as a thesis or creative thesis, it offers students the experience of extended research or creative work. This is a PASS/FAIL course.

Pre- or Corequisite(s): ENGL 690-3, ENGL 700-3 and four other graduate courses

ENGL 799-15 English MA Thesis Under the guidance of a supervisor, students are required to produce and defend an academic thesis of approximately 100 pages in length. At the discretion of the Department, students may complete a creative thesis that meets the requirements outlined in the English (MA program) section of the Graduate Calendar. The thesis is intended to require approximately 12 months of full-time work. This is a PASS/FAIL course.

Engineering (ENGR)

ENGR 606-3 Environmental Modelling This advanced course provides an understanding of the physical, chemical, and biological processes that govern contaminant transport and fate in environmental media. Topics include modelling fundamentals; mass transport in aquatic ecosystems; and mathematical modelling of a wide variety of contamination issues, such as lake eutrophication, river water quality, groundwater contamination, atmospheric deposition, and climate change. Laboratory exercises complement lecture topics and focus on the development of computer-based modelling skills.

Preclusion(s): ENSC 406-3, ENSC 607-3, ENVE 406-3

ENGR 616-3 Advanced Project Management This course examines advanced data analysis methods and practices used in project management as it relates to civil and environmental engineering. The study of project management spans all phases of the project life cycle including, but not limited to, preliminary feasibility analysis, concept development, and project commissioning. Students explore key issues in project management, as well as major aspects of data analysis and modelling such as data modelling, data mining in engineering research, artificial neural networks in engineering, an introduction to simulation modelling, Monte Carlo simulation, classification clustering, Bayesian analysis, and an introduction to granular computing as they relate to project management.

ENGR 621-3 Ecological Engineering and Design This advanced course introduces fundamental principles of ecological engineering and their application to understand and assess issues related to the provision of basic urban services through nature-based solutions. Topics include the role of ecosystem services in urban processes; socio-ecological systems; sustainable and low-impact urban development; resilience-building capacities; gray, green, and blue-green infrastructure; on-site (distributed) technologies; nature-based and regenerative technologies; and design for site-specific contexts.

Prerequisite(s): Admission to the MASc in Engineering program or permission of the instructor
Preclusion(s): ENGR 421-3

ENGR 638-4 Rock Engineering This advanced course introduces rock mechanics and its applications to rock engineering problems. Topics include mechanical properties of intact rock; rock mass properties and classifications; structural mapping and stereonets; rock and rock mass strength criteria; stresses in rock masses; rock slope stability analysis; rock support and stabilization; and empirical, analytical, and numerical analysis techniques for underground excavations.

Prerequisite(s): CIVE 360-4
Preclusion(s): CIVE 438-4

ENGR 639-3 Advanced Structural Fire Engineering This course focuses on the design and analysis of structures subjected to fire. Relevant topics include, but are not limited to, the fundamentals of fire behaviour, fire load, active- and passive-fire safety measures, material properties at elevated temperatures, and design methods and code guidelines for fire resistant structural design. Special emphasis is placed on computational and analytical tools for performance-based design. Risk and reliability assessment frameworks are also introduced.

Preclusion(s): CIVE 439-3

ENGR 640-3 Advanced Structural Concrete Design The course presents advanced analysis and design methods for reinforced concrete members subject to torsion, as well as axial, flexure, and shear stresses. The procedures are applied to stairs and beams curved in plan. Advanced concepts of yield line analysis for slabs and strut-and-tie model for deep beams are discussed. Additional topics include design and detailing of prestressed concrete members, concrete building systems, seismic design of concrete structures, and innovative design solutions for high-performance precast/prestressed concrete structures.

Prerequisite(s): CIVE 341-3 or equivalent, or permission from instructor
Preclusion(s): ENGR 440-3

ENGR 641-3 Bridge Engineering This course introduces engineering principles and their applications to bridge engineering problems. Topics include overview and history of bridges, bridge types and components, design considerations, structural modelling and analysis, design of substructure and superstructure, bridge aesthetics, and seismic analysis and retrofit of bridges.

Prerequisite(s): CIVE 340-3, CIVE 341-3
Preclusion(s): CIVE 441-3

ENGR 658-3 Advanced Treatment Processes for Water and Wastewater This advanced course covers processes for removing impurities that are not effectively removed by conventional water and wastewater treatment systems, such as nutrients (e.g., nitrogen and phosphorus), residual organics, and emerging pollutants. The scope of the course extends to sludge management and resource recovery. Topics include, but are not limited to, the following: polishing ponds, media filtration, disinfection, membrane treatment systems, membrane bioreactors, adsorption, nitrogen and phosphorus removal, biofilm processes, advanced oxidative processes, sludge management, and resource recovery from biosolids.

Prerequisite(s): ENGR 358-3 or equivalent, or permission of the instructor
Preclusion(s): ENGR 458-3

ENGR 672-3 Advanced Pavement Engineering This advanced course introduces graduate-level knowledge about pavement engineering. Topics include structural pavement design, asphalt mixture design, and performance evaluation / non-destructive testing of roadway pavements. Lecture and laboratory sessions are included to perform standard Quality Control (QC) tests on pavement specimens as well as advanced performance testing to evaluate pavement resistance to distresses. Students perform analysis of testing results and present laboratory reports. In-situ data collection or site visits are arranged with industrial partners based on availability.

Prerequisite(s): CIVE 241-3 and CIVE 370-3, or equivalent

ENGR 700-3 Technical Writing This course is an introduction to technical writing concepts for graduate students focusing on thesis and report writing. It is intended to help students improve their general writing skills while learning principles and approaches for producing good quality thesis, reports, and article manuscripts. Specific topics to be covered include thesis and report writing, improving grammar and organization, literature reviews, and referencing and documentation, including how to avoid plagiarism. Students prepare and submit a written report on a topic in Engineering related to their field of research.

ENGR 701-3 Graduate Seminar in Engineering This course covers important engineering subject areas including risk assessment, safety, law, and ethics, and prepares the student to conduct Master-level research through a literature review, peer-reviews, abstract composition, research proposal development, and a seminar presentation related to the student's thesis research. This is a PASS/FAIL course.

ENGR 790-12 Master of Applied Science in Engineering Thesis Students are required to submit a thesis that represents the result of the student's original research undertaken after admission to the program. The MASc thesis is prepared under the guidance of the primary supervisor and committee. Students are required to defend the thesis at an oral examination as this course is required for graduation in the Master of Applied Science in Engineering thesis option. This is a PASS/FAIL course.

ENGR 798-(1-6) Special Topics This course is intended to fulfill requirements for specialized instruction in any of the disciplines in Engineering. Topics are chosen depending upon student interest and instructor availability, and topic headings vary from year to year and from section to section.

ENGR 799-(1-6) Independent Studies This course provides a concentration on a particular topic or topics agreed upon by the student and a member of the faculty in the MASc Graduate Program. This course may be repeated to a maximum of 6 credit hours, provided that all topics are distinct.

Environmental Planning (ENPL)

ENPL 604-3 Housing: From Concept to Construction Through a series of case studies and exercises that follow a 'concept to construction' timeline, students develop an advanced understanding of the challenges and opportunities of planning, creating, and building secure and affordable housing for middle- and lower-income households. Students learn how planners and other professionals interact as visionaries, developers, and regulators, and how risks are managed.

ENPL 605-3 Applied Land Use Planning in British Columbia In this advanced course, students apply knowledge of land use planning to case studies grounded in the laws and landscapes of British Columbia. Case studies cover a range of professional planning contexts, including urban, rural, and regional areas; agricultural areas; First Nation reserves; protected areas; and joint land use initiatives between the province and Indigenous governing bodies.

Preclusion(s): ENPL 410-3

ENPL 606-3 Philosophy of Community Change How do we bring about change for the common good in a diverse and increasingly fragmented society? This question frustrates and animates professionals across public domains in community development, health, planning, natural resources management, and social policy. In this advanced course, students learn philosophies of the common good, how such philosophies interact with other forms of knowledge such as science, and how 'the good and the right' are mobilized in public argument and decisions.

Preclusion(s): ENPL 411-3, ENVS 606-3

ENPL 609-4 Indigenous Planning Studio In this advanced workshop style, community-based course, students work on a planning project that addresses Indigenous reconciliation and governance in land and water relationships. Students are expected to be able to work in off-campus settings.

Prerequisite(s): Permission of the instructor
Preclusion(s): ENPL 409-4

ENPL 617-4 Local Climate Action Studio This is an advanced hands-on studio course that allows students to learn and apply knowledge and skills related to local adaptation planning. Focusing on rural and remote communities across northern Canada, students explore a range of prevalent adaptation planning approaches. The course includes a critical examination of concepts that frame local climate action, including risk, resilience, and co-benefits. Students learn how to put these concepts into action by completing a project relevant to a northern regional context.

Prerequisite(s): Permission of the instructor

ENPL 619-4 Sustainable and Inclusive Design Studio This advanced studio course engages students in an applied and hands-on site design project as they embody design thinking. Students learn and apply current concepts and principles that advance social-ecological sustainability with a strong emphasis on inclusion. Students are prepared for a professional career by learning, applying, and critically reflecting on techniques and technologies used in planning and design practice.

Prerequisite(s): Permission of the instructor
Preclusion(s): ENPL 415-(3, 4)

See NRES course listing for additional 700-level Environmental Planning courses.

Environmental Science (ENSC)

ENSC 602-3 Watershed Science and Management This graduate-level course provides a comprehensive overview of watershed science and the principles underpinning integrated watershed management. It provides students with an understanding of hydrological processes at the watershed scale while considering the broader context of water resource management. It covers the frameworks, policies, and regulatory drivers that affect water resource management, and the role of government agencies, communities, and Indigenous perspectives in shaping these aspects. This course integrates scientific insights with governance, regulations, and culturally relevant management strategies.

Preclusion(s): ENSC 402-3, NREM 410-3, NREM 608-3

ENSC 604-3 Waste Management This advanced course introduces environmental, technical and political aspects of non-hazardous and hazardous wastes. Topics include sources, evaluative methods, risk assessment, treatment, disposal, and current legal and management requirements.

Preclusion(s): ENSC 404-3, ENVS 604-3

ENSC 607-3 Environmental Modelling This advanced course provides an understanding of the physical, chemical and biological processes that govern contaminant transport and fate in environmental media. Topics include: modelling fundamentals; mass transport in aquatic ecosystems; and mathematical modelling of a wide variety of contamination issues, such as lake eutrophication, river water quality, groundwater contamination, atmospheric deposition, and climate change. Laboratory exercises complement lecture topics and focus on the development of computer-based modelling skills.

Preclusion(s): ENSC 406-3

ENSC 608-3 Storms This advanced course covers the following topics: analysis and dynamics of synoptic weather systems; cyclones and cyclogenesis; fronts, thunderstorms, and jet streams; stability and thermodynamic charts; satellite and radar imagery; severe weather; and weather forecasting.

Preclusion(s): ENSC 408-3

ENSC 612-3 Air Pollution This advanced multidisciplinary course focuses on air pollution. Topics include: emissions, chemistry, air pollution meteorology and dispersion modelling, engineering and legislative controls, health effects, airshed planning.

Preclusion(s): ENSC 412-3, ENVS 612-3

ENSC 618-3 Environmental Measurement and Analysis This advanced course for Environmental Science and Environmental Engineering majors is focused on advanced environmental measurement and analysis of atmospheric, aquatic, and terrestrial systems. The approach is practical, integrative and problem-based. Students may examine natural and managed systems, including engineered systems (e.g., waste management) and systems impacted by anthropogenic activity (e.g., contamination).

Preclusion(s): ENSC 418-3

ENSC 625-3 Climate Change and Global Warming The climate change and global warming caused by human activity has become one of the most significant environmental, social and economic threats that we have faced. This course presents the science of global climate change and global warming. Emphasis is placed on scientific principles responsible for climate changes, observed evidence of global climate change and global warming, and future climate change. Course topics include climate system, greenhouse effect, El Niño, atmospheric and ocean circulation, Earth's past and present climate, climate models, future climate projection, and climate change impacts on Canada.

Precluded: ENSC 425-3

ENSC 635-3 Soil Biological Processes and the Environment Processes at the interface between the biosphere, atmosphere, hydrosphere and lithosphere are critical to the regulation of environmental quality on Earth. This advanced course provides an overview of the soil habitat from a biological perspective and of how soil organisms and the processes they mediate play critical roles in a sustainable planet.

Precluded: ENSC 435-3, FSTY 455-3, NREM 655-3

ENSC 650-3 Environmental and Geophysical Data Analysis The focus of this advanced course is on the principles and practicality of the most common environmental and geophysical data analysis methods, including time series analysis and multivariate statistical analysis as well as their application in the environmental and natural sciences. This course includes labs in which students are expected to apply theories and methods covered in lectures to solve practical problems using computer software for statistical data analysis.

Precluded: ENSC 450-3

ENSC 652-3 Reclamation and Remediation of Disturbed Environments This advanced course takes an integrative approach to the remediation and reclamation of drastically disturbed environments. Understanding behavior, fate and transport of contaminants is used to place remediation within the context of use-specific risk reduction. Reclamation is examined as a way to return land to some agreed upon purpose. Societal involvement is explored as a guide to acceptable choices of goals and options. The focus is on the remediation and reclamation of terrestrial systems, but aquatic systems are also included.

Precluded: ENSC 452-3

ENSC 654-3 Snow and Ice This advanced course focuses on the physical processes involving snow and ice that influence the hydrometeorology of northern British Columbia and the rest of Canada including: snowpack, permafrost, lake, river and sea ice; glacier formation and ablation processes; and the characteristics of snow and ice, as well as how these evolve with climate change. Students conduct an extensive snow survey in the field.

Prerequisites: Permission of the Instructor
Precluded: ENSC 454-3

See NRES course listing for additional 700-level Environmental Science courses.

Environmental and Sustainability Studies (ENVS)

ENVS 602-3 Environmental and Natural Resources Issues and Ethics Analysis of environmental and natural resource issues from an ethical perspective; viewpoints and value systems that determine management decisions.

Preclusion(s): ENVS 414-3, NREM 411-3

ENVS 631-3 Global Environmental Policy: Energy and Climate This course covers practical and theoretical understandings of international environmental policy, addressing sustainability challenges and solutions that are global in scope. The course uses interconnected themes of climate and energy to explore how environmental policies are designed and implemented, how domestic energy markets intersect with issues of international governance, and to review climate change adaptation and mitigation strategies aimed at transition to a low-carbon future. This course uses multiple learning formats, including policy simulations and case studies of substantive and procedural policies. Students have the opportunity to work on projects relevant to their area of research.

