

## Appendix II - Dept of Biology Publications (Refereed Journal Articles) since 2006

From Web of Science; search run on Jan 26, 2017, plus 6 publications not listed in Web of Science.

- Boczulak, S.A., M. Vanderwel, and B.D. Hall. In press. Survey of mercury in Boreal Chorus (*Pseudacris maculata*) and Wood (*Rana sylvatica*) frog tadpoles from wetland ponds in the Prairie Pothole Region of Canada. *Facets*
- Paranjape, A.R. and B.D. Hall. 2017. Recent advances in the study of mercury methylation in aquatic systems. *Facets*. 10.1139/facets-2016-0027
- Mueller,C.A., Doyle,L., Eme,J., Manzon,R.G., Somers,C.M., Boreham,D.R., and Wilson,J.Y. 2017. Lipid content and fatty acid profile during lake whitefish embryonic development at different incubation temperatures. *Comparative Biochemistry and Physiology A-Molecular & Integrative Physiology* **203**: 201-209.
- Jucker,T., Caspersen,J., Chave,J., Antin,C., Barbier,N., Bongers,F., Dalponte,M., van Ewijk,K.Y., Forrester,D.I., Haeni,M., Higgins,S.I., Holdaway,R.J., Iida,Y., Lorimer,C., Marshall,P.L., Momo,S., Moncrieff,G.R., Ploton,P., Poorter,L., Rahman,K.A., Schlund,M., Sonke,B., Sterck,F.J., Trugman,A.T., Usoltsev,V.A., Vanderwel,M.C., Waldner,P., Wedeux,B.M.M., Wirth,C., Woll,H., Woods,M., Xiang,W.H., Zimmermann,N.E., and Coomes,D.A. 2017. Allometric equations for integrating remote sensing imagery into forest monitoring programmes. *Global Change Biology* **23**: 177-190.
- Endsin,M.J., Michalec,O., Manzon,L.A., Lovejoy,D.A., and Manzon,R.G. 2017. CRH peptide evolution occurred in three phases: Evidence from characterizing sea lamprey CRH system members. *General and Comparative Endocrinology* **240**: 162-173.
- Kunstler G., Falster, D., Coomes, D.A., Hui F., Kooyman, R.M., Laughlin D.C., Poorter, L., Vanderwel, M.C., Vieilledent, G., Wright, S.J., Aiba, M., Baraloto, C., Caspersen, J., Cornelissen, J.H.C., Gourlet-Fleury, S., Hanewinkel, M., Herault, B., Kattge, J., Kurokawa, H., Onoda, Y., Peñuelas, J., Poorter, H., Uriarte, M., Richardson, S., Ruiz-Benito, P., Sun, I-F., Ståhl, G., Swenson, N.G., Thompson, J., Westerlund, B., Wirth, C., Zavala, M.A., Zeng, H., Zimmerman, J.K., Zimmerman, N.E., Westoby, M. 2016. Plant functional traits have globally consistent effects on competition. *Nature* **529**: 204-207. Klug-Baerwald,B.J., Gower,L.E., Lausen,C.L., and Brigham,R.M. 2016. Environmental correlates and energetics of winter flight by bats in southern Alberta, Canada. *Canadian Journal of Zoology* **94**: 829-836.
- Perry,B.J., Akter,M.S., and Yost,C.K. 2016. The Use of Transposon Insertion Sequencing to Interrogate the Core Functional Genome of the Legume Symbiont Rhizobium leguminosarum. *Frontiers in Microbiology* **7**.
- Gendron, F., Hancherow, A., and Norton, A. 2016. Exploring and revitalizing Indigenous food networks in Saskatchewan, Canada, as a way to improve food security. *Health Promotion International*.
- Bunting,L., Leavitt,P.R., Simpson,G.L., Wissel,B., Laird,K.R., Cumming,B.F., St Amand,A., and Engstrom,D.R. 2016. Increased variability and sudden ecosystem state change in Lake Winnipeg, Canada, caused by 20(th) century agriculture. *Limnology and Oceanography* **61**: 2090-2107.
- Sayer,C.D., Davidson,T.A., Rawcliffe,R., Langdon,P.G., Leavitt,P.R., Cockerton,G., Rose,N.L., and Croft,T. 2016. Consequences of Fish Kills for Long-Term Trophic Structure in Shallow Lakes: Implications for Theory and Restoration. *Ecosystems* **19**: 1289-1309.
- Zanacic,E., Stavriniades,J., and McMartin,D.W. 2016. Field-analysis of potable water quality and ozone efficiency in ozone assisted biological filtration systems for surface water treatment. *Water Research* **104**: 397-407.
- Oresnik,I.J., Mascarenhas,L., and Yost,C.K. 2016. Does it take a community to raise a plant? A summary of the Canadian Crop Microbiome Workshop. *Canadian Journal of Microbiology* **62**: 980-982.
- Balogianni,V.G., Blume-Werry,G., and Wilson,S.D. 2016. Root production in contrasting ecosystems: the impact of rhizotron sampling frequency. *Plant Ecology* **217**: 1359-1367.

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- Fleck,J.A., Marvin-DiPasquale,M., Eagles-Smith,C.A., Ackerman,J.T., Lutz,M.A., Tate,M., Alpers,C.N., Hall,B.D., Krabbenhoft,D.P., and Eckley,C.S. 2016. Mercury and methylmercury in aquatic sediment across western North America. *Science of the Total Environment* **568**: 727-738.
- Hansen,M.J. and Wilson,S.D. 2016. No selection for greater size in an introduced grass invading semiarid grassland. *Botany* **94**: 957-966.
- Rifai,S.W., Munoz,J.D.U., Negron-Juarez,R.I., Arevalo,F.R.R., Tello-Espinoza,R., Vanderwel,M.C., Lichstein,J.W., Chambers,J.Q., and Bohlman,S.A. 2016. Landscape-scale consequences of differential tree mortality from catastrophic wind disturbance in the Amazon. *Ecological Applications* **26**: 2225-2237.
- Hamelin,C., Truax,B., and Gagnon,D. 2016. Invasive glossy buckthorn impedes growth of red oak and sugar maple under-planted in a mature hybrid poplar plantation. *New Forests* **47**: 897-911.
- Thome,C., Mitz,C., Somers,C.M., Manzon,R.G., Boreham,D.R., and Wilson,J.Y. 2016. Incubation of lake whitefish (*Coregonus clupeaformis*) embryos in cooling water discharge and the impacts of fluctuating thermal regimes on development. *Canadian Journal of Fisheries and Aquatic Sciences* **73**: 1213-1221.
- Finlay,K. and Vogt,R.J. 2016. An ecosystem management framework to maintain water quality in a macrophyte-dominated, productive, shallow reservoir. *Hydrobiologia* **776**: 111-123.
- Eberts,R.L., Wissel,B., Manzon,R.G., Wilson,J.Y., Boreham,D.R., and Somers,C.M. 2016. Consistent differential resource use by sympatric lake (*Coregonus clupeaformis*) and round (*Prosopium cylindraceum*) whitefish in Lake Huron: a multi-time scale isotopic niche analysis. *Canadian Journal of Fisheries and Aquatic Sciences* **73**: 1072-1080.
- Murray,D.L., Morris,D., Lavoie,C., Leavitt,P.R., MacIsaac,H., Masson,M.E.J., and Villard,M.A. 2016. Bias in Research Grant Evaluation Has Dire Consequences for Small Universities. *Plos One* **11**.
- Makoto,K. and Wilson,S.D. 2016. New Multicentury Evidence for Dispersal Limitation during Primary Succession. *American Naturalist* **187**: 804-811.
- Webber,Q.M.R., Brigham,R.M., Park,A.D., Gillam,E.H., O'Shea,T.J., and Willis,C.K.R. 2016. Social network characteristics and predicted pathogen transmission in summer colonies of female big brown bats (*Eptesicus fuscus*). *Behavioral Ecology and Sociobiology* **70**: 701-712.
- Tambalo,D.D., Boa,T., Aryal,B., and Yost,C.K. 2016. Temporal variation in the prevalence and species richness of *Campylobacter* spp. in a prairie watershed impacted by urban and agricultural mixed inputs. *Canadian Journal of Microbiology* **62**: 402-410.
- Lee,A.H., Eme,J., Mueller,C.A., Manzon,R.G., Somers,C.M., Boreham,D.R., and Wilson,J.Y. 2016. The effects of increased constant incubation temperature and cumulative acute heat shock exposures on morphology and survival of Lake Whitefish (*Coregonus clupeaformis*) embryos. *Journal of Thermal Biology* **57**: 11-20.
- Vanderwel,M.C., Zeng,H.C., Caspersen,J.P., Kunstler,G., and Lichstein,J.W. 2016. Demographic controls of aboveground forest biomass across North America. *Ecology Letters* **19**: 414-423.
- Stevenson,M.A., McGowan,S., Anderson,N.J., Foy,R.H., Leavitt,P.R., McElarney,Y.R., Engstrom,D.R., and Pla-Rabes,S. 2016. Impacts of forestry planting on primary production in upland lakes from north-west Ireland. *Global Change Biology* **22**: 1490-1504.
- Reudink,M.W., Kyle,C.J., McKellar,A.E., Somers,C.M., Reudink,R.L.F., Kyser,T.K., Franks,S.E., and Nocera,J.J. 2016. Linking Isotopes and Panmixia: High WithinColony Variation in Feather delta 2H, delta 13C, and delta 15N across the Range of the American White Pelican. *Plos One* **11**.
- Barker,E.I. and Ashton,N.W. 2016. Ancestral and more recently acquired syntenic relationships of MADS-box genes uncovered by the *Physcomitrella patens* pseudochromosomal genome assembly. *Plant Cell Reports* **35**: 505-512.
- Stefanovic,D.I., Manzon,L.A., McDougall,C.S., Boreham,D.R., Somers,C.M., Wilson,J.Y., and Manzon,R.G. 2016. Thermal stress and the heat shock response in embryonic and young of the year juvenile lake whitefish. *Comparative Biochemistry and Physiology A-Molecular & Integrative Physiology* **193**: 1-10.

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- Frier,S.D., Somers,C.M., and Sheffield,C.S. 2016. Comparing the performance of native and managed pollinators of Haskap (*Lonicera caerulea*: Caprifoliaceae), an emerging fruit crop. *Agriculture Ecosystems & Environment* **219**: 42-48.
- Blume-Werry,G., Wilson,S.D., Kreyling,J., and Milbau,A. 2016. The hidden season: growing season is 50% longer below than above ground along an arctic elevation gradient. *New Phytologist* **209**: 978-986.
- Fortier,J., Truax,B., Gagnon,D., and Lambert,F. 2016. Potential for Hybrid Poplar Riparian Buffers to Provide Ecosystem Services in Three Watersheds with Contrasting Agricultural Land Use. *Forests* **7**.
- Einarsson,A., Hauptfleisch,U., Leavitt,P.R., and Ives,A.R. 2016. Identifying consumer-resource population dynamics using paleoecological data. *Ecology* **97**: 361-371.
- Halmillawewa,A.P., Restrepo-Cordoba,M., Perry,B.J., Yost,C.K., and Hynes,M.F. 2016. Characterization of the temperate phage vB\_RleM\_PPF1 and its site-specific integration into the *Rhizobium leguminosarum* F1 genome. *Molecular Genetics and Genomics* **291**: 349-362.
- Graham,C.F., Eberts,R.L., Morgan,T.D., Boreham,D.R., Lance,S.L., Manzon,R.G., Martino,J.A., Rogers,S.M., Wilson,J.Y., and Somers,C.M. 2016. Fine-Scale Ecological and Genetic Population Structure of Two Whitefish (Coregoninae) Species in the Vicinity of Industrial Thermal Emissions. *Plos One* **11**.
- Daku,R.M., Rabbi,F., Buttigieg,J., Coulson,I.M., Horne,D., Martens,G., Ashton,N.W., and Suh,D.Y. 2016. PpASCL, the Physcomitrella patens Anther-Specific Chalcone Synthase-Like Enzyme Implicated in Sporopollenin Biosynthesis, Is Needed for Integrity of the Moss Spore Wall and Spore Viability. *Plos One* **11**.
- Vuillemin,A., Ariztegui,D., Leavitt,P.R., and Bunting,L. 2016. Recording of climate and diagenesis through sedimentary DNA and fossil pigments at Laguna Potrok Aike, Argentina. *Biogeosciences* **13**: 2475-2492.
- Nilsson,C., Aradotir,A.L., Hagen,D., Halldorsson,G., Hoegh,K., Mitchell,R.J., Raulund-Rasmussen,K., Svavarsdottir,K., Tolvanen,A., and Wilson,S.D. 2016. Evaluating the process of ecological restoration. *Ecology and Society* **21**.
- Heisler,L.M., Somers,C.M., and Poulin,R.G. 2016. Owl pellets: a more effective alternative to conventional trapping for broad-scale studies of small mammal communities. *Methods in Ecology and Evolution* **7**: 96-103.
- Maheaux,H., Leavitt,P.R., and Jackson,L.J. 2016. Asynchronous onset of eutrophication among shallow prairie lakes of the Northern Great Plains, Alberta, Canada. *Global Change Biology* **22**: 271-283.
- Glibert,P.M., Wilkerson,F.P., Dugdale,R.C., Raven,J.A., Dupont,C.L., Leavitt,P.R., Parker,A.E., Burkholder,J.M., and Kana,T.M. 2016. Pluses and minuses of ammonium and nitrate uptake and assimilation by phytoplankton and implications for productivity and community composition, with emphasis on nitrogen-enriched conditions. *Limnology and Oceanography* **61**: 165-197.
- Alexander,D.C., Fitzgerald,S.F., DePaulo,R., Kitzul,R., Daku,D., Levett,P.N., and Cameron,A.D.S. 2016. Laboratory-Acquired Infection with *Salmonella enterica* Serovar Typhimurium Exposed by Whole-Genome Sequencing. *Journal of Clinical Microbiology* **54**: 190-193.
- Fitzgerald,S., Dillon,S.C., Chao,T.C., Wiencko,H.L., Hokamp,K., Cameron,A.D.S., and Dorman,C.J. 2015. Re-engineering cellular physiology by rewiring high-level global regulatory genes. *Scientific Reports* **5**.
- Thompson,R.H., Thompson,A.R., and Brigham,R.M. 2015. A Flock of Myotis Bats at Sea. *Northeastern Naturalist* **22**: N27-N30.
- Kirzinger,M.W.B., Butz,C.J., and Stavrinides,J. 2015. Inheritance of Pantoea type III secretion systems through both vertical and horizontal transfer. *Molecular Genetics and Genomics* **290**: 2075-2088.
- Gendron, F, Alqahtani, S.N., Alkholy, S.O., Haque, D., and Ferreira, M.P. 2015. Native/Aboriginal students use natural health products for health maintenance more than other university students. *International Journal of Complementary and Alternative Medicine*. 1(3): 1-9