See NRES course listing for additional 700-level Environmental and Sustainability Studies courses.

First Nations Studies (FNST)

FNST 600-3 Foundations of First Nations Studies: Theory and Practice A seminar in which major contributions to the field are reviewed and the methods, approaches and conclusions of the works are explicated and located within contemporary theory.

FNST 602-3 The Practice of Research A seminar in which students will design and pilot projects to implement methods and approaches for research in First Nations Studies, and will present papers discussing the implications of various approaches for the discipline. An advanced graduate research methods course from another program may be substituted with special permission.

FNST 605-3 The State of the Discipline A seminar in which students will present papers concerning current theoretical and methodological issues in the discipline.

FNST 650-3 Special Topics

FNST 751-3 Directed Readings

FNST 790-3 Internship I

FNST 791-3 Internship II

FNST 795-3 Research Seminar This course focuses on supporting students' ongoing work on their thesis. In particular, the course will identify and explain the various tasks that are typically involved in the development of a thesis; for example, design, implementation, analysis, interpretation and writing. Co-operative problem solving will be employed to assist students to develop their thesis plans.

Prerequisite(s): FNST 600 and FNST 602
Preclusion(s): EDUC 795-3 and HHSC 795-3

FNST 797-15 MA Project The MA Project is a praxis-oriented community-based research option and is considered an alternative to the Thesis for completion of the Master's Degree in First Nations Studies. Student projects may include, but are not limited to, artistic expressions, films, creative writing, or digital Indigenous-related media initiatives, based on comprehensive research. All projects must be accompanied by a paper that describes the project including the methodological principles and theory in project development, as well as community-related consultations and considerations. Normally, students are expected to complete the required coursework in the first two semesters of the Graduate Studies Program. This is a PASS/FAIL course.

Prerequisite(s): None

FNST 799-15 Graduate Thesis The thesis requires that each student undertakes a study that represents original, respectful, and relevant Indigenous-related research (including appropriate analysis and recommendations). Normally, students will have completed the required coursework in the first two semesters of the Graduate Studies program. This is a PASS/FAIL course.

Prerequisite(s): None

Forestry (FSTY)

FSTY 605-3 Forest Ecosystem Modelling This course introduces students to a range of quantitative models that form the basis of modern forest management and conservation. This course includes an overview of models to evaluate forest dynamics from the scale of individual trees up to forested landscapes; models used to assess and manage forests and their ecosystem services; and models for strategic forest planning.

Preclusion(s): FSTY 405-3

FSTY 635-3 Soil Biological Processes Processes at the interface between the biosphere, atmosphere, hydrosphere, and lithosphere are critical to the regulation of environmental quality on Earth. This advanced course provides an overview of the soil habitat from a biological perspective, and how soil organisms and the processes they mediate play critical roles in a sustainable planet.

Preclusion(s): ENSC 435-3; ENSC 635-3; FSTY 435-3

Geography (GEOG)

GEOG 601-3 Resource Geography This course examines global resources and their role in questions of conservation and economic development. Emphasis is placed on global and international resource issues and the role of public policy.

Prerequisite(s): Permission of the instructor
Preclusion(s): GEOG 401-3

GEOG 603-3 Indigenous Geographies of Climate Resilience This graduate seminar examines the resilience of Indigenous peoples to environmental change, highlighting the interconnected roles of place, agency, collective action, knowledge, and learning in adaptation. Theories of vulnerability, cultural adaptation, and resilience will be discussed, drawing on community-led case studies from Indigenous peoples globally.

Prerequisite(s): Permission of the instructor
Preclusion(s): GEOG 403-3

GEOG 605-3 Fluvial Geomorphology This advanced course investigates river channel morphometry and landforms developed by running water and focuses on the physical processes and techniques of measurement. Lectures, field trips, and laboratory sessions provide skills and methods to assess the work of rivers on the landscape.

Prerequisite(s): Permission of the instructor
Preclusion(s): GEOG 405-3

GEOG 611-3 Glacial Geology This advanced course examines geomorphic processes and environmental change in British Columbia during the last two million years of Earth's history. Through lectures, field trips, and laboratory exercises, students learn the Quaternary history of North America, the tools and techniques used in surficial geology research, and basic field skills.

Prerequisite(s): Permission of the instructor
Preclusion(s): GEOG 411-3

GEOG 613-3 Advanced GIS This course covers the use of remote sensing and satellite imagery in GIS: including scene correction, enhancement and time comparison. This course will deal with advanced GIS and mapping techniques, concentrating on northern British Columbia.

Prerequisite(s): GEOG 300-3 or permission of the instructor
Preclusion(s): GEOG 413-3

GEOG 616-3 Mountains With a focus on the environment and society tradition in geography, this course explores the diversity and distribution of mountain environments, the physical processes that shape them, and the role played by humans in their exploitation, modification and preservation.

Prerequisite(s): Permission of the instructor
Preclusion(s): GEOG 416-3

GEOG 620-3 Environmental Justice This course examines environmental injustices in North American and international contexts. We consider cases of environmental racism and responses to injustices (activism; scholarship; policy) related to the following: resource extraction; industrial processes; waste disposal; basic services and quality of life; and tourism.

Prerequisite(s): Permission of the instructor
Preclusion(s): GEOG 420-3

GEOG 624-3 Northern Communities Dramatic change and transition are re-shaping rural and small town communities. Drawing examples from northern British Columbia, this advanced seminar course examines a range of economic, social, and community issues, and includes a broad class-based project examining a different northern community each year.

Prerequisite(s): Permission of the instructor
Preclusion(s): GEOG 424-3

GEOG 626-3 Geographies of Culture, Rights and Power This seminar examines geographical approaches to culture, rights, and power as they relate to issues of political violence experienced by indigenous peoples, labour organizations, and social movements. Primary geographical focus is on the Mesoamerican region, particularly Guatemala, El Salvador, and Chiapas, Mexico. Implications for Canada and the United States are explored through refugee movements, foreign policy, and grassroots solidarity organizing.

Preclusion(s): GEOG 426-3, NRES 798-3 Culture, Rights and Power

GEOG 650-3 Advanced Geospatial Analysis Students work with and analyze large geospatial remotely-sensed datasets learning and using advanced Python functional programming. In addition to laboratory exercises, students participate in a weekly seminar to critically evaluate research on geospatial algorithms and analyses. Students work together to use geospatial analyses to solve a problem relevant to non-academic stakeholders.

Prerequisite(s): Permission of the instructor
Preclusion(s): GEOG 450-3

GEOG 657-3 Advanced Remote Sensing This project-oriented course focuses on advanced classification procedures incorporating digital elevation data, fuzzy and object-oriented classification, and new millennium data sources including ASTER, RADAR, MODIS, LiDAR and high-resolution scenes. Repeat imagery is used to assess local and global changes in land cover, oceanic, atmospheric and/or cryospheric environments.

Prerequisite(s): Permission of the instructor
Preclusion(s): GEOG 457-3

See NRES course listing for additional 700-level Geography courses.

Gender Studies (GNDR)

The following courses are offered as seminar courses. They may also be offered as reading courses, or as independent study courses.

GNDR 609-3 Advanced Feminist Methods The goal of this course is twofold; first to cover current debates in feminist methodology and second to develop appropriate research strategies for an independent research project.

Preclusion(s): WMST 409-3

GNDR 610-3 Feminist Political Philosophy This course provides an analysis and critique of both the historical and contemporary literature on feminist political philosophy. The course traces feminist political philosophy from its enlightenment roots to its contemporary post-modernist critique on enlightenment notions of rationality.

GNDR 611-3 Contemporary Feminist Theories This course covers the recent history of feminist theories beginning with Simone de Beauvoir's The Second Sex.

Preclusion(s): WMST 411-3

GNDR 613-3 Themes in Aboriginal Women's Studies This course explores topics relating to aboriginal women's studies in both Canadian and international contexts. Topics may vary from year to year.

Preclusion(s): FNST 613-3

GNDR 614-3 Gender, Peace, and Security This advanced course critically examines contemporary issues of gender, peace, and security (GPS) and unpacks complexities of the GPS agenda in Global North and Global South settings. It equips students with a critical understanding of GPS theories, debates, and perspectives, and enables them to use this knowledge in their projects and everyday practices.

Preclusion(s): INTS 414-3, INTS 614-3, WMST 414-3

GNDR 616-3 Gender and Politics This advanced course examines gender, understood as a hierarchical, binary opposition of masculinity and femininity, and its intersection with power relations, understood as an expression of politics. The course examines how gender hierarchy is a system of differential power that intersects with various systems of oppression and privilege. A significant amount of time is spent on the topic of intersectionality in politics from a variety of standpoints within our ever-changing socio-economic context, including Indigenous feminisms, eco-politics, Black social movements, disability, LGBTQ movements, and various iterations of masculinity.

Preclusion(s): POLS 416-3, POLS 616-3, and WMST 416-3

GNDR 698-(3-6) Special Topics This course provides detailed examination of a topic selected by the instructor. Topics may vary from year to year. This course may be repeated for credit where topics vary. This course may be repeated for a maximum of 6 credit hours.

GNDR 700-9 Gender Studies Thesis This is a PASS/FAIL course.

GNDR 701-3 Gender Studies Major Research Paper

GNDR 703-3 Gender and Post-Colonialism This course examines key post-colonial feminist theorists while also considering post-colonial theorists from a critical feminist perspective.

GNDR 706-3 Feminism and Contemporary Critical Theory This course examines new directions in feminist theories focusing on US, Canadian, British, Third World/ postcolonial feminist theories of the 1980s and 1990s. We will discuss the intersections among gender, class, race, sexuality, imperialism and ecology from a multidisciplinary perspective including law, society, politics, literature, culture, science and anthropology. We will also look at critical articulations between feminisms and theories such as Marxism, postcolonialism, psychoanalysis and post-modernism.

GNDR 799-(1-6) Independent Study

Health Sciences (HHSC)

HHSC 600-3 Critical Social and Health Issues in Northern Communities This course will expose students to critical issues in the analysis of social and health problems in Northern Communities. The emphasis will be on interdisciplinary research and analysis in a northern context. Topics will be organized around specific problems to be found in the community, and ways of analyzing them from social and health perspectives.

HHSC 601-3 Principles of Epidemiology Epidemiological principles applicable to infectious and non-infectious diseases are discussed: occurrence and distribution; factors underlying distribution of disease; host-agent environment complex and; principles underlying etiology and causation.

Preclusion(s): HHSC 401-3 and NURS 306-3

HHSC 602-3 Organization and Financing of Canadian Health Care This course focuses on the historical development and current structure and financing of the Canadian health care system, which are related to changes that have occurred in the political, social, and technological environment.

Preclusion(s): POLS 403-3 and POLS 603-3

HHSC 603-3 Community Research Methods A survey of design, strategies, methods, and applied socio-medical disciplines as related to health and health care. Emphasis is based on the application of quantitative and qualitative techniques and in the measurement and health-related attitudes and behaviours and program outcomes.

HHSC 605-3 Health in Developing Countries The patterns of mortality and morbidity in developing countries will be described with a particular focus on those conditions such as malaria that are endemic and influence not only the health but also the social and economic development of the countries. Special emphasis will be placed on Pacific Rim countries.

HHSC 606-3 Health Promotion This course examines health promotion theories, principles, and underlying philosophies. Students identify and critique health promotion issues and will also gain experience in developing strategies to promote health and well-being at individual, group and community levels.

HHSC 607-3 Cultural Perspectives on Health and Illness The cultural influences on the definition, experience, and expression of illness are examined. Attention will be given to ways in which culturally responsive health care can be provided. May be taken as ANTH 498-3 with the permission of the instructor.

HHSC 640-(3-6) Special Topics in Health Sciences The topics for this course will vary, depending on student interest and faculty availability. This course may be repeated for up to 6 credit hours total (with permission of the instructor and program chair).

Prerequisite(s): Permission of the instructor and Program Chair

HHSC 680-(3-6) Directed Studies

HHSC 700-3 Advanced Techniques in Epidemiology This course builds on the principles learned in HHSC 601-3 and focuses on new and advanced techniques in epidemiology. Topics include: risk adjustment, survival analysis, uses of administrative health data, health geography, and advanced training in study design.

HHSC 703-3 Qualitative Research Approaches in Health and Human Sciences This course explores various approaches to qualitative research in the health and human sciences. These approaches are discussed in light of the epistemological and ontological commitments, their methods and their demands upon the researcher. Included is an examination of inherent issues of ethics and rigour. The approaches examined normally include: phenomenology, interpretive phenomenology, participatory action research, feminist research, grounded theory, Indigenous methodologies and institutional ethnography.

Preclusion(s): NURS 609-3

HHSC 760-3 Field School in Human Ecology This field-school is an intensive, interdisciplinary course addressing themes including social-ecological systems, human-environment relationships and ecosystem approaches to health. The course includes class-based sessions and intensive field-based components relevant to the course theme and location, that differ from year to year. The field-school brings together colleagues in natural sciences, health sciences, social sciences, humanities, and beyond, who work in collaboration with interested parties and community members to address issues at the interface of environment, society and health.

Preclusion(s): HHSC 860-3, NRES 760-3

HHSC 790-12 MSc Health Sciences Thesis This thesis is a written report of high academic quality that demonstrates mastery of the health-related field specified and the ability to undertake research. This course is required for graduation in the Master of Science: Health Sciences. This is a PASS/FAIL course.

HHSC 795-3 Graduate Seminar in Health Sciences The graduate seminar builds awareness of a range of Health Sciences research, to generate debate on key issues, and to provide a context for research and presentations by students and invited speakers. The graduate seminar creates opportunities for graduate student engagement and interaction, learning and exchange among Health Sciences researchers across UNBC and builds a culture of research and scholarship including presentation and facilitation skills, thesis development, research ethics, grant writing, etc. This course is required for graduation in the Master of Science in Health Sciences.

HHSC 796-1 Health Research Seminar Series In this course, students attend a monthly Health Research Seminar Series where they are exposed to different styles of presentation and are asked to reflect on and learn a range of approaches to Health Sciences research. The course is offered during the January semester and builds on the Health Sciences Graduate Seminar (HHSC 795-3) which is taught in the September Semester. This is a PASS/FAIL course.

Prerequisite(s): HHSC 795-3

HHSC 798-(3-6) Directed Studies

HHSC 799-9 MSc Community Health Science Thesis The thesis is a written report of high academic quality that demonstrates mastery of the health-related field specified and the ability to undertake research. This is a PASS/FAIL course.