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- Fortier,J., Truax,B., Gagnon,D., and Lambert,F. 2015. Plastic Allometry in Coarse Root Biomass of Mature Hybrid Poplar Plantations. *Bioenergy Research* **8**: 1691-1704.
- Balogianni,V.G., Wilson,S.D., Farrell,R.E., and MacDougall,A.S. 2015. Rapid Root Decomposition Decouples Root Length from Increased Soil C Following Grassland Invasion. *Ecosystems* **18**: 1307-1318.
- Kopriva,D., Kisheev,A., Meena,D., Pelle,S., Karnitsky,M., Lavoie,A., and Buttigieg,J. 2015. The Nature of Iron Deposits Differs between Symptomatic and Asymptomatic Carotid Atherosclerotic Plaques. *Plos One* **10**.
- Srikumar,S., Kroger,C., Hebrard,M., Colgan,A., Owen,S.V., Sivasankaran,S.K., Cameron,A.D.S., Hokamp,K., and Hinton,J.C.D. 2015. RNA-seq Brings New Insights to the Intra-Macrophage Transcriptome of *Salmonella Typhimurium*. *Plos Pathogens* **11**.
- Robinson,L.J., Cameron,A.D.S., and Stavrinides,J. 2015. Spontaneous and on point: Do spontaneous mutations used for laboratory experiments cause pleiotropic effects that might confound bacterial infection and evolution assays? *Fems Microbiology Letters* **362**.
- Walterson,A.M. and Stavrinides,J. 2015. Pantoea: insights into a highly versatile and diverse genus within the Enterobacteriaceae. *Fems Microbiology Reviews* **39**: 968-984.
- Veen,G.F., Sundqvist,M.K., Metcalfe,D., and Wilson,S.D. 2015. Above-ground and below-ground plant responses to fertilization in two subarctic ecosystems. *Arctic Antarctic and Alpine Research* **47**: 693-702.
- Graham,C.F., Glenn,T.C., Mcarthur,A.G., Boreham,D.R., Kieran,T., Lance,S., Manzon,R.G., Martino,J.A., Pierson,T., Rogers,S.M., Wilson,J.Y., and Somers,C.M. 2015. Impacts of degraded DNA on restriction enzyme associated DNA sequencing (RADSeq). *Molecular Ecology Resources* **15**: 1304-1315.
- Truax,B., Gagnon,D., Lambert,F., and Fortier,J. 2015. Multiple-Use Zoning Model for Private Forest Owners in Agricultural Landscapes: A Case Study. *Forests* **6**: 3614-3664.
- Painter,K.J., Westbrook,C.J., Hall,B.D., O'Driscoll,N.J., and Jardine,T.D. 2015. Effects of in-channel beaver impoundments on mercury bioaccumulation in Rocky Mountain stream food webs. *Ecosphere* **6**.
- Spriggs,R.A., Vanderwel,M.C., Jones,T.A., Caspersen,J.P., and Coomes,D.A. 2015. A simple area-based model for predicting airborne LiDAR first returns from stem diameter distributions: an example study in an uneven-aged, mixed temperate forest. *Canadian Journal of Forest Research* **45**: 1338-1350.
- Hoggarth,C.G.J., Hall,B.D., and Mitchell,C.P.J. 2015. Mercury methylation in high and low-sulphate impacted wetland ponds within the prairie pothole region of North America. *Environmental Pollution* **205**: 269-277.
- Stea,E.C., Hansen,L.T., Jamieson,R.C., and Yost,C.K. 2015. Fecal Contamination in the Surface Waters of a Rural- and an Urban-Source Watershed. *Journal of Environmental Quality* **44**: 1556-1567.
- Sreetharan,S., Thome,C., Mitz,C., Eme,J., Mueller,C.A., Hulley,E.N., Manzon,R.G., Somers,C.M., Boreham,D.R., and Wilson,J.Y. 2015. Embryonic development of lake whitefish *Coregonus clupeaformis*: a staging series, analysis of growth and effects of fixation. *Journal of Fish Biology* **87**: 539-558.
- Samways,K.M., Leavitt,P.R., Magnan,P., Rodriguez,M.A., and Peres-Neto,P.R. 2015. Convergent polymorphism between stream and lake habitats: the case of brook char. *Canadian Journal of Fisheries and Aquatic Sciences* **72**: 1406-1414.
- Radtke,T.M. and Wilson,S.D. 2015. A limited role for apparent competition via granivory in the persistence of a grassland invader. *Journal of Vegetation Science* **26**: 995-1004.
- Karmakar,M., Leavitt,P.R., and Cumming,B.F. 2015. Enhanced algal abundance in northwest Ontario (Canada) lakes during the warmer early-to mid-Holocene period. *Quaternary Science Reviews* **123**: 168-179.
- Samways,K.M., Quinones-Rivera,Z.J., Leavitt,P.R., and Cunjak,R.A. 2015. Spatiotemporal responses of algal, fungal, and bacterial biofilm communities in Atlantic rivers receiving marine-derived nutrient inputs. *Freshwater Science* **34**: 881-896.

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- Vanderwel,M.C., Slot,M., Lichstein,J.W., Reich,P.B., Kattge,J., Atkin,O.K., Bloomfield,K.J., Tjoelker,M.G., and Kitajima,K. 2015. Global convergence in leaf respiration from estimates of thermal acclimation across time and space. *New Phytologist* **207**: 1026-1037.
- Bhat,S.V., Booth,S.C., Vantomme,E.A.N., Afroj,S., Yost,C.K., and Dahms,T.E. 2015. Oxidative stress and metabolic perturbations in *Escherichia coli* exposed to sublethal levels of 2,4-dichlorophenoxyacetic acid. *Chemosphere* **135**: 453-461.
- Wilson,S.D. 2015. Managing contingency in semiarid grassland restoration through repeated planting. *Restoration Ecology* **23**: 385-392.
- Donald,D.B., Parker,B.R., Davies,J.M., and Leavitt,P.R. 2015. Nutrient sequestration in the Lake Winnipeg watershed. *Journal of Great Lakes Research* **41**: 630-642.
- MacKenzie,K.D., Wang,Y.J., Shivak,D.J., Wong,C.S., Hoffman,L.J.L., Lam,S., Kroger,C., Cameron,A.D.S., Townsend,H.G.G., Koster,W., and White,A.P. 2015. Bistable Expression of CsgD in *Salmonella enterica* Serovar Typhimurium Connects Virulence to Persistence. *Infection and Immunity* **83**: 2312-2326.
- Stea,E.C., Purdue,L.M., Jamieson,R.C., Yost,C.K., and Hansen,L.T. 2015. Comparison of the Prevalences and Diversities of *Listeria* Species and *Listeria monocytogenes* in an Urban and a Rural Agricultural Watershed. *Applied and Environmental Microbiology* **81**: 3812-3822.
- Beal,M.A., Rowan-Carroll,A., Canipbell,C., Williams,A., Somers,C.M., Marchetti,F., and Yauk,C.L. 2015. Single-molecule PCR analysis of an unstable microsatellite for detecting mutations in sperm of mice exposed to chemical mutagens. *Mutation Research-Fundamental and Molecular Mechanisms of Mutagenesis* **775**: 26-32.
- Fortier,J., Truax,B., Gagnon,D., and Lambert,F. 2015. Biomass carbon, nitrogen and phosphorus stocks in hybrid poplar buffers, herbaceous buffers and natural woodlots in the riparian zone on agricultural land. *Journal of Environmental Management* **154**: 333-345.
- Hamelin,C., Gagnon,D., and Truax,B. 2015. Aboveground Biomass of Glossy Buckthorn is Similar in Open and Understory Environments but Architectural Strategy Differs. *Forests* **6**: 1083-1093.
- Atkin,O.K., Bloomfield,K.J., Reich,P.B., Tjoelker,M.G., Asner,G.P., Bonal,D., Bonisch,G., Bradford,M.G., Cernusak,L.A., Cosio,E.G., Creek,D., Crous,K.Y., Domingues,T.F., Dukes,J.S., Egerton,J.J.G., Evans,J.R., Farquhar,G.D., Fyllas,N.M., Gauthier,P.P.G., Gloor,E., Gimeno,T.E., Griffin,K.L., Guerrieri,R., Heskell,M.A., Huntingford,C., Ishida,F.Y., Kattge,J., Lambers,H., Liddell,M.J., Lloyd,J., Lusk,C.H., Martin,R.E., Maksimov,A.P., Maximov,T.C., Malhi,Y., Medlyn,B.E., Meir,P., Mercado,L.M., Mirochnick,N., Ng,D., Niinemets,U., O'Sullivan,O.S., Phillips,O.L., Poorter,L., Poot,P., Prentice,I.C., Salinas,N., Rowland,L.M., Ryan,M.G., Sitch,S., Slot,M., Smith,N.G., Turnbull,M.H., Vanderwel,M.C., Valladares,F., Veneklaas,E.J., Weerasinghe,L.K., Wirth,C., Wright,I.J., Wythers,K.R., Xiang,J., Xiang,S., and Zaragoza-Castells,J. 2015. Global variability in leaf respiration in relation to climate, plant functional types and leaf traits. *New Phytologist* **206**: 614-636.
- Taranu,Z.E., Gregory-Eaves,I., Leavitt,P.R., Bunting,L., Buchaca,T., Catalan,J., Domaizon,I., Guilizzoni,P., Lami,A., McGowan,S., Moorhouse,H., Morabito,G., Pick,F.R., Stevenson,M.A., Thompson,P.L., and Vinebrooke,R.D. 2015. Acceleration of cyanobacterial dominance in north temperate-subarctic lakes during the Anthropocene. *Ecology Letters* **18**: 375-384.
- Mueller,C.A., Eme,J., Manzon,R.G., Somers,C.M., Boreham,D.R., and Wilson,J.Y. 2015. Embryonic critical windows: changes in incubation temperature alter survival, hatchling phenotype, and cost of development in lake whitefish (*Coregonus clupeaformis*). *Journal of Comparative Physiology B-Biochemical Systemic and Environmental Physiology* **185**: 315-331.
- Finlay,K., Vogt,R.J., Bogard,M.J., Wissel,B., Tutolo,B.M., Simpson,G.L., and Leavitt,P.R. 2015. Decrease in CO<sub>2</sub> efflux from northern hardwater lakes with increasing atmospheric warming. *Nature* **519**: 215-218.
- Gardiner,L.E., Somers,C.M., Parker,D.L., and Poulin,R.G. 2015. Microhabitat Selection by Prairie Rattlesnakes (*Crotalus viridis*) at the Northern Extreme of their Geographic Range. *Journal of Herpetology* **49**: 131-137.