HHSC 800-3 Graduate Seminar I This seminar introduces foundational concepts to enhance critical thinking, research skills, and capacities to develop as a doctoral-level health sciences scholar. The seminar presents key concepts to generate discussion, debate, and exchange on key issues important for health sciences as a whole, as well as specific research themes relevant to the student cohort, faculty members, guest speakers, and other health researchers. During the course, students are expected to write, reflect, present, share, provide feedback, and engage in peer-learning activities.

HHSC 801-3 Graduate Seminar II Doctoral training in Health Sciences is intended to produce globally competent individuals, suited for a variety of career choices. This course includes key attributes of a successful doctoral training program, including the importance of team science, critical thinking, communication skills, grantsmanship, scholarship of teaching and learning, and the implications of intellectual property law in health care and in higher education.

HHSC 804-3 The Health of First Nations People This course provides a detailed review of the determinants and health status of First Nations peoples. Emphasis is placed on biological determinants and those factors that are derived from the status of the First Nations peoples in the larger population, including evolving lifestyles, environmental influences, dominant government and social policies.

Preclusion(s): NURS 604-3

HHSC 811-3 Organization and Financing of Canadian Health Care This course focuses on the historical development and current structure and financing of the Canadian health care system, which are related to changes that have occurred in the political, social, and technological environment.

Preclusion(s): HHSC 602-3, POLS 603-3

HHSC 820-0 Qualifying Examination and Dissertation Proposal Defense This course is a two-part process, beginning with the Qualifying Examination. The Qualifying Examination is comprised of two components: the Written part and the Oral part. This examination is defined by the supervisory committee to assess the student's background knowledge and familiarity with the theory and methodology associated with their field of research. Subsequent to the Qualifying Examination (written and oral), students prepare and defend a research Dissertation Proposal that integrates theory, current research, and methods in fields related to the selected research problem. This is a PASS/FAIL course.

HHSC 840-3 Special Topics in Health Sciences The topics for this course vary depending on student interest and faculty availability. This course may be repeated for up to 6 credit hours total (with the permission of the instructor and program Chair).

HHSC 860-3 Field School in Human Ecology This field-school is an intensive, interdisciplinary course addressing themes including social-ecological systems, human environment relationships and ecosystem approaches to health. The course includes class-based sessions and intensive field-based components relevant to the course theme and location that differ from year to year. The field-school brings together colleagues in natural sciences, health sciences, social sciences, humanities, and beyond, who work in collaboration with interested parties and community members to address issues at the interface of environment, society and health.

Preclusion(s): HHSC 760-3, NRES 760-3

HHSC 880-3 Directed Readings This course provides a concentration on a particular topic or topics agreed upon by the student and the instructor. This course may be repeated for up to 6 credit hours total (with the permission of the instructor and program Chair).

HHSC 890-12 PhD Dissertation The Doctoral thesis must emphasize the candidate's original research or provide an original investigation, interpretation or synthesis of existing research. This is a PASS/FAIL course.

History (HIST)

HIST 700-3 Seminar in Historical Methodology and Research This course traces the development of modern historical thought.

HIST 701-3 Themes in the History of Gender The course explores aspects of the history of gender, drawing on the literature of women and men in various parts of the world.

HIST 702-3 Themes in Indigenous History This course examines the history of indigenous people and their relations with non-indigenous people, drawing on the literature on a number of countries.

HIST 704-3 Themes in Environmental History This course explores aspects of environmental history, drawing on the literature from a number of countries.

HIST 705-3 Themes in the History of International Relations Aspects of the history of the relations between nations drawing on the literature from a number of countries.

HIST 707-3 Themes in Cultural History This course explores themes in the history of culture and draws upon relevant literature from various countries or eras.

HIST 708-3 Themes in Social History This course explores themes in social history and draws upon relevant literature from various countries or eras.

HIST 745-3 Historical Methods and Approaches Historical methods and research techniques are examined in this seminar; students also learn about research design and prepare thesis proposals. This is a PASS/FAIL course.

HIST 750-15 MA Thesis or Project Working under the guidance of a supervisor, each student must plan a study requiring original research and sophisticated analysis in order to produce and defend either (a) a substantial thesis or project of approximately 25,000 to 30,000 words (85-100 pages) or (b) an original project of comparable weight to a thesis. Projects may include knowledge transmission, museum exhibits, documentary films, creative writing, digital history initiatives, and/or artistic projects based on substantial historical research. This is a PASS/FAIL course.

Prerequisite(s): Students must have completed the graduate courses required for a Master's degree in history, including HIST 700-3

HIST 760-12 History Master's Major Research Paper Students complete a scholarly paper of approximately 9,000 to 11,000 words (30-36 pages), based on original research and defending an original argument, and modelled on an article-length manuscript prepared for submission to a peer-reviewed historical journal. Students prepare an oral presentation of about 20 minutes based on that scholarly paper, and modelled on a presentation at a scholarly conference. This is a PASS/FAIL course.

Prerequisite(s) with concurrency: HIST 700-3, HIST 745-3, and four other graduate courses
Preclusion(s): HIST 750-15

HIST 799-3 Independent Study The details of this course will be determined on a case-by-case basis between faculty and graduate students.

Integrated Engineering (IENG)

IENG 611-3 Introduction to Wood as a Building Material This course provides an overview of using wood as a building material. The course first examines the macro- and microscopic structures of wood, chemical compositions, physical and mechanical properties, and then covers a variety of structural wood-based products by exploring the manufacturing process, characteristics, mechanical properties and application in modern wood structures. The course also briefly introduces wood technologies related to the use of wood in building, fire properties and durability of wood.

IENG 612-3 Project Design I This course focuses on principles of structural mechanics and their applications in wood structures. Load calculation procedures for typical structures under practical conditions are presented. Analysis of different types of structural members and connections are discussed.

Prerequisite(s): IENG 611-3, or by permission of the Program Chair

IENG 613-3 Wood Design I This course focuses on the design of timber structural elements and connections. Topics include the behaviour and design of bending, tension and compression members made of solid timber or glue-laminated timber and the complete suite of contemporary connectors and connector systems. Students design and analyze various structural components and design, build, test and analyze a connection assembly.

IENG 614-3 Engineering Vibration and Acoustics The first part of this course introduces engineering vibration theories, including free, harmonic, and forced vibration response of single- and multiple-degree-of-freedom systems, distributed parameter systems, and experimental techniques in vibration testing, including non-destructive testing and the application of engineering vibration in non-seismic-related building design. The second part covers room acoustics, sound insulation performance of wall and floor assemblies, and sound transmission in wood buildings. The labs include modal testing and analysis, vibration data processing, reverberation time measurement, and sound insulation testing

IENG 615-3 Wood Science This course examines the macroscopic and microscopic anatomical features of wood and explores its physical properties. The course looks at the wood-water interaction and methods of wood drying. Students learn to identify macroscopically commonly used wood species.

Prerequisite(s): IENG 611-3, or by permission of the Program Chair

IENG 624-3 Envelope Design This course addresses the fundamentals of building physics in building envelopes, thermal bridges, and hydrodynamic processes. Students examine airtightness and convection-based influences along with durability of building envelopes. The principles and details of energy-efficient design, specifically for wood buildings, are applied.

Preclusion(s): CIVE 451-3

IENG 626-3 Sustainable Design I This course focuses on sustainable design, durability and resilience as well as energy efficiency and lowest possible environmental impact. It addresses the adaptation of design to climate zones, the interconnection of architectural volumes, form, envelope design and healthy living. It explores the integration of mechanical systems and their influence on design. Parameters of healthy living, air quality and thermal comfort are introduced. Economic calculations and life cycle assessment are discussed.

Prerequisite(s): IENG 611-3, or by permission of the Program Chair

IENG 650-3 CAD/BIM in the Construction Industry This advanced course focuses on industry-specific topics, including Computer-Aided Design (CAD) and Design for Manufacturing and Assembly (DfMA), with a strong emphasis on their role in Building Information Modelling (BIM) as they relate to construction and engineering. New emerging trends of parametric design are also explored and further investigated for their role in state-of-the-art projects. The roles that interoperability, data exchange, and sharing have in the industry are discussed within the BIM context.

Preclusion(s): ENGR 450-3

IENG 722-3 Project Design II This course is a wood design studio that provides students with the opportunity to apply their design skills to a realistic design task.

Prerequisite(s): IENG 611-3 and IENG 613-3, or by permission of the Program Chair

IENG 723-3 Wood Design II This course focuses on structural design of timber floors and lateral load resisting systems. Topics include: the behavior and design of floors made from solid timber; engineered wood products; timber-concrete composites; contemporary lateral load resisting systems such as light-frame; cross-laminated timber shear walls and diaphragms; and moment frames. Students design and analyze various structural wood and hybrid systems.

Prerequisite(s): IENG 611-3 and IENG 613-3, or by permission of the Program Chair

IENG 727-3 Prefabrication and Digital Manufacturing in Wood Construction This course introduces students to prefabrication. Topics cover state-of-the-art fabrication technology including CNC-machines and industrial robots, tooling options, material handling, and process flow. Students learn the basics of Design for Manufacturing and Assembly (DfMA) including machine interfacing, machining strategies, and how design decisions influence the ability to assemble and manufacture a structure to the highest standards and efficiency.

Prerequisite(s): IENG 611-3, or by permission of the Program Chair

IENG 729-3 Structural Dynamics and Seismic Design This course aims to acquaint graduate students and practicing engineers with theories of structural dynamics and principles of seismic design. Part one discusses concepts, theories, and methods for conducting analysis of distributed-parameter, single- and multi-degree-of-freedom systems subjected to various types of dynamic loads, including seismic excitation. Part two introduces principles of earthquake engineering and fundamentals of seismic hazards. Students learn philosophies, principles, and practices of seismic design of concrete, steel, timber, and composite structures in compliance with the National Building Code of Canada (NBCC).

IENG 731-6 Master of Engineering Project This course is the capstone project and can include various fields covered in the program. Students are encouraged to combine several topics to demonstrate integrated design skills.

Prerequisite(s): IENG 722-3 with a minimum grade of B- and IENG 723-3 with a minimum grade of B

IENG 738-3 Finite Element Analysis and Computational Engineering This course first reviews the basics of matrix structure analysis including bar, 2D truss, beam, and 2D frame elements, and then introduces the fundamental concepts of finite element analysis (FEA) including domain discretization, element types, system matrix assembly, and numerical solution techniques. Application of FEA to conduct structural analysis is covered using commercial software, including both static and dynamic analysis. Case studies focus on wood structures. Computational design and digital fabrication are introduced through guest lectures and additional materials.

IENG 739-3 Special Topics III This course focuses on recent developments in the Canadian and international wood and/or sustainable construction industry. Topics vary and explore recent trends, methods or new products and approaches in the industry. Field trip(s) are required.

Prerequisite(s): IENG 611-3

Interdisciplinary Studies (IDIS)

IDIS 704-3 Graduate Seminar in Interdisciplinary Studies The weekly seminar course allows students to investigate and present ideas and results pertaining to current research in interdisciplinary studies. The offerings may include presentations of current literature, research methodology, and topics related to students' own research work. Students participate in discussions and critique the work present. All IDIS students must successfully complete this seminar course once during their program of studies. MA and MSc students are required to attend and participate in all seminar sessions to obtain credit for the course. This is a PASS/FAIL course.

Preclusion(s): CPSC 704-3, MATH 704-3, MCPM 704-3, NRES 704-3

IDIS 791-(3-6) Special Topics The course provides an opportunity for students to study at an advanced level a topic relevant to their interdisciplinary program.

IDIS 797-3 Research Paper This course is intended for students in the Interdisciplinary Studies Master's degree program who have chosen the course-based option. This course involves the student working with a supervisor to prepare a research paper for submission for publication. The topic and form of publication are decided by the supervisor and the student. This is a PASS/FAIL course.

IDIS 798-12 MSc Thesis The MSc thesis requires that a student undertake original research involving a literature review and the development of a research design and methodology appropriate to the research problem. The implementation of the research methodology normally includes original investigation and data collection, the analyses and discussion of which constitute the major part of the completed research thesis. The thesis may involve, but is not confined to, the testing of a specific hypothesis or hypotheses. This is a PASS/FAIL course.

IDIS 799-12 MA Thesis This is a PASS/FAIL course.

IDIS 804-3 Graduate Seminar in Interdisciplinary Studies The weekly seminar course allows students to investigate and present ideas and results pertaining to current research in interdisciplinary studies. The offerings may include presentations of current literature, research methodology, and topics related to the student's own research. Students participate in discussions and critique works. All IDIS students must successfully complete this seminar course once during their program of studies. Students are required to attend and participate in all seminar sessions to obtain credit for the course. This is a PASS/FAIL course.

Preclusion(s): IDIS 704-3

IDIS 899-12 PhD Dissertation The Doctoral dissertation must emphasize the candidate's original research or provide an original investigation, interpretation, or synthesis of existing research. This is a PASS/FAIL course.

Prerequisite(s): PhD candidacy

International Exchange (INTX)

INTX 688 (1-18) International Exchange Program Graduate students register in this course when they have been accepted to participate in a formal international exchange program at one of UNBC's partner institutions. This is a PASS/FAIL course.

Prerequisite(s): Completion of at least 6 credit hours of graduate level coursework at UNBC and approval of the graduate supervisor. A student may register in this course more than once for a maximum of 18 credit hours.

International Studies (INTS)

INTS 607-3 Global Economy and Development This advanced course analyzes the evolution and assesses competing theories of the global economy. The prospects for developing countries within the global economy are examined.

Preclusion(s): ECON 401-3, ECON 601-3, INTS 407-3

INTS 612-3 Critical Perspectives on Climate Change and Security This advanced course examines the relationships between climate change and (in)security, drawing on critical, multidisciplinary theoretical and methodological perspectives. Considering (in)security in broad terms, from violent conflict to displacement to everyday experiences, topics include definitions of (in)security, historical and structural roots of climate-related vulnerabilities and insecurities, responses to climate-related risks and insecurities, and possible climate and security futures, considering dynamics of climate change and (in)security at local, national, regional, international, and global scales.

Preclusion(s): INTS 412-3

INTS 614-3 Gender, Peace, and Security This advanced course critically examines contemporary issues of gender, peace, and security (GPS) and unpacks complexities of the GPS agenda in Global North and Global South settings. It equips students with a critical understanding of GPS theories, debates, and perspectives and enables them to use this knowledge in their projects and everyday practices.

Preclusion(s): GNDR 614-3, INTS 414-3, WMST 414-3

INTS 621-3 The Political Economy of Natural Resource Extraction This course examines the political economy/ecology of natural resource extraction by examining issues such as the socio-economic, political, human and environmental dimensions of extractive activities. Specific global case studies are used to explore the concepts of sustainable livelihoods, vulnerability and adaptation, community well-being and governance at both domestic and global levels.

Preclusion(s): INTS 421-3

INTS 623-(3-6) Global Studies Field Experience This advanced course allows students to learn about the application of global studies in specific contexts through field schools or other forms of experiential learning such as internships. Course location varies with instructor and year taken.

Preclusion(s): INTS 423-(3-9)

INTS 625-3 Sustainability Problem Solving Can we fix it? This advanced course focuses on critical, strategic, and lateral-thinking skills. Global sustainability issues are explored in dynamic and future contexts using analytical and management systems involving the interaction of environmental processes and human spatial activity.

Preclusion(s): INTS 425-3, NRES 720-3

INTS 650-3 Pacific Affairs A detailed study of contemporary issues in the relations between Asia-Pacific nations, including an assessment of regional and subregional institutions.

INTS 660-3 Issues in Canadian Foreign Policy A detailed examination of selected problems in Canada's foreign relations.

INTS 698-(3-6) Special Topics in International Studies This course offers a detailed examination and analysis of a contemporary issue in international studies, including the exploration of future policy options.

INTS 699-(3-6) Independent Study This course enables students to read in depth in an area of international studies not normally covered by existing courses in the program. Permission of the graduate advisor and consent of the faculty supervisor is required.

INTS 700-3 Research Methods in Global Studies This course is a graduate seminar on quantitative and qualitative methods in Global Studies. Theoretical, methodological and practical issues in undertaking research from a global perspective are examined.

INTS 702-0.5 Graduate Colloquia Students attend colloquia on a range of research conducted on global issues. Students must register twice in this course. The course is offered during the September and January semesters. This is a PASS/FAIL course.

Preclusion(s): ECON 700-0.5

INTS 797-3 Research Paper This course involves the student (or students) working with a supervisor to prepare a document for submission for publication. The topic and form of publication are decided by the supervisor and the student(s).

INTS 799-12 MA Thesis This is a PASS/FAIL course.

Mathematics (MATH)

MATH 602-3 Functional Analysis This advanced course deals with analysis on structures varying from metric spaces to normed and Hilbert spaces. Topics include the contraction mapping principle, applications of fixed-point theorems to differential equations, bounded linear operators between normed vector spaces, Banach spaces, duality, Riesz representation theorem, and compact linear maps and their spectra. The course also covers the Fourier transform and shows some of its applications in thermodynamics and diffusion.

Prerequisite(s): Permission of the instructor
Preclusion(s): MATH 400-3, MATH 402-3, MATH 600-3

MATH 603-3 Measure Theory and Integration This course focuses on the development and properties of Lebesgue measure and the Lebesgue integral, with generalization to integration in abstract measurable spaces. Topics include outer measure, measurable sets and Lebesgue measure, measurable functions, differentiation of integrals, and the extension of these concepts to more general settings.

Prerequisite(s): MATH 302-3
Preclusion(s): MATH 401-3, MATH 403-3, MATH 601-3

MATH 620-3 Structure of Groups and Rings Advanced course in group theory and ring theory. Homomorphism theorems for groups, rings and R-modules, Sylow theorems, short exact sequences, chain conditions.

Prerequisite(s): MATH 320-3
Preclusion(s): MATH 420-3

MATH 621-3 Field Theory Topics discussed will include: fields, field extensions, splitting fields, automorphism group, Galois Theory.

Prerequisite(s): MATH 320-3
Preclusion(s): MATH 421-3

MATH 635-3 Numerical Methods for Partial Differential Equations This advanced course introduces the theory and application of numerical methods for partial differential equations for science and engineering. Programming and mathematical analysis of numerical methods are emphasized. Topics include methods for solving linear and nonlinear systems (direct and iterative methods), initial value problems, and boundary value problems (finite difference, spectral, finite volume, and finite element methods).

Prerequisite(s): MATH 335-3 or permission of the instructor
Preclusion(s): MATH 435-3

MATH 636-3 Partial Differential Equations 1 This is an advanced course in deterministic studies of partial differential equations (PDE). The main focus is on linear PDE models of first and second order arising from various disciplines. The course introduces analytic techniques related to three classical types of PDE: elliptic, parabolic and hyperbolic. Topics include: method of characteristics; Sobolev spaces; distributional derivatives; variational methods; maximum principle; Harnack inequalities; and qualitative properties of solutions to certain models.

Prerequisite(s): MATH 336-3, or MATH 302-3 and MATH 230-3, or permission of the instructor
Preclusion(s): MATH 436-3

MATH 650-3 Combinatorics This course is an introduction to Combinatorics. Topics include: counting principles, principle of inclusion and exclusion, generating functions, graph theory and applications, combinatorial structures, combinatorial optimization and applications.

Prerequisite(s): Permission of the instructor
Preclusion(s): MATH 450-3

MATH 655-3 Graphs and Algorithms Topics are chosen from basic graph concepts, flows and connectivity, trees, matchings and factors, graph colouring, scheduling, planar graphs, and algorithms.

Prerequisite(s): MATH 224-3 or CPSC 141-3
Preclusion(s): MATH 455-3

MATH 681-3 Analytic Number Theory This is an advanced course in analytic number theory. This course covers the following topics, with other topics as time permits: arithmetic functions and their average orders; prime counting functions; elementary theorems on the distribution of prime numbers; Dirichlet characters; Dirichlet theorem on primes in arithmetic progressions; Dirichlet series and Euler products; analytic properties of the Riemann zeta function and Dirichlet L-functions; the prime number theorem; and the prime number theorem in arithmetic progressions.

Preclusion(s): MATH 481-3

MATH 699-3 Special Topics in Mathematics The topics for this course will vary, depending on student interest and faculty availability.

Prerequisite(s): Permission of the instructor

MATH 700-3 Topics in Functional Analysis Topics may include operators on Hilbert spaces, Banach space theory, operator analysis.

Prerequisite(s): Permission of the instructor

MATH 704-1.5 Graduate Seminar in Mathematics This course is comprised of weekly seminar sessions. Students will investigate and present ideas and results pertaining to current research in mathematics. The offerings may include presentations of current literature, research methodology, and topics related to students' own research or project work. Students will participate in discussions and critique the work presented. MSc students are required to attend and participate in all seminar sessions to obtain credit for the course. This is a PASS/FAIL course. All MSc students must register in a seminar course twice during their program of studies. It is expected that all MSc students will attend the seminar each semester they are available.

Prerequisite(s): Permission of the instructor

MATH 705-3 Complex Analysis Analytic functions, Cauchy-Riemann equations, power series, Liouville theorem, maximum modulus principle, Cauchy's theorem, winding number, calculus of residues, meromorphic functions, conformal mappings, Riemann mapping theorem, analytic continuation.

Prerequisite(s): Permission of the instructor

MATH 720-3 Topics in Algebra and Logic Topics may include Universal Algebra, Recursion Theory, Model Theory.

Prerequisite(s): Permission of the instructor

MATH 725-3 Topics in Topology Topics are chosen from topological spaces, Tychonoff theorem, Tietze extension theorems, Urysohn lemma, compactification, homotopy theory, fundamental group, uniform spaces, and knot theory.

Prerequisite(s): MATH 226-3 and MATH 302-3 and either MATH 321-3 or MATH 405-3, or permission of the instructor

MATH 731-3 Topics in Applied Mathematics Topics may include Operations Research, Discrete modelling, Biomathematics.

Prerequisite(s): Permission of the instructor

MATH 740-(1-6) Advanced Topics in Mathematics This course permits specialized instruction in the discipline of Mathematics. Topics are chosen depending upon student interest and faculty availability, and topic headings vary from year to year and from section to section. With permission of the Chair, this course may be taken any number of times provided all the topics are distinct.

Prerequisite(s): Permission of the instructor

MATH 793-6 Master of Science (Mathematics) Project The MSc project requires the completion of an extended position paper, report, plan or program making a contribution to, or addressing a major issue in, a scientific field. The development of the project requires the application of original thought to the problem or issue under investigation. The non-thesis project does not require the development of a research design or research methodology, and need not involve the collection or generation of an original data. This is a PASS/FAIL course.

Prerequisite(s): Acceptance in the Masters of Science (Mathematics) program

MATH 794-12 Master of Science (Mathematics) Thesis The MSc thesis documents a scientific contribution to the field of Mathematics. Students are expected to conduct original research involving a literature review, development of a research design and methodology, testing and analysis of data, and development of conclusions. Successful defence of the thesis is required for graduation in the Master of Science (Mathematics) thesis stream. This is a PASS/FAIL course.

Prerequisite(s): Acceptance in the Masters of Science (Mathematics) program

Mathematical, Computer, Physical and Molecular Sciences (MCPM)

MCPM 704-1.5 Graduate Seminar This course comprises weekly seminar sessions and is offered during both the September and January semesters. At least one of the course offerings each year provides students with an opportunity to present ideas pertaining to their research proposals, or the overall research design, methodology and results of a thesis or non-thesis project. The second offering each year may follow a similar traditional seminar format or may involve a class project related to MCPM. Students are required to attend and participate in all seminars to get credit for the course. (All MSc students must register in a seminar course twice during their program of studies. It is expected that all MSc students will attend the seminar each semester in which it is available). This is a PASS/FAIL course.

MCPM 790-12 MSc Thesis Credit for the MSc thesis results from the student making a contribution to a scientific field. It requires that a student undertake original research involving a literature review and the development of a research design and methodology appropriate to the research problem. The implementation of the research methodology normally includes original investigation and data collection, the analyses and discussion of which constitutes the major part of the completed research thesis. The thesis may involve, but is not confined to, the testing of a specific hypothesis or hypotheses. This is a PASS/FAIL course.

MCPM 791-6 MSc Project Credit for the MSc Project is given for the completion of an extended position paper, report, plan or program that makes a contribution to, or addresses a major problem issue in, a scientific field. The development of the project requires the application of original thought to the problem or issue under investigation. The non-thesis project does not require the development of a research design or research methodology, and need not involve the collection of original data. This is a PASS/FAIL course.

MCPM 798-(1-3) Special Topics This course fulfils requirements for specialized instruction in the Mathematical, Computer, Physical, and Molecular Sciences Graduate Program. Topics chosen are dependent upon student interest and instructor availability. Topic headings and credit hours vary from year to year and from section to section. This course may be repeated for a maximum of 3 credit hours.

Prerequisite(s): Permission of the Chair of the MCPM Graduate Program Committee

MCPM 799-(1-6) Independent Study This course provides a concentration on a particular topic or topics agreed upon by the student and a member of the faculty in the Mathematical, Computer, Physical and Molecular Sciences Graduate Program. This course may be repeated to a maximum of 6 credit hours.

Prerequisite(s): Permission of the Chair of the MCPM Graduate Program Committee

Natural Resources and Environmental Studies (NRES)

The content of NRES 700-level courses supports the range of streams within the NRES degrees including Biology, Environmental Science, Environmental Studies, Forestry, Geography, and Outdoor Recreation and Tourism Management.

NRES 698-(3-6) Special Topics in Natural Resources and Environmental Studies This course covers selected topics related to Natural Resources and Environmental Studies. This course may be repeated to a maximum of 6 credit hours if the material is substantially different.

NRES 700-3 Research in Natural Resources and Environmental Studies This course exposes Master's students to various philosophies and epistemologies regarding research within the field of natural resources and environmental studies. Topics include the nature of research, communicating research, research ethics, qualitative and quantitative methodology and interdisciplinary research.

Prerequisite(s): Enrollment in a graduate program

NRES 701-0.5 Graduate Colloquia Students attend weekly colloquia on a range of research conducted in natural resources and environmental studies. Students must register twice in this course. The course is offered during the September and January semesters. This is a PASS/FAIL course.

NRES 710-3 Modelling and Simulation This course enables students to use models to represent and analyze quantitative aspects of natural systems (static, dynamic, and spatial). The course involves use of analytical, physical, and/or numerical models such as computational fluid dynamics models to simulate natural systems. Visualization, validation, verification, and sensitivity analysis of models are discussed.

NRES 730-3 Disturbance Ecology This course covers the effects of biotic and abiotic disturbance agents on ecological processes in terrestrial and aquatic systems. Topics covered may include the role of disturbance frequency, scale and pattern in vegetation and animal succession, animal and plant adaptation and dependence on disturbance, and effects of anthropogenic disturbances or management of disturbance events on ecosystem function. The course may include a field study of a selected system, e.g., sub-boreal forest or prairie landscape.

Prerequisite(s): Permission of the instructor

NRES 731-3 Soil Ecology This course takes an ecological approach to the role of soil organisms in energy flow and biogeochemical cycling, and the contributions of soil organisms and associated processes to ecosystem productivity, sustainability and environmental quality. The habitat, interactions, adaptation and function of organisms in the forest floor, mineral horizons, and at the root-soil interface are studied. Students conduct a research project that employs modern methods to investigate the role of soil organisms in an area pertinent to the course.

Prerequisite(s): Permission of the instructor

NRES 732-3 Forest Systems and Management This course covers the important processes and features of forest systems, with special emphasis on sub-boreal, boreal, and riparian systems. Processes such as tree and forest gas and nutrient exchange, tree growth and acquisition of resources, and the effects and interactions of management practices, pathogens, arthropods, vertebrates, and climate change on forest systems are examined. The course requires each student to complete a 'forest systems' laboratory or field research project with a UNBC faculty member.

Prerequisite(s): Background in forest ecology and silviculture

NRES 737-3 Evolutionary Biology This course is an examination of evolutionary processes, including discussions of micro- and macro-evolutionary change and the underlying behavioural, ecological, physiological, biochemical and genetic variation among individuals upon which evolution can act. Topics vary with the instructor, and may include: molecular evolution, concepts and mechanism of speciation, adaptions that affect the evolution of organisms, or factors limiting their exploitation of different environments.

Prerequisite(s): Permission of the instructor

NRES 760-3 Field School in Human Ecology This field-school is an intensive, interdisciplinary course addressing themes including social-ecological systems, human-environment relationships and ecosystem approaches to health. The course includes class-based sessions and intensive field-based components relevant to the course theme and location, that differ from year to year. The field-school brings together colleagues in natural sciences, health sciences, social sciences, humanities, and beyond, who work in collaboration with interested parties and community members to address issues at the interface of environment, society and health.

Preclusion(s): HHSC 760-3, HHSC 860-3

NRES 763-3 Graduate Geography Field School Graduate students apply field methods in physical and/or human geography towards an integrated study of local and global environments. This course is normally taught concurrently with GEOG 333-3.