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- Brahney,J., Ballantyne,A.P., Kociolek,P., Leavitt,P.R., Farmer,G.L., and Neff,J.C. 2015. Ecological changes in two contrasting lakes associated with human activity and dust transport in western Wyoming. *Limnology and Oceanography* **60**: 678-695.
- Halmillawewa,A.P., Restrepo-Cordoba,M., Yost,C.K., and Hynes,M.F. 2015. Genomic and phenotypic characterization of *Rhizobium gallicum* phage vB\_RgIS\_P106B. *Microbiology-Sgm* **161**: 611-620.
- Ludlow,S.M., Brigham,R.M., and Davis,S.K. 2015. Oil and natural gas development has mixed effects on the density and reproductive success of grassland songbirds. *Condor* **117**: 64-75.
- Alberdi,A., Aihartza,J., Aizpurua,O., Salsamendi,E., Brigham,R.M., and Garin,I. 2015. Living above the treeline: roosting ecology of the alpine bat *Plecotus macrobullaris*. *European Journal of Wildlife Research* **61**: 17-25.
- Asselin,H. and Gagnon,D. 2015. Trends in ecological research: reflecting on 21 years of Ecoscience. *Ecoscience* **22**: 1-2.
- Asselin,H. and Gagnon,D. 2015. Trends in ecological research: reflecting on 21 years of Ecoscience. *Ecoscience* **22**: 3-5.
- Tse,T.J., Doig,L.E., Leavitt,P.R., Quinones-Rivera,Z.J., Codling,G., Lucas,B.T., Liber,K., Giesy,J.P., Wheater,H., and Jones,P.D. 2015. Long-term spatial trends in sedimentary algal pigments in a narrow river-valley reservoir, Lake Diefenbaker, Canada. *Journal of Great Lakes Research* **41**: 56-66.
- Vogt,R.J., Sharma,S., and Leavitt,P.R. 2015. Decadal regulation of phytoplankton abundance and water clarity in a large continental reservoir by climatic, hydrologic and trophic processes. *Journal of Great Lakes Research* **41**: 81-90.
- Quinones-Rivera,Z.J., Finlay,K., Vogt,R.J., Leavitt,P.R., and Wissel,B. 2015. Hydrologic, metabolic and chemical regulation of water-column metabolism and atmospheric CO<sub>2</sub> exchange in a large continental reservoir during spring and summer. *Journal of Great Lakes Research* **41**: 144-154.
- Neudorf,K.D., Vanderlinde,E.M., Tambalo,D.D., and Yost,C.K. 2015. A previously uncharacterized tetratricopeptide-repeat-containing protein is involved in cell envelope function in *Rhizobium leguminosarum*. *Microbiology-Sgm* **161**: 148-157.
- Eme,J., Mueller,C.A., Manzon,R.G., Somers,C.M., Boreham,D.R., and Wilson,J.Y. 2015. Critical windows in embryonic development: Shifting incubation temperatures alter heart rate and oxygen consumption of Lake Whitefish (*Coregonus clupeaformis*) embryos and hatchlings. *Comparative Biochemistry and Physiology A-Molecular & Integrative Physiology* **179**: 71-80.
- Truax,B., Gagnon,D., Fortier,J., and Lambert,F. 2014. Biomass and Volume Yield in Mature Hybrid Poplar Plantations on Temperate Abandoned Farmland. *Forests* **5**: 3107-3130.
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- Finlay,K., Patoine,A., Donald,D.B., Bogard,M.J., and Leavitt,P.R. 2010. Experimental evidence that pollution with urea can degrade water quality in phosphorus-rich lakes of the Northern Great Plains. *Limnology and Oceanography* **55**: 1213-1230.
- Brigham,R.M. 2010. Talking the talk: giving oral presentations about mammals for colleagues and general audiences. *Journal of Mammalogy* **91**: 285-292.
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## Appendix II - Dept of Biology Publications (Refereed Journal Articles) since 2006

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- Partel,M., Laanisto,L., and Wilson,S.D. 2008. Soil nitrogen and carbon heterogeneity in woodlands and grasslands: contrasts between temperate and tropical regions. *Global Ecology and Biogeography* **17**: 18-24.
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- MacDougall,A.S. and Wilson,S.D. 2007. Herbivory limits recruitment in an old-field seed addition experiment. *Ecology* **88**: 1105-1111.
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- Wyn,B., Sweetman,J.N., Leavitt,P.R., and Donald,D.B. 2007. Historical metal concentrations in lacustrine food webs revealed using fossil ephippia from *Daphnia*. *Ecological Applications* **17**: 754-764.
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- Swystun,M.B., Lane,J.E., and Brigham,R.M. 2007. Cavity roost site availability and habitat use by bats in different aged riparian cottonwood stands. *Acta Chiropterologica* **9**: 183-191.
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- Langlois,N.L., Mantha,R., Somers,C.M., Quinn,J.S., Mitchel,R.E.J., and Boreham,D.R. 2006. Examining the role of p53 in radiation-induced mutations at ESTR loci. *Environmental and Molecular Mutagenesis* **47**: 433.
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- Somers,C.M. 2006. Expanded simple tandem repeat (ESTR) mutation induction in the male germline: Lessons learned from lab mice. *Mutation Research-Fundamental and Molecular Mechanisms of Mutagenesis* **598**: 35-49.
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## Appendix II - Dept of Biology Publications (Refereed Journal Articles) since 2006

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- Lund,S.G., Ruberte,M.R., and Hofmann,G.E. 2006. Turning up the heat: The effects of thermal acclimation on the kinetics of hsp70 gene expression in the eurythermal goby, *Gillichthys mirabilis*. *Comparative Biochemistry and Physiology A-Molecular & Integrative Physiology* **143:** 435-446.
- Hansen,M.J. and Wilson,S.D. 2006. Is management of an invasive grass *Agropyron cristatum* contingent on environmental variation? *Journal of Applied Ecology* **43:** 269-280.
- Willis,C.K.R., Voss,C.M., and Brigham,R.M. 2006. Roost selection by forest-living female big brown bats (*Eptesicus fuscus*). *Journal of Mammalogy* **87:** 345-350.
- Weger,H.G., Matz,C.J., Magnus,R.S., Walker,C.N., Fink,M.B., and Treble,R.G. 2006. Differences between two green algae in biological availability of iron bound to strong chelators. *Canadian Journal of Botany-Revue Canadienne de Botanique* **84:** 400-411.
- Psyllakis,J.M. and Brigham,R.M. 2006. Characteristics of diurnal roosts used by female Myotis bats in sub-boreal forests. *Forest Ecology and Management* **223:** 93-102.
- Geiser,F., Westman,W., McAllan,B.M., and Brigham,R.M. 2006. Development of thermoregulation and torpor in a marsupial: energetic and evolutionary implications. *Journal of Comparative Physiology B-Biochemical Systemic and Environmental Physiology* **176:** 107-116.
- Manzon,R.G. and Smith,T.M. 2006. Isolation and expression of a putative lamprey transthyretin during metamorphosis. *Journal of Experimental Zoology Part A-Comparative Experimental Biology* **305A:** 152.
- Willis,C.K.R., Brigham,R.M., and Geiser,F. 2006. Deep, prolonged torpor by pregnant, free-ranging bats. *Naturwissenschaften* **93:** 80-83.
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- Schmaltz,G., Somers,C.M., Sharma,P., and Quinn,J.S. 2006. Non-destructive sampling of maternal DNA from the external shell of bird eggs. *Conservation Genetics* **7:** 543-549.

**16. Faculty of Science**

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**16.11 DEPARTMENT OF BIOLOGY**

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**16.11.1 ACADEMIC PROGRAMS**

The Department offers the following programs, described below:  
Biology majors and honours students should seek advising from the  
Department of Biology.

**16. Faculty of Science****16.11.1.1 BSc in Biology**

Refer to §16.6 and §16.9.1 for additional important information.

Credit hours	BSc with Biology major, required courses	Student's record of courses completed
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	BIOL 378	
3.0	BIOL 266	
3.0	BIOL 275	
3.0	BIOL 2xx, 3xx or BIOC 220	
3.0	BIOL 288	
0.0	BIOL 488 (semester 1)	
0.0	BIOL 488 (semester 2)	
3.0	BIOL 3xx, 4xx or BIOC 221 or above	
3.0	BIOL 3xx, 4xx or BIOC 221 or above	
3.0	BIOL 3xx, 4xx or STAT 342	
3.0	BIOL 402	
3.0	BIOL 3xx or 4xx	
3.0	BIOL 3xx or 4xx	
3.0	CHEM 104	
3.0	CHEM 105	
3.0	CHEM 140	
3.0	CS 110	
3.0	MATH 103 and 112, or MATH 110 and 111	
3.0	PHYS 109 and 119, or PHYS 111 and 112	
3.0	STAT100	
3.0	STAT 200	
<b>75.0</b>	<b>Subtotal: Major Requirements</b>	<b>65% Major GPA required</b>
3.0	ENGL 100	
3.0	ENGL 110	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
<b>120.0</b>	<b>Total</b>	<b>65% Program GPA required</b>

**16.11.1.2 BSc Honours in Biology**

Refer to §16.6 and §16.9.2 for additional important information.

Credit hours	BSc Honours in Biology, required courses	Student's record of courses completed
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	BIOL 378	
3.0	BIOL 266	
3.0	BIOL 275	
3.0	BIOL 2xx, 3xx or BIOC 220	
3.0	BIOL 288	
0.0	BIOL 488 (semester 1)	
0.0	BIOL 488 (semester 2)	
3.0	BIOL 498	
3.0	BIOL 499	
3.0	BIOL 3xx, 4xx, or BIOC 221 or above	
3.0	BIOL 3xx, 4xx or BIOC 221 or above	
3.0	BIOL 3xx,4xx or STAT 342	
3.0	BIOL 402	
3.0	BIOL 3xx or 4xx	
3.0	BIOL 3xx or 4xx	
3.0	BIOL 3xx or 4xx	
3.0	CHEM 104	
3.0	CHEM 105	
3.0	CHEM 140	
3.0	CS 110	
3.0	MATH 103 and 112, or MATH 110 and 111	
3.0	PHYS 109 and 119, or PHYS 111 and 112	
3.0	STAT 100	
3.0	STAT 200	
<b>84.0</b>	<b>Subtotal: Major Requirements</b>	<b>75% Major GPA required</b>
3.0	ENGL 100	
3.0	ENGL 110	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
<b>120.0</b>	<b>Total</b>	<b>70% Program GPA required</b>

**16. Faculty of Science****16.11.1.3 BSc in Indigenous Environmental Science**

The Bachelor of Science in Indigenous Environmental Science program is designed to provide students with holistic Indigenous perspectives and cultures. This degree will provide students with tools to work in the multifaceted disciplines in mining, land development, natural resource exploration, and health impact. To take advantage of these opportunities, students will enroll in a variety of courses in Sciences, focusing on environmental and ecological topics with an Indigenous worldview. Students will also acquire important knowledge in environmental economics and community development.

Credit hours	BSc in Indigenous Environmental Science	Student's record of courses completed
<b>Section A: Basic and Breadth Courses</b>		
3.0	BIOL 100	
3.0	BIOL 101	
3.0	CHEM 104	
3.0	CHEM 105	
3.0	CHEM 140	
3.0	CS 110	
3.0	ENGL 100	
3.0	ENGL 110	
3.0	ENVS 100	
3.0	GEOG 120	
3.0	GEOG 121	
3.0	GEOL 102	
3.0	MATH 102	
3.0	MATH 103, or 110	
3.0	PHYS 109 and 119, or PHYS 111 and 112	
3.0	STAT 100 or STAT 160	
<b>51.0</b>	<b>Subtotal</b>	
<b>Section B: Environmental Courses</b>		
3.0	BIOL 275	
3.0	BIOL 276	
3.0	ENHS 340	
3.0	ENHS 350	
3.0	ENHS 440	
3.0	GEOL 270	
3.0	ENST 200	
3.0	GEOG 326	
3.0	GEOL 329	
<b>27.0</b>	<b>Subtotal</b>	
<b>Section C: Indigenous Courses</b>		
3.0	INDG 100	
3.0	INDG 236	
3.0	INDG 360 or ADMN 225	
3.0	1 course from: INDG 222AD, INDG 234, INDG 440/ADMN 436AM	
3.0	Indian Language 100	
<b>15.0</b>	<b>Subtotal</b>	
<b>Section D: Economics and Law Courses</b>		
3.0	ECON 201	
3.0	ECON 273 or ENHS 305	
3.0	ECON 372	
3.0	ENVS 200	
<b>12.0</b>	<b>Subtotal</b>	
<b>Section E: Approved Electives</b>		
3.0	*Approved Science Elective	
3.0	*Approved Science Elective	

3.0	*Approved Science Elective	
3.0	*Approved Science Elective	
3.0	*Approved Elective	
<b>15.0</b>	<b>Subtotal</b>	
<b>120.0</b>	<b>Total</b>	(65% Program GPA Required)

\*Approved Electives

Science Electives (Minimum 4)

BIOC 200, BIOL 205, 223, 266, 288, 302, 316, 335, 356, 365, 366, 367, 378, 456, 457, 463, CHEM 210, GEOL 201, 210, 211, 240, 241, 307, 313, 314, 315, 353

Additional Electives

ADMN 260, 320, ENHS 310, 311, 320, 321, GEOG 203, 207, 210, 222, 232, 246, 303, 307, 309, 327 PHIL 275, SOC 230, WGST 201

**16.11.1.4 BSc in Biology, Cellular & Molecular Biology Area of Concentration**

Refer to §16.6 and §16.9.1 for additional important information.