Preclusion(s): GEOG 333-3

NRES 773-3 Advanced Qualitative Research Methodology This seminar course explores methodological approaches to, and theoretical frameworks of, qualitative research. Emphasis is given to exploring key concepts of validity, rigour, reliability, subjectivity/objectivity, and ethics of concern to qualitative researchers. The course surveys various frameworks including indigenous, feminist, and critical methodologies, among others, to understand their assumptions and approaches to fieldwork including interviewing, survey work, field notes, writing results, and reciprocity. This course explores how to translate abstract concepts such as place, space, scale, region, and mobility into viable field methods.

NRES 776-3 Advanced Statistical Analyses for Natural Resource Sciences This course provides graduate students in natural resource sciences with advanced, practical training in the analysis of quantitative data. The course focuses primarily on advanced univariate statistics that can be applied to both experimental and observational data. This focus includes a full exploration of generalized linear models (E.g., linear, logistic, and mixed models) as well as methods for experimental data including analysis of variance and associated techniques. Also, students receive instruction in the principles of experimental design, data management, and the review and reporting of statistical results. Students receive instruction in the use of statistical software used for manipulating and analysing data that are applicable to the natural resource sciences.

Prerequisite(s): Undergraduate course in univariate statistical analysis or permission of the Instructor
Preclusion(s): NRES 798-3 when offered as Statistical Methods for Ecologists

NRES 790-12 Master of Science (NRES) Thesis The MSc thesis results in a scientific contribution to a traditional science field or to an applied understanding of resources and the environment. It requires that a student undertake original research involving a literature review and the development of a research design and methodology appropriate to the research problem. The implementation of the research methodology will normally include original investigation and data collection, the analyses and discussion of which will constitute the major part of the completed research thesis. The thesis may involve, but is not confined to, the testing of a specific hypothesis or hypotheses. Required for graduation in the Master of Science (Natural Resources and Environmental Studies stream). This is a PASS/FAIL course.

Preclusion(s): BIOL 720-12, ENVS 720-12, GEOG 720-12, NREM 720-12

NRES 792-12 Master of Natural Resources and Environmental Studies Thesis The MNRES thesis addresses an integrated research problem. It requires that a student undertake original research involving a literature review and the development of a research design and methodology appropriate to the research problem. Implementation of the research methodology will normally include original investigation and data collection, the analyses and discussion of which will constitute the major part of the completed research thesis. The thesis may involve, but is not confined to, the testing of a specific hypothesis or hypotheses. Required for graduation in the Master of Natural Resources and Environmental Studies Thesis option. This is a PASS/FAIL course.

NRES 793-6 Master of Natural Resources and Environmental Studies Project The MNRES project is an extended position paper, report, plan or program that addresses a major problem or issue relevant to the field of natural resources and environmental studies. The project development requires the application of original thought to the problem or issue under investigation, and the framing of that problem within the broader context of natural resources and the environment. The project does not require the development of a research design or research methodology, and need not involve the collection of original data. Students are required to pass an evaluation of the project set by the supervisory committee as this course is required for graduation in the Master of Natural Resources and Environmental Studies project option. This is a PASS/FAIL course.

Preclusion(s): NREM 710-(3-6)

NRES 794-12 Master of Arts (NRES) Thesis The MA thesis contributes to the understanding of social, political, economic, and/or cultural dimensions of natural resources and the environment. It requires that a student undertake original research involving a literature review and the development of a research design and methodology appropriate to the research problem. The implementation of the research methodology will normally include original investigation and data collection, the analyses and discussion of which will constitute the major part of the completed research thesis. The thesis may involve, but is not confined to, the testing of a specific hypothesis or hypotheses. Required for graduation in the Master of Arts (Natural Resources and Environmental Studies). This is a PASS/FAIL course.

NRES 798-(1-3) Special Topics This course is intended to fulfill requirements for specialized instruction in any of the disciplines represented in the Natural Resources and Environmental Studies Program. Topics will be chosen depending upon student interest and instructor availability, and topic headings will vary from year to year and from section to section.

Preclusion(s): BIOL 722-3, ENVS 722-3, FSTY 722-3, GEOG 722-3

NRES 799-(1-6) Independent Study This course provides a concentration on a particular topic or topics agreed upon by the student and a member of the faculty in the NRES Graduate Program. This course may be repeated to a maximum of 6 credit hours, if the material is substantially different.

Prerequisite(s): Permission of the Instructor and Chair, NRES Graduate Program Committee
Preclusion(s): BIOL 799-3, ENVS 799-3, GEOG 799-3, NREM 799-3

NRES 801-3 Integrated Environmental Systems I This course is an interdisciplinary examination of the biological, chemical, and physical processes of ecosystems. Key sciences to be considered include biology, ecology, physics, chemistry, earth sciences, selected social sciences, and recent developments in systems theory, as well as interactions among the sciences. This course will involve a critical examination of the nature and distribution of components within ecosystems, the processes that govern them, and their relevance to environmental systems. Major issues in natural resource management and environmental studies, such as global climate change, will provide the discussion framework for this class.

Prerequisite(s): Admission into the PhD NRES program

NRES 802-3 Integrated Environmental Systems II This course exposes the student to the major extant theoretical explanations of human use, valuation, appreciation, and perceptions of the natural environment. Included will be overviews of the role of science in society, market and non-market valuation processes with respect to natural resources, attitude formation, aesthetics and perceptual bases, planning and policy implications, and the driving forces in human uses of natural resources. An important component will be an exploration of the major natural resource issues involving environmental ethics and reasoning.

Prerequisite(s): Admission into the PhD NRES program

NRES 803-3 Integrated Environmental Systems III Students in the graduate cohort work together to formulate an interdisciplinary perspective on their graduate research projects. Supervisors and the supervisory committees guide students in the development of their research proposals, while the NRES 803-3 cohort and instructor provides input, through seminars and discussions, to help the student relate the research thesis to the social and arts, physical, and life sciences of natural resources and the environment.

Prerequisite(s): NRES 801-3 and NRES 802-3, and admission into the PhD NRES program

NRES 804-3 Graduate Seminar This seminar is geared toward developing "critical thought" and aims to help candidates respond across a broad spectrum of topics. The seminar functions to generate debate on various (frequently contentious) issues, to promote interaction with faculty members and other students across the entire Faculty, and to act as a platform for presentations by the students themselves and invited speakers. Each PhD student is expected to give two 50 minute presentations. One presentation will be on a topic agreed upon by the student and the course coordinator, and the other will be relative to the student's thesis. This is a PASS/FAIL course.

Prerequisite(s): Admission into the PhD NRES program

NRES 890-12 Thesis Research The Doctoral thesis must stress original research or an original investigation, interpretation or synthesis of existing research. This is a PASS/FAIL course.

Natural Resources Management (NREM)

NREM 607-3 Natural Resources Planning Natural resource management planning processes to include crown land and different lease arrangements as well as private land. Inventory, public involvement, implementation, monitoring, and assessing resource values.

Preclusion(s): NREM 400-3

NREM 608-3 Watershed Management Principles and practices of forest management for protection, maintenance and improvement of water resource values. Effects of land management on quality, quantity and timing of water flow.

Preclusion(s): NREM 410-4

NREM 613-3 Agroforestry This course introduces students to agroforestry concepts, strategies and practices (systems). Discussions include ecological, economic, and social circumstances under which a landowner lives and makes decisions about whether or not to practice agroforestry. Both temperate and tropical approaches to agroforestry systems are addressed in the course. Special attention is given to agroforestry research and development in British Columbia. Students are exposed to current modelling techniques used in agroforestry, as well as research opportunities in agroforestry.

Preclusion(s): NREM 413-3

NREM 615-3 Forest Soils This course examines the distinctive physical, chemical and biological properties of forest soils from an ecological perspective, emphasizing western Canadian examples. Major themes include the role of soils in forest site classifications, carbon and nutrient cycling in forests, soil determinants of forest productivity, and the responses of soils to forest management practices. Field trips and laboratory exercises provide experience in techniques used to assess forest soil properties and management impacts.

Prerequisite(s): None (FSTY 205-3 or equivalent is recommended)
Preclusion(s): FSTY 315-3 or FSTY 415-3

NREM 616-3 Conservation Planning Conservation planning is concerned with the theory and techniques to improve the scientific basis of conservation decisions and the cost-effectiveness of conservation and management actions. Students learn to apply the basic tools of conservation planning to real and complex conservation problems. These tools include: systematic conservation planning; multi-criteria decision-analysis; and risk assessment.

Preclusion(s): NREM 409-3

NREM 625-3 Soil Formation and Classification Examination of soil formation with emphasis on environmental forces including human activity; distribution and classification of soils in northern and interior British Columbia; correlation of the Canadian system of Soil Classification with international systems such as Soil Taxonomy and FAO/UNESCO Soil Map of the World.

Preclusion(s): FSTY 425-3

See NRES course listing for additional 700-level Natural Resources Management courses.

Nursing (NURS)

NURS 602-3 Pathophysiology This course provides an intensive, comprehensive, evidence-based background for assessment and advanced nursing management of common acute/episodic and chronic illnesses encountered across the life-span in primary health care settings. Normal anatomy and physiology are reviewed and the pathophysiology of selected conditions, diseases, or disorders is examined in-depth. Particular attention is given to epidemiological evidence relevant to northern British Columbia.

Corequisite(s): NURS 605-3
Major Restriction: Master of Science in Nursing (Family Nurse Practitioner) students, or permission of the Chair

NURS 603-3 Health Assessment and Diagnostic Reasoning This course prepares students to perform comprehensive advanced health assessments with clients across the life-span. The integration of interpersonal communication and physical assessment skills with diagnostic reasoning, critical thinking, and clinical decision-making in determining differential diagnoses is emphasized. Students learn health assessment and diagnostic reasoning in accordance with Nurse Practitioner professional regulations and within the context of interpersonal practice.

Major Restriction: Master of Science in Nursing (Family Nurse Practitioner) students

NURS 604-3 The Healing and Well-being of Indigenous Peoples This course provides a critical examination of Indigenous healing and well-being in relation to the historical influences of European contact and colonization, government social policy, environmental change, migration, and evolving lifestyles. Traditional and contemporary knowledge, world-views and spirituality, as well as Indigenous approaches to healing and well-being within families and communities are explored.

NURS 605-3 Pharmacological Management and Therapeutic Interventions This course provides students with the most current advanced knowledge of pharmacology, including pharmacokinetics and pharmacodynamics. Students learn about evidence-based practice, including BCCNM limits and regulations, in the selection, prescription, and monitoring of drugs that are commonly used to treat diseases, disorders, conditions, and injuries. This course involves in-depth study of the mechanisms of drug interactions, therapeutic and adverse effects, and client education. Emphasis is on clinical decision-making, applied in case studies that span a variety of age groups and conditions.

Corequisite(s): NURS 602-3
Major Restriction: Master of Science in Nursing (Family Nurse Practitioner) students, or permission of the Chair

NURS 606-3 Developing Nursing Knowledge This course explores the historical, philosophical, and theoretical underpinnings of professional nursing and the evolution and application of nursing knowledge. This course examines the relationships between nursing theory, nursing science, and practice. Students examine the core elements of nursing knowledge, the distinct nature of nursing research, and the dynamic relationship between theory and practice.

Major Restriction: Master of Science in Nursing (Family Nurse Practitioner) or Master of Science in Nursing (Thesis or Project) students

NURS 607-3 Appraising and Synthesizing Evidence for Practice This course provides students with the knowledge and skills to undertake a systematic search of literature, to critically examine and analyze the evidence, and to prepare an integrative or narrative literature review in response to a specific practice question. Students critique qualitative and quantitative research, systematic reviews, evidence-based guidelines, and other relevant sources, and explore ways to apply that research and evidence in practice.

Major Restriction: Master of Science in Nursing (Thesis or Project) or Master of Science in Nursing (Family Nurse Practitioner) students

NURS 608-3 Nurse Practitioner Professional Practice This course focuses on building an in-depth understanding of family nurse practitioner practice in British Columbia, including related legislative, regulatory, and professional practice concepts. The course addresses the professional responsibility, accountability, and practice management implications of the family nurse practitioner role, and emphasizes the responsibility for continued professional development and maintenance of the family nurse practitioner's competence and fitness to practice.

Prerequisite(s): NURS 606-3, NURS 704-3
Major Restriction: Master of Science in Nursing (Family Nurse Practitioner) students

NURS 612-3 Women and Health This course examines women's health from a holistic perspective through a feminist lens, with emphasis on social determinants of health. Students use health research evidence and sources from social sciences and humanities to explore women's health experiences as well as specific health concerns across the lifespan.

Preclusion(s): NURS 412-3

NURS 618-3 Research Approaches for Nursing and Health This course introduces a broad overview of research approaches and methods relevant to nursing and health care. Students examine the philosophical and methodological foundations of qualitative, quantitative, and mixed methods research, and explore the development of research questions and the selection of appropriate methods to address these questions. Topics covered include research design, data collection and analysis principles, ethical and culturally safe research, and approaches to knowledge translation.

Major Restriction: Master of Science in Nursing (Thesis or Project) students, or with permission of the Chair

NURS 619-3 Qualitative Research in Nursing and Health This course explores various approaches to qualitative research in nursing and health, beginning with the epistemological and ontological commitments. Approaches may include qualitative description, phenomenology, participatory action research, feminist research, grounded theory, and forms of ethnography. Practical concerns encountered in undertaking qualitative research, including issues of ethics and rigour, are explored.

Prerequisite(s): NURS 618-3
Preclusion(s): EDUC 610-4, GNDR 609-3, HHSC 703-3, and NURS 609-3
Major Restriction: Master of Science in Nursing (Thesis) students, or with permission of the Chair

NURS 620-3 Quantitative Research in Nursing and Health This course introduces students to a range of quantitative research designs, methods, and statistical approaches that are commonly used in nursing practice, nursing education, and health care. This course exposes students to methodological tools.

Prerequisite(s): NURS 618-3
Preclusion(s): NURS 610-3 and SOCW 609-3
Major Restriction: Master of Science in Nursing (Thesis) students, or with permission of the Chair

NURS 621-3 Health and Global Interconnections This course provides students with opportunities to develop a critical understanding of key issues related to the relevance of health and global interconnections including the following: links between health, social justice and poverty; health disparities and health equity; and gender, diversity and health. Particular attention is given to cross-cutting global health topics such as global health care, geographical health policy, and the effects of significant world events. Students have an opportunity to develop an appreciation of political, social and economic responsibility, global citizenship in health, planetary health, and actions being taken to effectively deal with important global health challenges.

NURS 660-3 Health, Justice, and the Environment This advanced course explores the health impacts of pressing ecological crises including pollution, climate change, and biodiversity loss, and the equity dimensions of these crises. A systems-thinking approach is taken to explore both social and ecological determinants of health. The equity focus considers environmental racism in northern British Columbia and the need to develop environmental and climate health justice praxis in Canadian nursing and health professions. Students gain an appreciation of the complexity of wicked problems in the context of health, justice, and the environment in Canada.