Credit hours	BSc with Biology major, Cellular & Molecular Biology area of concentration required courses	Student's record of courses completed
3.0	BIOC 220	
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	BIOL 378	
3.0	BIOL 266	
3.0	BIOL 275	
3.0	BIOL 288	
3.0	BIOL 305	
3.0	BIOL 402	
0.0	BIOL 488 (semester 1)	
0.0	BIOL 488 (semester 2)	
3.0	Four courses from: BIOL 302, 303, 310, 366, 390, 395, 401, 405, 406, 407, 410, up to two of BIOC 221, 3xx or 4xx	
3.0	CHEM 104	
3.0	CHEM 105	
3.0	CHEM 140	
3.0	CS 110	
3.0	MATH 103 and 112, or MATH 110 and 111	
3.0	PHYS 109 and 119, or PHYS 111 and 112	
3.0	STAT 100	
3.0	STAT 200	
<b>75.0</b>	<b>Subtotal: Major Requirements</b>	<b>65% Major GPA required</b>
3.0	ENGL 100	
3.0	ENGL 110	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and	

## 16. Faculty of Science

Credit hours	BSc with Biology major, Cellular & Molecular Biology area of concentration required courses	Student's record of courses completed
	Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
120.0	<b>Total</b>	<b>65% Program GPA required</b>

**16.11.1.5 BSc Honours in Biology, Cellular & Molecular Biology Area of Concentration**

Refer to §16.6 and §16.9.2 for additional important information.

Credit hours	BSc Honours with Biology major, Cellular & Molecular Biology area of concentration required courses	Student's record of courses completed
3.0	BIOC 220	
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	BIOL 378	
3.0	BIOL 266	
3.0	BIOL 275	
3.0	BIOL 288	
3.0	BIOL 305	
3.0	BIOL 402	
0.0	BIOL 488 (semester 1)	
0.0	BIOL 488 (semester 2)	
3.0	BIOL 498	
3.0	BIOL 499	
3.0	FIVE courses from BIOL 302, 303, 310, 366, 390, 395, 401, 405, 406, 407, 410, up to two of BIOC 221, 3xx or 4xx	
3.0	CHEM 104	
3.0	CHEM 105	
3.0	CHEM 140	
3.0	CS 110	
3.0	MATH 103 and 112, or MATH 110 and 111	
3.0	PHYS 109 and 119, or PHYS 111 and 112	
3.0	STAT 100	
3.0	STAT 200	
84.0	<b>Subtotal: Major</b>	<b>75% Major GPA</b>

Credit hours	BSc Honours with Biology major, Cellular & Molecular Biology area of concentration required courses	Student's record of courses completed
	<b>Requirements</b>	<b>required</b>
3.0	ENGL 100	
3.0	ENGL 110	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
120.0	<b>Total</b>	<b>70% Program GPA required</b>

**16.11.1.6 BSc in Biology, Ecology & Environmental Biology Area of Concentration**

Refer to §16.6 and §16.9.1 for additional important information.

Credit hours	BSc with Biology major, Ecology & Environmental Biology area of concentration required courses	Student's record of courses completed
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	BIOL 378	
3.0	BIOL 266	
3.0	BIOL 275	
3.0	BIOL 276	
3.0	BIOL 288	
3.0	BIOL 402	
0.0	BIOL 488 (semester 1)	
0.0	BIOL 488 (semester 2)	
3.0	FIVE courses from: BIOL 302, 316, 335, 341 (or STAT 342), 356, 365, 366, 367, 375, 376, 380, 385, 401, 402, 425, 435, 456, 457, 463, 485	
3.0	CHEM 104	
3.0	CHEM 105	
3.0	CHEM 140	
3.0	CS 110	
3.0	MATH 103 and 112, or MATH 110 and 111	
3.0	PHYS 109 and 119, or PHYS 111 and 112	
3.0	STAT 100	
3.0	STAT 200	

## 16. Faculty of Science

Credit hours	BSc with Biology major, Ecology & Environmental Biology area of concentration required courses	Student's record of courses completed
<b>75.0</b>	<b>Subtotal: Major Requirements</b>	<b>65% Major GPA required</b>
3.0	ENGL 100	
3.0	ENGL 110	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
<b>120.0</b>	<b>Total</b>	<b>65% Program GPA required</b>

**16.11.1.7 BSc Honours in Biology, Ecology & Environmental Biology Area of Concentration**

Refer to §16.6 and §16.9.2 for additional important information.

Credit hours	BSc Honours in Biology, Ecology & Environmental Biology required courses	Student's record of courses completed
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	BIOL 378	
3.0	BIOL 266	
3.0	BIOL 275	
3.0	BIOL 276	
3.0	BIOL 288	
3.0	BIOL 402	
0.0	BIOL 488 (semester 1)	
0.0	BIOL 488 (semester 2)	
3.0	BIOL 498	
3.0	BIOL 499	
3.0	SIX courses from: BIOL 302, 316, 335, 341 (or STAT 342), 356, 365, 366, 367, 375, 376, 380, 385, 401, 402, 425, 435, 456, 457, 463, 485	
3.0		
3.0		
3.0		
3.0		
3.0		
3.0	CHEM 104	
3.0	CHEM 105	

Credit hours	BSc Honours in Biology, Ecology & Environmental Biology required courses	Student's record of courses completed
3.0	CHEM 140	
3.0	CS 110	
3.0	MATH 103 and 112, or MATH 110 and 111	
3.0	PHYS 109 and 119, or PHYS 111 and 112	
3.0	STAT 100	
3.0	STAT 200	
<b>84.0</b>	<b>Subtotal: Major Requirements</b>	<b>75% Major GPA required</b>
3.0	ENGL 100	
3.0	ENGL 110	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
<b>120.0</b>	<b>Total</b>	<b>70% Program GPA required</b>

**16.11.1.8 BSc Combined Major in Biology and Biochemistry**

Refer to §16.6 and §16.9.1 for additional important information.

Credit hours	BSc Combined Major in Biology and Biochemistry, required courses	Student's record of courses completed
3.0	BIOC 220	
3.0	BIOC 221	
3.0	BIOC 321	
3.0	BIOC 3xx	
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	BIOL 378	
3.0	BIOL 266	
3.0	BIOL 275	
3.0	BIOL 288	
3.0	THREE courses from: BIOL 300, 301, 305, 366, 390, 401, 402, 405, 407	
3.0	BIOL or BIOC 3xx or 4xx	
3.0	BIOL or BIOC 3xx or 4xx	
3.0	BIOL or BIOC 3xx or 4xx	
3.0	BIOL or BIOC 3xx or 4xx	
3.0	BIOL 402	
3.0	CHEM 104	
3.0	CHEM 105	
3.0	CHEM 140	
3.0	CHEM 210	

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Credit hours	BSc Combined Major in Biology and Biochemistry, required courses	Student's record of courses completed
3.0	CHEM 215 OR 250	
3.0	CHEM 241	
3.0	CS 110 or 115	
3.0	MATH 103 and 112, or MATH 110 and 111	
3.0	PHYS 109 and 119, or PHYS 111 and 112	
3.0	STAT 160	
<b>96.0</b>	<b>Subtotal: Major Requirements</b>	<b>65% Major GPA required</b>
3.0	ENGL 100	
3.0	ENGL 110	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Open elective	
3.0	Open elective	
<b>120.0</b>	<b>Total</b>	<b>65% Program GPA required</b>

**16.11.1.9 BSc Combined Major in Biology and Geography**

Refer to §16.6 and §16.9.1 for additional important information.

Credit hours	BSc Combined Major in Biology and Geography, required courses	Student's record of courses completed
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	BIOL 378	
3.0	BIOL 266	
3.0	BIOL 275	
3.0	BIOL 288	
3.0	THREE courses from: BIOL 335, 341 (or STAT 342), 356, 365, 367, 376, 370, 375, 385, 425, 435, 456, 457, 463, 490BH	
3.0	BIOL 402	
3.0	GEOG 120	
3.0	GEOG 121	
3.0	GEOG 205	
3.0	GEOG 207	
3.0	GEOG 210	
3.0	ENST 200	
3.0	GEOG 301	
3.0	GEOG 305	
3.0	GEOG 3xx or 4xx	
3.0	GEOG 3xx or 4xx	
3.0	GEOG 3xx or 4xx	
3.0	GEOG 3xx or 4xx	
3.0	CHEM 104	
3.0	CHEM 140	
3.0	CS 110	
3.0	PHYS 109 and 119, or PHYS 111 and 112	
<b>90.0</b>	<b>Subtotal: Major Requirements</b>	<b>65% Major GPA required</b>

Credit hours	BSc Combined Major in Biology and Geography, required courses	Student's record of courses completed
3.0	GEOL 102	
3.0	CS 110	
3.0	MATH 103 and 112, or MATH 110 and 111	
3.0	PHYS 109 and 119, or PHYS 111 and 112	
3.0	STAT 100 or 160	
<b>99.0</b>	<b>Subtotal: Major Requirements</b>	<b>65% Major GPA required</b>
3.0	ENGL 100	
3.0	ENGL 110	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Open elective	
<b>120.0</b>	<b>Total</b>	<b>65% Program GPA required</b>

**16.11.1.10 BSc Combined Major in Biology and Statistics**

Refer to §16.6 and §16.9.1 for additional important information.

Credit hours	BSc Combined Major in Biology and Statistics, required courses	Student's record of courses completed
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	BIOL 378	
3.0	BIOL 266	
3.0	BIOL 275	
3.0	BIOL 2xx, 3xx or BIOC 220	
3.0	BIOL 288	
3.0	BIOL 341 or STAT 342	
3.0	BIOL 402	
3.0	BIOL 3xx, 4xx or BIOC 221	
3.0	BIOL 3xx, 4xx or BIOC 221	
3.0	MATH 103 and 112, or MATH 110 and 111	
3.0	MATH 122	
3.0	MATH 213	
3.0	One of STAT 160, 200 or 289	
3.0	STAT 251	
3.0	STAT 252	
3.0	STAT 351	
3.0	STAT 354	
3.0	STAT course above 354	
3.0	STAT course above 354	
3.0	STAT course above 354	
3.0	CHEM 104	
3.0	CHEM 140	
3.0	CS 110	
3.0	PHYS 109 and 119, or PHYS 111 and 112	
<b>90.0</b>	<b>Subtotal: Major Requirements</b>	<b>65% Major GPA required</b>

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Credit hours	BSc Combined Major in Biology and Statistics, required courses	Student's record of courses completed
3.0	ENGL 100	
3.0	ENGL 110	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
3.0	Open elective	
<b>120.0</b>	<b>Total</b>	<b>65% Program GPA required</b>

**16.11.1.11 BSc in Environmental Biology (Joint Program with Saskatchewan Polytechnic & Lethbridge College)**

This is a joint program with Saskatchewan Polytechnic and Lethbridge College. To complete the BSc in Environmental Biology, students must have completed the Diploma of Integrated Resource Management from Saskatchewan Polytechnic or the Diploma in Renewable Resource Management from Lethbridge College with a minimum 60% graduating average and a passing grade in Pre-Calculus 30 or equivalent. Graduation from a similar program may be used for admission to this program and will be reviewed on a case by case basis. Students meeting admission requirements will be granted 60.0 hours of block transfer credit toward this degree program.

Refer to §16.6 and §16.9.1 for additional important information.

Credit hours	Environmental Biology major (University of Regina), required courses	Student's record of courses completed
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 402	
0.0	BIOL 488 (first semester)	
0.0	BIOL 488 (second semester)	
3.0	TWO courses from: BIOL 316, 335, 341 (or STAT 342), 356, 365, 367, 380, 385, 435, 456, 457, 463, 485	
3.0	CHEM 104	
3.0	CHEM 140	
3.0	GEOG 121	
3.0	ENST 200	
3.0	GEOG 325, 326 or 327	
3.0	MATH 103 or 110	
3.0	PHYS 109 or 111	
3.0	ENGL 100	
3.0	ENGL 110	
3.0	STAT 200	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	

	elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
<b>60.0</b>	<b>Subtotal</b>	<b>65% U of R GPA required</b>
<b>120.0</b>	<b>Total</b>	

**16.11.1.12 BSc Honours in Environmental Biology (Joint Program with Saskatchewan Polytechnic & Lethbridge College)**

This is a joint program with Saskatchewan Polytechnic and Lethbridge College. To complete the BSc in Environmental Biology, students must have completed the Diploma of Integrated Resource Management from Saskatchewan Polytechnic, or the Diploma in Renewable Resource Management from Lethbridge College with a minimum 60% graduating average and a passing grade in Pre-Calculus 30 or equivalent. Graduation from a similar program may be used for admission to this program and will be reviewed on a case by case basis. Students meeting admission requirements will be granted 60.0 hours of block transfer credit toward this degree program.

Refer to §16.6, §16.9.2, and §16.11.1.10 for additional important information.

Credit hours	Environmental Biology major (University of Regina), required courses	Student's record of courses completed
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 402	
0.0	BIOL 488 (first semester)	
0.0	BIOL 488 (second semester)	
3.0	BIOL 498	
3.0	BIOL 499	
3.0	FOUR courses from: BIOL 316, 335, 341 (or STAT 342), 356, 365, 367, 380, 385, 435, 456, 457, 463, 485	
3.0	CHEM 104	
3.0	CHEM 140	
3.0	GEOG 121	
3.0	ENST 200	
3.0	GEOG 325, 326 or 327	
3.0	MATH 103 or 110	
3.0	PHYS 109 or 111	
3.0	ENGL 100	
3.0	ENGL 110	
3.0	STAT 200	
3.0	Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
<b>72.0</b>	<b>Subtotal</b>	<b>70% U of R GPA required</b>
<b>132.0</b>	<b>Total</b>	

**16. Faculty of Science****16.11.1.13 BSc in Environmental Biology (Joint Program with Lakeland College)**

This is a joint program with Lakeland College. To complete the BSc in Environmental Biology, students must have completed the Diploma in Wildlife and Fisheries Conservation, or the Diploma in Conservation and Restoration Ecology at Lakeland College with a minimum 60% graduating average and a passing grade in Pre-Calculus 30 or equivalent. Graduation from a similar program may be used for admission to this program and will be reviewed on a case by case basis. Students meeting admission requirements will be granted 60.0 hours of block transfer credit toward this degree program.

Credit hours	Environmental Biology major (University of Regina), required courses	Student's record of courses completed
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	ONE of: BIOL 378, 266	
3.0	BIOL 402	
0.0	BIOL 488 (first semester)	
0.0	BIOL 488 (second semester)	
3.0	TWO courses from: BIOL 316, 335, 341 (or STAT 342), 356, 365, 367, 380, 385, 435, 456, 457, 463, 485	
3.0	GEOG 121	
3.0	ENST 200	
3.0	GEOG 325, 326 or 327	
3.0	MATH 103 or 110	
3.0	PHYS 109 or 111	
3.0	ENGL 100	
3.0	ENGL 110	
3.0	STAT 200	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
60.0	<b>Subtotal</b>	<b>65% U of R GPA required</b>
120.0	<b>Total</b>	

**16.11.2.14 BSc Honours in Environmental Biology (Joint Program with Lakeland College)**

This is a joint program with Lakeland College. To complete the BSc in Environmental Biology, students must have completed the Diploma in Wildlife and Fisheries Conservation, or the Diploma in Conservation and Restoration Ecology at Lakeland College with a minimum 60% graduating average and a passing grade in Pre-Calculus 30 or equivalent. Graduation from a similar program may be used for admission to this program and will be reviewed on a case by case basis. Students meeting admission requirements will be granted 60.0 hours of block transfer credit toward this degree program.