Prerequisite(s): Permission of the instructor
Preclusion(s): NURS 460-3

NURS 680-(3-6) Special Topics in Nursing and Health This course addresses topics of current interest in nursing and health, which vary from year to year. With the permission of the Chair, this course may be repeated to a maximum of 6 credit hours if the material is substantially different.

NURS 681-(1-6) Independent Study The details of this course are determined on an individual basis between faculty and graduate students.

NURS 701-6 Advanced Clinical Practice Nursing This course focuses on applied advanced nursing practice within specialist or generalist areas of practice. The course is tailored to each student's specific clinical focus, which could include health care management, interprofessional practice, education, clinical informatics, collaborative social enquiry, Indigenous health care, intercultural practice, or rural nursing. A practicum is required.

Prerequisite(s): NURS 604-3, NURS 606-3, NURS 607-3

NURS 703-3 Health Program Planning, Community Development and Evaluation This course addresses health program planning, community development, and program evaluation informed by epidemiological and community engagement approaches. Tools and processes for implementation are linked to strategies for continuous quality improvement. Evaluation competencies are examined through an ethical lens to consider how programs can be tailored for context. The contextual focus for this course is on rural, northern, and Indigenous communities.

Major Restriction: Master of Science in Nursing (Thesis or Project Option) or Master of Science in Nursing (Family Nurse Practitioner) students, or permission of the Chair

NURS 704-3 Leadership in Health Care and Practice This course provides a critical examination of selected current issues in health and advanced practice nursing in Canada with a focus on underlying social, political, cultural, historical, legal, and economic factors. This course examines ways in which nurses can influence policy development and foster change in the health system, including how theories of leadership and change can be implemented to ensure quality care, provider and client satisfaction, and equitable distribution of resources in various practice settings.

Preclusion(s): HHSC 602-3 and POLS 603-3
Major Restriction: Master of Science in Nursing (Family Nurse Practitioner) or Master of Science in Nursing (Thesis or Project Option) students

NURS 720-6 Practicum: Integrating Primary Health Care I This course enables students to consolidate and practice assessing, diagnosing, and managing physical and mental health/illness in adults, older adults, and their families. The focus is on the management of common episodic and chronic health conditions of individuals across the lifespan, within the context of family and community in northern primary health care settings. Emphasis is placed on health promotion and illness/injury prevention strategies and on chronic self-care management. Situations requiring physician referral and managing rapidly changing conditions are also addressed. This two-part course, which consists of on-site practice, seminars, and a clinical practicum, includes a structured clinical evaluation.

Prerequisite(s): NURS 602-3, NURS 603-3, NURS 604-3, NURS 605-3, NURS 607-3, NURS 608-3, NURS 703-3, NURS 704-3
Major Restriction: Master of Science in Nursing (Family Nurse Practitioner) students

NURS 730-6 Practicum: Integrating Primary Health Care II This course enables students to extend their knowledge and practice skills in northern primary health care setting with an emphasis on the development of core family nurse practitioner competencies related to caring for perinatal women, infants, children, and adolescents. Emphasis is placed on health promotion and illness/injury prevention strategies and on chronic self-care management. Situations requiring physician referral and managing rapidly changing conditions are also addressed. This two-part course, which consists of on-site practice, seminars, and a clinical practicum, includes a structured clinical evaluation.

Prerequisite(s): NURS 720-6
Major Restriction: Master of Science in Nursing (Family Nurse Practitioner) students

NURS 763-(1-6) Field School In this experiential learning course, students are immersed in a specific global health context where they actively engage in developing and applying global health knowledge related to health promotion, social capital and community sustainability. The field school provides opportunities to develop new knowledge, skills, attitudes, reflective approaches, and perspectives through interaction with people and communities from other cultures. It is open to students from all disciplines. This course may be repeated to a maximum of 6 credit hours if the material is substantially different.

Prerequisite(s): Permission of the Instructor
Preclusion(s): NURS 493-(1-6)

NURS 790-9 Nurse Practitioner Internship This final practicum course, consisting of seminars and concentrated clinical practice, sees students building upon previously acquired family nurse practitioner knowledge and skills. Students undertake autonomous, collaborative primary health care practice, through consolidating their skills and judgement in the assessment, management, and care of individuals and families across the life-span. Students collaborate with other health professionals to provide comprehensive care, and begin to take on leadership roles in addressing population health needs, service gaps, and the promotion of health in primary health care settings.

Prerequisite(s): NURS 730-6
Major Restriction: Master of Science in Nursing (Family Nurse Practitioner) students

NURS 797-6 MScN Project The project is an original piece of evidence-based and theory-informed scholarship that addresses a current issue relevant to nursing. The project advances nursing practice, education, or leadership through a critical examination that can contribute to decision-making in clinical, ethical, and evidence-informed health care practice and patient care. This is a PASS/FAIL course.

Prerequisite(s): NURS 604-3, NURS 606-3, NURS 607-3, NURS 618-3, NURS 703-3, and NURS 704-3
Major Restriction: Master of Science in Nursing (Project) students, or with permission of the Chair

NURS 798-3 Nurse Practitioner Project In this course, which spans the final two semesters of the program, students undertake a practice-based project that examines and synthesizes knowledge in a critical area of concern to nurse practitioners. This is a PASS/FAIL course.

Prerequisite(s): NURS 602-3, NURS 603-3, NURS 604-3, NURS 605-3, NURS 606-3, NURS 607-3, NURS 608-3, NURS 703-3, NURS 704-3, NURS 720-6
Major Restriction: Master of Science in Nursing (Family Nurse Practitioner) students

NURS 799-12 MScN Thesis The thesis is an original, independent research project carried out under the supervision of faculty. This is a PASS/FAIL course.

Prerequisite(s): NURS 604-3, NURS 606-3, NURS 607-3, NURS 618-3, NURS 619-3, NURS 620-3, and NURS 704-3
Major Restriction: Master of Science in Nursing (Thesis) students, or with permission of the Chair

Outdoor Recreation and Tourism Management (ORTM)

ORTM 601-3 The Culture of Adventure This advanced course explores how social, cultural, political, and economic dimensions affect our travel and sporting opportunities, but also how adventurous activities influence our understandings of the environment and society. The focus of the course is on adventure sport and tourism, which include a variety of activities from rock climbing to mountain biking to BASE jumping. Emphasis is placed on how adventure can reproduce and/or challenge inequities.

Preclusion(s): ORTM 401-3

ORTM 605-3 Leadership Praxis Students explore leadership theories and practices in depth as applied to work and institutions in outdoor and adventure recreation, education, travel, and conservation. Topics include leadership theories (e.g. servant leadership, culturally-appropriate leadership), group dynamics and management, decision-making, team and public communication, coalition building, and advocacy. This advanced course engages with leadership as ethical and socio-ecologically engaged practice. It explores ways that privilege, gender, race, and social discourses intersect outdoor and conservation leadership, participant experiences, and professional careers. Students develop repertoires of practice through leading and mentoring experiences outside of scheduled class.

Prerequisite(s): Permission of the Instructor
Preclusion(s): ORTM 405-3

ORTM 609-3 Critical Approaches to Outdoor Recreation Activities This seminar course critically questions and creatively reconsiders the nature of outdoor recreation activities as related to contemporary, and interrelated, social and environmental issues. The course is firmly grounded in recreation and leisure studies literature offering anthropological, critical, historical, and socio-ecological interpretations of particular activities (e.g. canoeing, rock climbing, mountaineering), and involving concepts such as identity, place, skill, and community. The course may involve practical experiences and field trips to inform academic content, but these are not the focus.

Preclusion(s): ORTM 409-3

ORTM 615-3 Conservation, Culture, and Society This advanced course explores the applications and implications of conservation social science. The course highlights how diverse systems of power, knowledge, affect, and belief are entangled with ecological stewardship. Students examine case studies from around the globe to understand how methods and theory from the social sciences can be applied to understand the social institutions, cultural values, and knowledge regimes which shape conservation success.

Preclusion(s): ORTM 415-3

ORTM 633 (1-6) Graduate Field School This graduate level experiential course provides a combination of theoretical and practical skills in the field. The course integrates outdoor recreation, conservation and nature-based tourism perspectives, and may be based in various locations in British Columbia or worldwide. This course may be repeated to a maximum of 6 credit hours.

Physics (PHYS)

PHYS 600-3 Quantum Mechanics II Covers: matrix formulation, perturbation theory, approximation methods, scattering theory, many-particle problems, identical particles, spin and statistics, atomic and molecular systems.

Prerequisite(s): PHYS 302-3 or equivalent or permission of the instructor
Preclusion(s): PHYS 400-3

PHYS 604-3 Solid State Physics Physics of the solid state of matter. Covers: theories of metals, crystal lattices, reciprocal lattice, periodic potentials, electron dynamics, band structure, conduction in metals, phonons in metals, semiconductors, diamagnetism and paramagnetism, superconductivity.

Prerequisite(s): PHYS 302-3 or equivalent, or permission of the instructor
Preclusion(s): PHYS 404-3

PHYS 606-3 Subatomic Physics Properties and structure of subatomic particles, symmetries and conservation laws, electromagnetic, weak, and hadronic interactions, beta decay, alpha decay, gamma decay, models of nuclear structure, nuclear reactions, fission, fusion, quarks and hadron spectroscopy.

Prerequisite(s): PHYS 302-3 or equivalent or permission of the instructor
Preclusion(s): PHYS 406-3

PHYS 607-3 Statistical Mechanics Kinetic theory of gases, laws of thermodynamics, probability theory, probability distributions, equilibrium statistical ensembles, ideal gases, phase transitions, critical phenomena, quantum statistics.

Prerequisite(s): PHYS 302-3 or equivalent or permission of the instructor
Preclusion(s): PHYS 407-3

PHYS 609-3 Mathematical Methods in Physics This course is a survey of the methods and techniques involved in the formulation and solutions of physics problems. Topics include matrix algebra and group theory, eigenvalue problems, differential equations, functions of a complex variable, Green's functions, special functions, Fourier series, integral equations, calculus of variations, and tensor analysis.

Prerequisite(s): Permission of the instructor
Preclusion(s): PHYS 409-3, MATH 409-3

PHYS 701-(1.5, 3) Graduate Seminar in Physics This course comprises weekly seminar sessions in physics, and provides students with an opportunity to develop and present ideas pertaining to their research proposals, research design, scientific writing and presentation of research results. This is a PASS/FAIL course.

Prerequisite(s): Permission of the instructor
Preclusion(s): CHEM 714-1.5, CPSC 704-1.5, MATH 704-1.5

PHYS 710-3 Advanced Quantum Mechanics Review of quantum mechanics including operators, linear vector spaces, Dirac notation; density operator; angular momentum; spin; and rotation groups; addition of angular momentum; symmetries and conservation laws; identical particles; time-dependent and time-independent perturbation theory; scattering theory; interaction of radiation with matter; introduction to relativistic quantum mechanics; special topics.

Prerequisite(s): Permission of the Chair/Instructor

PHYS 720-3 Condensed Matter Physics Theory and application of solid state physics to macroscopic and microscopic phenomena in materials. Topics to be chosen from the following: review of crystal lattices, unit cells, reciprocal lattice, Bloch theorem; free and nearly free electron models, tight binding model; band structure and Fermi surfaces, electron dynamics, scattering; metals, semiconductors and insulators; phonons, phonon bandstructure, scattering; diamagnetism, paramagetism, ferromagnetism, magnetic ordering and scattering; heterostructures, quantum Hall effect; topics in surface physics (surface states, work function, reconstruction); topics in superconductivity (Type I and Type II, flux quantization, Josephson Effect, BCS Theory, high-temperature superconductivity).

Prerequisite(s): Permission of the Chair/Instructor

PHYS 730-3 Advanced Nuclear Physics Topics to be chosen from the following: properties of nuclei, the nuclear force and the two-nucleon system; nuclear structure; nuclear models; the collective model; many-body basis states; Hartree-Fock Hamiltonian; spherical and deformed shell model; nuclear excitation and the electromagnetic transition; weak interaction and beta-decay; alpha decay; nuclear fission; thermonuclear fusion; nuclear reactions; compound nucleus formation; direct reactions; the optical model; intermediate energy nucleon-induced reactions; electron- and photon-induced reactions; meson-nucleon and meson-nucleus reactions; heavy-ion reactions.

Prerequisite(s): Permission of the Chair/Instructor

PHYS 740-3 Elementary Particle Physics Topics to be chosen from the following: quarks, leptons and the standard model; symmetries and conservation laws; Dirac equation and the Dirac field; gauge invariance and gauge theories—Quantum Electrodynamics; phenomenology of hadronic interactions, strong interaction, SU(3), and the quark model; other quark flavours — charm and beauty; principles of Quantum Chromodynamics; the weak interaction and parity non-conversation, invariance under CP and T; the heavy gauge bosons and the electro-weak theory; CP-violation; grand unification, supersymmetry; superstrings, particle physics and cosmology.

Prerequisite(s): Permission of the Chair/Instructor

PHYS 793-6 Master of Science (Physics) Project The MSc project documents an extended paper, plan, or program that makes a contribution to or addresses an issue in Physics. The development of a project requires the application of original thought to the problem or issue being investigated. The non-thesis project does not require the development of a research design or research methodology and need not involve the collection of original data. Successful completion of the project is required for graduation in the Master of Science (Physics) project stream. This is a PASS/FAIL course.

Prerequisite(s): Acceptance in the Masters of Science (Physics) project option program

PHYS 794-12 Master of Science (Physics) Thesis The MSc thesis documents a scientific contribution to the field of Physics. Students are expected to conduct original research involving a literature review, development of a research design and methodology, testing and analysis of data, and development of conclusions. Successful defence of the thesis is required for graduation in the Master of Science (Physics) thesis stream. This is a PASS/FAIL course.

Prerequisite(s): Acceptance in the Masters of Science (Physics) program

PHYS 798-(1-3) Advanced Topics in Physics This course covers topics of current interest in physics research, which vary from year to year. This course may be repeated provided that all topics are distinct.

Prerequisite(s): Permission of the Chair/Instructor

Political Science (POLS)

POLS 603-3 Social and Health Policy in the Context of Health and Health Care This course examines the evolution of social and health services in Canada in a comparative context and encourages students to think broadly about health care, taking into account the social, political, cultural, historical and economic factors that affect health and health policy. Students critically examine the impact of global, national, provincial and local influences on the delivery of health care and on the enactment of advanced practice. Students use concepts of public policy and policy analysis to analyze policies that are relevant to professional practice and health care and to be equipped to engage in policy debates and to influence health policy.

Preclusion(s): POLS 403-3

POLS 613-3 Democracy and Diversity This course is an exploration of the politics of ethnic, racial and religious diversity and its impact on the theory and practice of democracy in the 21st Century. Theoretical concepts and models are examined in relation to case studies drawn from Canada and around the globe.

Preclusion(s): POLS 413-3

POLS 614-3 Comparative Federalism A comparative examination of the theories, development, and problems of federalism in countries such as Russia, Canada, Germany, United States, Australia and Switzerland.

Preclusion(s): POLS 414-3

POLS 615-3 Comparative Northern Development An examination of the strategies and challenges of northern development, including political administration, resource development, the environment and indigenous peoples in Russia, Scandinavia, Alaska and Canada.

Preclusion(s): POLS 415-3

POLS 616-3 Gender and Politics This advanced course examines gender, understood as a hierarchical, binary opposition of masculinity and femininity, and its intersection with power relations, understood as an expression of politics. The course examines how gender hierarchy is a system of differential power that intersects with various systems of oppression and privilege. A significant amount of time is spent on the topic of intersectionality in politics from a variety of standpoints within our ever-changing socio-economic context, including Indigenous feminisms, eco-politics, Black social movements, disability, LGBTQ movements, and various iterations of masculinity.

Preclusion(s): GNDR 616-3, POLS 416-3, WMST 416-3

POLS 625-3 The Politics of Polarization This advanced seminar examines political polarization, understood as extremes in opinions and/or the erosion of a more moderate political centre, and its impact(s) on power relations ranging from citizen interactions to domestic and international politics. We explore how polarization develops and how it shapes political identities, discourses, and ways of thinking and acting. We also spend a significant amount of time considering how polarization intersects with developments in media, information technology, and artificial intelligence. With permission of the Chair, this course may be repeated for a maximum of 6 credit hours if the material is substantially different.

Preclusion(s): POLS 425-3

POLS 627-3 Ethics and Public Affairs This course is an exploration of the ethical foundations of domestic and foreign policy making in contemporary democratic states. Special emphasis is placed on the tension that frequently arises between moral idealism and political realism in the conduct of public affairs.

Preclusion(s): POLS 427-3

POLS 672-3 Seminar in Political Philosophy This seminar guides students through the process of conducting a research project in political philosophy. Topics are chosen according to students' interests. With permission of the Chair, this course may be repeated for a maximum of 6 credit hours if the material is substantially different.

POLS 698-3 Special Topics in Political Science This course provides students with in-depth knowledge of a specialized topic in political science. With permission of the Chair, this course may be repeated for credit if the subject matter is substantially different.

Prerequisite(s): Permission of the instructor

POLS 702-3 Scope and Methods of Political Science A graduate seminar which examines major considerations in doing quantitative and qualitative methods of social research and explores critical, theoretical, and other methodological issues in the discipline.

POLS 704-3 Independent Study The content of this course is determined on a case-by-case basis. With permission of the Chair, this course may be repeated to a maximum of 6 credit hours if the material is substantially different.

POLS 795-3 Major Research Paper This course is intended for students in the Political Science Master's degree program who have chosen the course-based option. The content of the course is determined by the student's graduate supervisor, who oversees the student's research and grades the final paper. It is normally the final course in the student's program of studies.

POLS 797-9 Graduate Project The Graduate Project is a requirement for students choosing the MA Project Option. Students will prepare a 12,000 - 15,000 word research paper, under the direction of a supervisor from Political Science. The project will contain a thorough review of the existing literature, a detailed bibliography, and will demonstrate clear evidence of critical thinking. A project proposal, and the final research paper, will be assessed by a graduate committee, comprising the supervisor, one other member from Political Science, and one member from outside the program. This is a PASS/FAIL course.

POLS 799-12 Master's Thesis The MA thesis should pose and attempt to deal with a significant public question in a way that demonstrates critical thinking, an understanding of the relevant literature, and the ability to conduct systematic research. This should be accomplished within the limits of 20,000 - 25,000 words. In preparation for the thesis, a research proposal is to be drafted (in consultation with the faculty) and submitted for discussion and approval to a committee of three persons appointed by the Program Chair. This is a PASS/FAIL course.

Psychology (PSYC)

PSYC 600-4 Univariate Statistics The course emphasizes linear statistical models involving one dependent variable. The laboratory component of the course focuses on the use of a statistical package to analyze data.

Prerequisite(s): an undergraduate course in data analysis or permission of the instructor

PSYC 605-4 Multivariate Statistics The course emphasizes statistical models involving multiple dependent variables. The laboratory component of the course focuses on the use of a statistical package to analyze data.

Prerequisite(s): PSYC 600-4 or equivalent

PSYC 607-3 Social Psychology This course examines advanced issues and current research in the study of social behaviour. If the undergraduate equivalent of this course has been successfully completed, this course may only be taken for credit at the graduate level with permission of the Chair.

Preclusion(s): PSYC 615-3

PSYC 608-3 Psychology and Environmental Conservation This course examines factors within and outside the individual that give rise to unsustainable lifestyles and examine approaches to environmental conservation that take human psychology and well-being into consideration. If the undergraduate equivalent of this course has been successfully completed, this course may only be taken for credit at the graduate level with permission of the Chair.

PSYC 609-3 Health Psychology This course examines advanced issues in the field of health psychology. Topics may include the following: the intricate relationship between psychological and physical health; and their determinants; such as cognitive processes; life-style; and health-related behaviours. If the undergraduate equivalent of this course has been successfully completed, this course may only be taken for credit at the graduate level with permission of the Chair.

Preclusion(s): PSYC 620-3

PSYC 611-3 Developmental Psychology This course examines advanced issues and current research in human development from infancy through adulthood. If the undergraduate equivalent of this course has been successfully completed, this course may only be taken for credit at the graduate level with permission of the Chair.

Preclusion(s): PSYC 645-3

PSYC 618-3 Sensation and Perception This course examines advanced issues in the study of perception and action. Building on an understanding of fundamental neural science, topics may include the mechanisms of perception and the manner in which perceptual processes are integrated with other psychological processes, such as memory and problem solving. If the undergraduate equivalent of this course has been successfully completed, this course may only be taken for credit at the graduate level with permission of the Chair.

PSYC 621-3 Biopsychology This course provides a research oriented examination of contemporary topics in biological psychology. Topics may include neural plasticity, behavioral epigenetics, neuroendocrinology, neuroimmunology and the gut-brain connection. If the undergraduate equivalent of this course has been successfully completed, this course may only be taken for credit at the graduate level with permission of the Chair.

PSYC 622-3 Positive Psychology This course provides advanced study of topics and issues in positive psychology, with an emphasis on how individuals flourish and make meaning through desirable and undesirable experiences. If the undergraduate equivalent of this course has been successfully completed, this course may only be taken for credit at the graduate level with permission of the Chair.

PSYC 627-3 Cross-cultural Psychology This course examines cross-cultural psychology through the study of people's beliefs, attitudes and behaviours in cross-cultural contexts. Representative research on major theories in the field are studied. If the undergraduate equivalent of this course has been successfully completed, this course may only be taken for credit at the graduate level with permission of the Chair.

PSYC 631-3 Psychopathology This course examines historical and current approaches to the study of behaviour disorders and problems of life adjustment, including critical evaluation of empirical findings in selected areas. Classification systems, including the current revision of the APA Diagnostic and Statistical Manual, are critically reviewed.

PSYC 632-3 Cognition This course examines advanced issues in research and theories of human mental processes and the psychological and neuroscientific methods used to study them. If the undergraduate equivalent of this course has been successfully completed, this course may only be taken for credit at the graduate level with permission of the Chair.

Preclusion(s): PSYC 635-3

PSYC 685-3 Current Methods in Psychological Research This course examines advanced theories and behavioural and neuroscientific methods applied to areas of emerging interest in psychology. If the undergraduate equivalent of this course has been successfully completed, this course may only be taken for credit at the graduate level with permission of the Chair.

PSYC 690-12 Master's Thesis An original, empirical research project. This is a PASS/FAIL course.

PSYC 800-3 Graduate Seminar The graduate seminar is geared toward developing critical thinking skills and aims to help students evaluate a broad spectrum of topics. The seminar functions to generate debate on key issues, promote interaction with faculty members and other students in the program, and to act as a context for presentations by the students. Each student is expected to give, in a manner acceptable for a national or international conference presentation, one presentation in each semester of enrollment.

PSYC 810-3 Cognitive Neuroscience This course provides exposure to major and emergent issues in the study of brain and behaviour relationships. The focus of the course is on the theoretical and physiological basis of neuropsychological processes.

Preclusion(s): PSYC 610-3

PSYC 812-3 Independent Research Allows a PhD student to conduct research under the supervision of a faculty member.

PSYC 815-3 Social Psychology This course offers an advanced study of social psychology and social cognition. The course provides exposure to major current issues in the study of social behaviour. Topics of special relevance to the social problems of the north are considered.

Preclusion(s): PSYC 615-3

PSYC 820-3 Health Psychology This is an advanced seminar in health psychology dealing with such areas as psychosocial epidemiology, stress and its management, social factors and health, behavioural risk factors for chronic disease and disability, and intervention programs based on behavioural change.

Preclusion(s): PSYC 620-3

PSYC 825-3 Cognitive Neuropsychological Assessment This course provides exposure to the assessment of cognitive neuro-psychological functioning. Emphasis is placed on providing practical hands-on experience in the administration and scoring of commonly used tests of mental status, depression, achievement, memory, and/or intelligence. Also included is an introduction to fundamental measurement concepts and ethics.

Prerequisite(s): Permission of the instructor
Preclusion(s): PSYC 625-3, PSYC 725-3

PSYC 826-3 Personality Assessment This course provides exposure to standardized procedures for the evaluation of personality. Emphasis is placed on administration, scoring, and interpretation of objective tests of personality. Also included is an overview of the history and theories of personality assessment, psychometrics, responsible test use, and current controversies.

Preclusion(s): PSYC 625-3, PSYC 726-3

PSYC 830-3 Psychological Interventions This is an advanced seminar on the application of psychological procedures to the change of human social, emotional, behavioural and personality functioning.

Preclusion(s): PSYC 630-3, PSYC 730-3

PSYC 835-3 Cognition and Learning This course provides an advanced study of cognition and cognitive processes.

Preclusion(s): PSYC 635-3

PSYC 845-3 Developmental Psychology This course provides an advanced study of human development from infancy through adulthood.

Preclusion(s): PSYC 645-3

PSYC 850-(3-6) Special Topics in Advanced Psychology This course provides an advanced study in specific substantive areas. Topics may include aging, communication theory, cross-cultural issues, emotion, gender, and health promotion, history and systems. The topic area is noted on the transcript.

Preclusion(s): PSYC 650-3, PSYC 750-(3-6)

PSYC 860-(3-6) Research Practicum The research practicum focuses on the acquisition of technical skills and practical research experience. PhD students are expected to demonstrate the use of experimental methods consistent with their career goals. They have the opportunity to develop and demonstrate their skills in individual research laboratories in psychology.

Prerequisite(s): Enrollment in PhD program and permission of the instructor

PSYC 870-(3-6) Fieldwork Practicum This course provides supervised exposure to applied psychology practice. It includes observation of applied psychology, supervised practice of assessment and/or intervention techniques, participation in case supervision, and attendance at case conferences.

Prerequisite(s): Permission of the instructor
Preclusion(s): PSYC 770-(3-6)

PSYC 890-12 PhD Dissertation An original, empirical research project. This is a PASS/FAIL course.

Social Work (SOCW)

SOCW 601-3 Current Issues in Northern/Remote Social Work This course unravels, explores and analyzes the linkages between community issues, personal presenting problems, and global, national and regional historical, economic and social developments. It focuses on public issues and personal problems as they affect different demographic groups and Indigenous populations that live in the central and interior of British Columbia. This course examines the formulation of changes in social work practice and policy that give a greater voice to the consumers of welfare and the social and personal services of the welfare state.

SOCW 602-3 Indigenous Peoples: Advanced Social Work Practice This course investigates conceptual, policy and practice issues that help professionals in the human services develop an appropriate role for social work in Indigenous cultures. Government and legal processes, values, economic factors, policies and practices are examined. The course examines issues such as racism, the position of women and children in relation to reserve, town and city life, autonomy, integration, underdevelopment and the transfer of social services to Indigenous peoples.

SOCW 603-3 Women: Policy/Practice Issues This interdisciplinary course explores the historical nature of the role of women and women's struggles in Canada with particular focus on the role of women in northern, remote and Indigenous communities. The exploration also includes a review of feminist perspectives and the meaning and application of feminist practice for social work in the areas of policy, research, counselling and direct service. While gender relations are the focus, they are analyzed as they intersect with issues such as race, class, ability, sexual orientation, and aging.

SOCW 604-3 Directed Readings Directed Readings enables students to undertake an independent reading course in an area that fits a chosen MSW research/policy/practice concentration. Students may take a maximum of one Directed Readings course.

SOCW 605-3 Community Work/Politics of Change Community Work and the Politics of Change is based on theories of social change and interactive problem solving skills with groups and communities is the main focus of this course. Critical analysis of selected field experiences will be examined in relation to the values of participatory democracy, co-operation, empowerment, mutual aid and a social justice vision of genuine community. Issues to be examined include developing grass roots leadership, valuing undervalued persons and building a community culture of hope. The methods of popular education, participatory action research and other forms of qualitative research directed to the politics of change will be examined.

SOCW 609-3 Quantitative Research Methods This course covers a range of quantitative methods, research designs, statistical analyses, and measures. It explores social policy and social work issues in comparative, national, and provincial contexts. This course links measures, methods, and analyses to current issues and debates in social work policy and practice. The course prepares students with the research tools necessary to undertake their thesis and/or practicum projects.

Prerequisite(s): MSW Foundation Year students must successfully complete SOCW 634-3

SOCW 610-3 Holistic Trauma-Informed Expressive Arts Therapies This course introduces and explores a variety of holistic trauma-informed therapeutic approaches. These include expressive arts, meditation, and process-oriented practices in working with individuals, couples, families, and groups. Themes and exercises focus on mental health and wellbeing. A creative experiential lab provides students with the opportunity to practice the various modalities examined in this course.

SOCW 613-3 Clinical Social Work Practice Critical analysis of psychotherapy and counselling, particularly by women and ethnic/racial minorities has had an influence on how psychotherapy is organized and how values are expressed. Psychotherapy and counselling have also been influenced by the reality of restructuring in health care, education and social services. Social workers have been faced with the challenge of delivering service in environments that are increasingly restrictive. These developments have encouraged the implementation of new therapeutic approaches which emphasize brevity, respect for clients, client strength and collaborative approaches to problem solving. This course explores clinical practice within this context with emphasis on issues that pertain to northern British Columbia. The course requires critical analysis as well as practice skills.

SOCW 623-3 Human Growth and Development This course examines human growth and development with an emphasis on social processes from birth to death. The course follows a life-cycle approach and addresses the influence of issues such as culture, class, gender, and sexual orientation. Linkages are drawn between individual human development and health and social welfare policy, particularly as it affects residents of northern British Columbia.

Preclusion(s): SOCW 421-3

SOCW 630-3 Communication Skills This is an introductory course that aims to increase skills and analysis in the diverse cultural settings that are appropriate to social work among Indigenous peoples and remote, northern and rural communities. Learning to recognize the contradictions in people's experiences and to maximize the possibilities, resources and strengths in their lives are critical aspects of a social worker's practice. This course emphasizes the integration of interpersonal and analytical skills. Students learn effective helping strategies within a structural framework that acknowledges the influence of class, race and gender in shaping personal and social well-being. This course includes a skills laboratory.

Prerequisite(s): Admission to the MSW Program Foundation Year

SOCW 631-3 Critical Social Work Practice This course critically examines the historical origins, value, methods and applications of various social work practice approaches. With an emphasis on structural, feminist, and Indigenous social work strategies, the course includes the application of these approaches to women, minority groups, Indigenous peoples and residents of northern and remote communities. These approaches are contrasted with other models of social work practice including general systems theory, ecological theory, and case management.

Prerequisite(s): Admission to the MSW Program Foundation Year

SOCW 632-9 MSW Practicum I This field placement introduces MSW students who do not have a BSW to the social work role and organizational settings. The field placement consists of 450 hours and provides students with an opportunity to enhance and refine their generalist social work skills. The focus of the placement is on the development of generalist skills, however, where possible, students are matched to a placement that broadly meets their area of interest. This is a PASS/FAIL course.

Prerequisite(s): Admission to the MSW Program Foundation Year
Corequisite(s): SOCW 637-3

SOCW 633-3 Critical Social Policy This course examines the development of social policy in Canada, including current debates from conventional and critical perspectives, and invites students to consider the relationship between research, policy and social work practice. The course reviews ideologies of social welfare policy, its formulation and implementation and consequences for people in need. Policy formulation is analyzed from a critical perspective that examines the role of power and privilege in the construction of social policy. Alternative social arrangements and models of policy and practice are explored.

Prerequisite(s): Admission to the MSW Program Foundation Year

SOCW 634-3 Social Work Research/Policy/Practice This course introduces research methods and analysis techniques that are used to examine issues in the policy and practice of social work and social welfare. It reviews qualitative and quantitative approaches with an emphasis on community needs research, participatory research and the development of interview schedules and questionnaires. The methods examined in this course are linked to substantive policy and practice issues that reflect the economic, social and personal circumstances of people and communities in northern, remote and Indigenous communities.

Prerequisite(s): Admission to the MSW Program Foundation Year

SOCW 635-3 Social Work Philosophy and Ethics This course critically assesses the ethical issues involved in carrying out the tasks of social work practice, policy and research. Using the Social Work Code of Ethics as a starting point, these practice, policy and research roles are considered in the context of northern and remote social work. The course reviews different theoretical approaches to social work.

Prerequisite(s): Admission to the MSW Program Foundation Year

SOCW 637-3 Advanced Practice This course is designed for graduate students who have worked in social work practice settings but who do not have formal social work training. The historical and cultural development of social work practice models is surveyed with emphasis on contemporary models of practice such as constructivism, anti-oppressive practice, feminist practice, Indigenous practice approaches and structural practice. Key components of practice such as assessment, intervention planning, advocacy, organizing, recording, confidentiality, evaluation, case management, interdisciplinarity and termination are studied.

Prerequisite(s): Admission to the MSW Program Foundation Year
Corequisite(s): SOCW 632-9
Preclusion(s): SOCW 636-3

SOCW 640-3 Social Work and Leadership This course examines leadership and supervision from a social work perspective and it also draws on interdisciplinary knowledge from related fields of practice in health, education, business, and human services. The course emphasizes social justice and the effective and responsible use of human and material resources. Components of supervision and leadership such as administration, support, education, clinical supervision, performance management, recruitment and retention of employees, organizational context, interdisciplinary practices, and problem solving are addressed in this course. The course also encourages the development of styles of leadership and supervision that are respectful and anti-oppressive in nature.

Preclusion(s): SOCW 443-3

SOCW 643-3 Social Work and Health Care This course focuses on the knowledge, attitudes, and skills workers need to practice effectively in health care settings. Case studies are used to demonstrate different methods of intervention in this context.

Preclusion(s): SOCW 443-3

SOCW 644-3 Critical Issues in Aging This course examines the physical, social, and psychological needs of the elderly. Adaptation of generic social work skills in effective intervention with and on behalf of the aged is also examined.

Preclusion(s): SOCW 444-3

SOCW 653-3 Social Work Practice and Spirituality This course provides a forum for the critical exploration of the impact and influence of spiritual and religious thought and practices on human service work. The historical roots of this work are based in religious movements, aspects of which still affect today's practice and policy. In an increasingly multicultural environment, social workers must have a fundamental understanding of religion and spirituality in order to practice effectively.

Preclusion(s): SOCW 453-3

SOCW 670-3 Indigenous Peoples in Canada: Past/Present/Future This course examines the history of Indigenous peoples in Canada its and current and future impacts on Indigenous children and youth. A particular focus is on the importance and knowledge of traditional family systems, parental attachment and evolving methods and practices. Discussions also include managing personal issues in professional practice, self-care and the intersection of Indigenous and Western frameworks for physical and mental health.

Prerequisite(s): BSW, Bachelor of Child and Youth Care or other bachelor-level degree subject to Chair approval

SOCW 671-3 Reflections on Practice: Indigenous Child/Youth Mental Health This course provides an opportunity to reflect on practice. The course surveys the historical and cultural development of social work practice, emphasizing contemporary models such as anti-oppressive practice, constructivism and feminist practice. The students study assessment, intervention, planning, advocacy, organizing, recording, confidentiality, evaluation, case management, interdisciplinary environments, and termination.

Prerequisite(s): BSW, Bachelor of Child and Youth Care or other bachelor-level degree subject to Chair approval

SOCW 672-3 Social Work/Counselling Skills with Indigenous Children/Youth This course examines practice and intervention skills for working with Indigenous children and youth. Topics include: basic issues of child development; communication skills that are effective in working with younger people; and specific therapeutic assessments and interventions. The importance of balancing the relationship between Western and traditional treatment and intervention approaches is also explored.

Prerequisite(s): BSW, Bachelor of Child and Youth Care or other bachelor-level degree subject to Chair approval

SOCW 673-3 Mental Illness and Addictions Among Indigenous Children/Youth This course focuses on common types of mental illness with an overview of substance misuse and addictions. Students are introduced to structural elements impacting mental health such as poverty, racism, and isolation, in addition to biological, traumatic, attachment, and familial factors. Epidemiological and etiological related mental illness among Indigenous children and youth is examined. Pharmacological interventions are considered.

Prerequisite(s): BSW, Bachelor of Child and Youth Care or other bachelor-level degree subject to Chair approval

SOCW 674-3 Crisis Work with Indigenous Children/Youth: Restoring Balance This course examines the nature and types of crisis situations faced by children and youth, with special attention to Indigenous children and youth. Basic crisis intervention skills aimed at the restoration of balance are identified. There is a particular focus on suicide including assessment of suicide lethality, intervention skills, skills for working with survivors, cluster suicide and suicide epidemics, and prevention work. The course addresses other trauma or crisis work, critical incident debriefing with children and youth and individual, family and community risk and protective factors.

Prerequisite(s): BSW, Bachelor of Child and Youth Care or other bachelor-level degree subject to Chair approval

SOCW 675-3 Community-Based Prevention with Indigenous Peoples: Creating Balance This course examines community-based prevention strategies and risk reduction as it applies to child and youth mental health and highlights the role and restoration of traditional activities that promote wellness for Indigenous children and youth. Interventions and practical application of prevention strategies in relation to suicide, parenting, disability, and other issues are addressed. The course emphasizes approaches to identifying and building on existing community programs and community strengths.

Prerequisite(s): BSW, Bachelor of Child and Youth Care or other bachelor-level degree subject to Chair approval

SOCW 698-3 Special Topics This course number designation will be available to permit faculty to offer courses in areas of specialization.

Prerequisite(s): Graduate standing

SOCW 700-12 MSW Thesis Students taking this route will register for a thesis leading to a written report of high academic quality that demonstrates mastery of the field specified and an ability to undertake research. The thesis may be based on research about models of advanced practice, policy and/or evaluation in the thematic areas of the MSW program. This is a PASS/FAIL course.

SOCW 701-3 Research Practicum This course is a research-based practicum that provides students with the opportunity to enhance and refine their research skills. It normally takes place two days per week over one semester. This elective is available to both practicum and thesis route students. This is a PASS/FAIL course.

SOCW 704-3 MSW Integrative Seminar MSW Thesis/ Practicum/Project Proposal Development/Integrative Seminar has two dimensions. One is the focus on the relationship between theory, ideology, policy and practice in the study of social welfare. Its objective is to enable students to acquire, develop and apply analytical approaches to the social policy. The second dimension focuses on the development of thesis/practicum/project proposals. Students are encouraged to use theoretical approaches in the formulation of the MSW research for thesis, practicum and project. It examines the steps used in the development of thesis, practicum and project proposals. It gives the students an opportunity to present their proposals and thesis/practicum/project plans with other students and faculty.

SOCW 732-9 MSW Practicum II This field placement requires students to perform in a social work role or organizational setting. Field education provides students with an opportunity to enhance and refine their social work skills and focus on an area of particular interest. Students normally are placed in an agency or organizational setting that matches their specific learning needs. This is a PASS/ FAIL course.

Prerequisite(s): Admission to the MSW program

Statistics (STAT)

STAT 671-3 Linear Models This course discusses the estimation of parameters in the multiple linear regression model by the least-squares method. Topics covered include the statistical properties of the least-squares estimators, the Gauss-Markov theorem, estimates of residual and regression sums of squares, distribution theory under normality of the observations, assessment of normality, variance stabilizing transformations, examination of multicollinearity, variable selection methods, logistic regression for a binary response, log-linear models for count data, and generalized linear models.

Preclusion(s): MATH 471-3, MATH 499-3 Regression, MATH 671-3, STAT 471-3

STAT 672-3 Survey Sampling Design and Analysis This course discusses the planning and practice of sample surveys. Topics covered include simple random sampling, unequal probability sampling, stratified sampling, cluster sampling, multistage sampling, cost-effective design, analysis and control of sources of sampling and non-sampling error, ratio estimation, model-based regression estimation, resampling, and replication methods.

Preclusion(s): MATH 472-3, MATH 499-3 Design of Sample Surveys, MATH 672-3, STAT 472-3

STAT 673-3 Experimental Design and Analysis This course discusses experimental designs and analyses. Topics covered include basic principles and guidelines for designing experiments, simple comparative designs, single factor analysis of variance, block designs, factorial designs, response surface methods and designs, nested and split plot designs, and the analysis of covariance.

Preclusion(s): MATH 473-3, MATH 499-3 Design of Experiments, MATH 673-3, STAT 473-3

STAT 675-3 Methods for Multivariate Data This course discusses practical techniques for the analysis of multivariate data. Topics covered include estimation and hypothesis testing for multivariate means and variances; partial, multiple and canonical correlations; principal components analysis and factor analysis for data reduction; multivariate analysis of variance; discriminant analysis for classification; and cluster analysis.

Preclusion(s): MATH 475-3, MATH 499-3 Applied Multivariate Analysis, MATH 675-5, STAT 475-3

STAT 699-(1-3) Special Topics in Statistics The topic for this course varies, depending on student interest and faculty availability. This course may be taken any number of times provided all the topics are distinct.

Prerequisite(s): Permission of the instructor

STAT 704-1.5 Seminar in Statistics This course comprises seminar sessions relating to applications or the theory of statistics, or both. Students investigate and present ideas and results pertaining to current research. The offerings may include presentations of current literature, statistical methodology, and topics related to the student's own research or project work or that of others. Students participate in discussions and critiques of their and others' presentations. This is a PASS/FAIL course. This course may be repeated to a maximum of 3 credit hours. Student must attend and participate in all seminar session to obtain credit for the course.

Prerequisite(s): Permission of the instructor

STAT 731-(1-6) Advanced Topics in Statistics This course is intended to fulfill requirements for specialized instruction in the discipline of Statistics. Topics are chosen depending upon student interest and faculty availability, and topic headings vary from year to year and from section to section. This course may be taken any number of times provided all the topics are distinct.

Prerequisite(s): Permission of the instructor

STAT 793-6 Master of Science (Mathematics) Project The MSc project requires the completion of an extended position paper, report, plan or program making a contribution to, or addressing a major issue in, a scientific field. The development of the project requires the application of original thought to the problem or issue under investigation. The non-thesis project does not require the development of a research design or research methodology, and need not involve the collection or generation of an original data. This is a PASS/FAIL course.

Prerequisite(s): Acceptance in the Masters of Science (Mathematics) program

STAT 794-12 Master of Science (Mathematics) Thesis The MSc thesis documents a scientific contribution to the field of Statistics. Students are expected to conduct original research involving a literature review, development of a research design and methodology, testing and analysis of data, and development of conclusions. Successful defence of the thesis is required for graduation in the Master of Science (Mathematics) thesis stream. This is a PASS/FAIL course.

Prerequisite(s): Acceptance in the Masters of Science (Mathematics) program

Visiting Research Student (VRES)

VRES 950-0 Visiting Research Student: Graduate All graduate Visiting Research Students who are at UNBC under the Canadian Graduate Student Research Mobility Agreement or other approved graduate student research agreements must register in this course. This course may be repeated but degree program requirements may limit the number of times students may take external courses and apply them to a degree. Current UNBC graduate students are not eligible to register for this course. This is a PASS/FAIL course.

VRES 951-0 Visiting Research Student: Western Dean's Agreement All outgoing graduate students under the Western Dean's Agreement must register in this course. This course may be repeated but degree program requirements may limit the number of times students may take external courses and apply them to a degree. This is a PASS/FAIL course.

VRES 952-0 Visiting Research Student: Canadian University Graduate Transfer Agreement All outgoing graduate students under the Canadian University Graduate Transfer Agreement (CUGTA) must register in this course. This course may be repeated but degree program requirements may limit the number of times students may take external courses and apply them to a degree. This is a PASS/FAIL course.

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