Refer to §16.6, §16.9.2, and §16.11.1.10 for additional important information.

Credit hours	Environmental Biology major (University of Regina), required courses	Student's record of courses completed
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 205	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	ONE of: BIOL 378, 266	
3.0	BIOL 402	
0.0	BIOL 488 (first semester)	
0.0	BIOL 488 (second semester)	
3.0	BIOL 498	
3.0	BIOL 499	
3.0	FOUR courses from: BIOL 316, 335, 341 (or STAT 342), 356, 365, 367, 380, 385, 435, 456, 457, 463, 485	
3.0	GEOG 121	
3.0	ENST 200	
3.0	GEOG 325, 326 or 327	
3.0	MATH 103 or 110	
3.0	PHYS 109 or 111	
3.0	ENGL 100	
3.0	ENGL 110	
3.0	STAT 200	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
3.0	Science, Arts, or Media, Art, and Performance elective	
72.0	<b>Subtotal</b>	<b>70% U of R GPA required</b>
132.0	<b>Total</b>	

**16.11.1.15 Minor in Biology**

Credit hours	Biology minor - required courses	Student's record of courses completed
3.0	BIOL 100	
3.0	BIOL 101	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	BIOL 2xx, 3xx or 4xx	
3.0	BIOL 2xx, 3xx or 4xx	
18.0	<b>Subtotal</b>	<b>65% Minor GPA required</b>

## 24. Courses

<b>BIOL</b>	<b>Biology</b>
<b>BIOL 051</b>	<b>0:0-0</b>
<b>Biology Co-op Work Term I</b>	
Four-month co-op work term approved by the department and arranged by the co-op coordinator.	
<b>BIOL 052</b>	<b>0:0-0</b>
<b>Biology Co-op Work Term II</b>	
Four-month co-op work term approved by the department and arranged by the co-op coordinator.	
<b>BIOL 053</b>	<b>0:0-0</b>
<b>Biology Co-op Work Term III</b>	
Four-month co-op work term approved by the department and arranged by the co-op coordinator.	
<b>BIOL 054</b>	<b>0:0-0</b>
<b>Biology Co-op Work Term IV</b>	
Four-month co-op work term approved by the department and arranged by the co-op coordinator.	
<b>BIOL 100</b>	<b>3:3-1.5</b>
<b>Biology I - From Cells to Organisms</b>	
An examination of biological molecules, cell structure and fundamental cellular processes, bioenergetics, genetics, evolution, and animal and plant physiology. ***Prerequisite: Biology 30 and Chemistry 30 are strongly recommended***	
*Note: This course is designed for biology majors, pre-professional students, secondary education science students, and those wanting two semesters of biology. Students seeking a single semester introductory course are advised to take Biology 140 or 150*	
<b>BIOL 101</b>	<b>3:3-3</b>
<b>Biology II - Organisms in their Environment</b>	
A comparative approach to the three Domains of life, including structure, diversity, physiology, and ecology.	
*Notes: BIOL 100 is a recommended pre-requisite. This course is designed for biology majors, pre-professional students, secondary education science students, and those wanting two semesters of biology. Students seeking a single semester introductory course are advised to take BIOL 140 or 150*	
<b>BIOL 110</b>	<b>3:3-3</b>
<b>Human Anatomy &amp; Physiology I</b>	
An introduction to the anatomy and normal functioning of the human body. The course takes a holistic approach to understanding and integrating anatomy and physiology in both lecture and laboratory components.	
* Note: Restricted to Nursing students only *	
<b>BIOL 111</b>	<b>3:3-3</b>
<b>Human Anatomy &amp; Physiology II</b>	
A continuation of BIOL 110. Further study of the anatomy and normal functioning of the human body, integrating anatomy and physiology in both lecture and laboratory components. ***Prerequisite: BIOL 110***	
* Note: Restricted to Nursing students only *	
<b>BIOL 140</b>	<b>3:3-1.5</b>
<b>Human Biology for Non-majors</b>	
An introductory level course covering the principles of biology with examples taken from humans.	
* Note: This course is designed to apply the study of biological principles to humans. Biology majors cannot take this course for credit. Students cannot receive credit for both BIOL 140 and 150. Students who have credit for either BIOL 100 or BIOL 101 cannot subsequently receive credit for either of BIOL 140 or BIOL 150. *	
<b>BIOL 150</b>	<b>3:3-1.5</b>
<b>Biological Principles for Non-majors</b>	
This course is a survey of basic modern biological principles. Topics will include: origin of life, basic cell structure and function, evolution, an outline of organism diversity, ecological principles, and selected functions of multicellular organisms.	

\* Note: Designed for students who do not intend to be biology majors and who are not in pre-professional programs. Students cannot receive credit for both BIOL 140 and 150. Students who have credit for BIOL 100 or BIOL 101 cannot subsequently receive credit for either of BIOL 140 or BIOL 150. \*

**BIOL 201 3:3-0****Evolutionary Biology of Sex**

This lecture based course will help students understand sexual reproduction in animals (including humans) in an evolutionary context. Specifically the course will deal with issues about the potential conflicts between males and females and their offspring. Topics will include evolution and natural selection in the context of the function of sex, sexual selection, mating systems, mate selection and parental investment, social behaviour, male-female and parent-offspring conflict.

\*\*\* Prerequisite: 24 credit hours \*\*\*

\* Note: Any students who have taken BIOL 275 are precluded from taking this course. \*

**BIOL 205 3:3-3****Introductory Genetics**

This course covers chromosome theory of inheritance/eukaryotic transmission genetics. Topics will include: nature of genetic material, DNA replication, mechanism of mutation, natural recombination, artificial recombination, recombinant DNA technology/genetic engineering, and population genetics.

\*\*\* Prerequisite: BIOL 100 and 101, CHEM 104 \*\*\*

\* Note: CHEM 104 can be taken concurrently \*

**BIOL 220 3:3-3****Introductory Microbiology**

This is an introductory microbiology course covering microbial structure, physiology, genetics and environmental relationships, mainly with respect to bacteria, but also in part with the fungi, rickettsiae, and viruses. Basic concepts of the immune response will also be covered.

\*\*\* Prerequisite: BIOL 100 and 101, CHEM 104 \*\*\*

\* Note: CHEM 104 can be taken concurrently \*

**BIOL 222 3:2-0****Microbiology for Health Professionals**

This course introduces fundamental concepts of microbiology with specific emphasis on clinically relevant microbes and their impact on human health.

\* Note: Restricted to Nursing students \*

**BIOL 223 3:3-0****Microbes and Society: Can microbes save humanity?**

Microbes play a critically important role in the environment and human society. Microbiology will be used to introduce students to relevant environmental issues. Students will develop critical thinking skills for evaluating these environmental issues.

\*\*\*Prerequisite: Completion of 24 credit hours\*\*\*

**BIOL 266 3:3-3****Plant Physiology**

This course covers the functioning of plants and their interaction with the environment. Topics will include: photosynthesis, water relations, transport processes, mineral nutrition and assimilation, hormones, and development.

\*\*\* Prerequisite: BIOL 100 and 101, CHEM 104 \*\*\*

\* Note: CHEM 104 can be taken concurrently \*

**BIOL 275 3:3-3****Ecology**

This is an introductory course that covers plant, animal, and microbial ecology. Field work will be required.

\*\*\* Prerequisite: BIOL 100 and 101, CHEM 104 \*\*\*

\* Note: CHEM 104 can be taken concurrently \*

**BIOL 276 3:3-0****Environmental Biology**

This course discusses the biological basis for environmental change and its impacts on human society and will review the patterns, causes

and consequences of human-induced and natural environmental change. Topics will include: global warming, acid rain, ozone depletion, fisheries collapse, sustainable forestry, agriculture, biodiversity, and conservation. For Biology, Environmental Science and Environmental Studies Majors.

\*\*\* Prerequisite: BIOL 100 and 101, or BIOL 150 and ENST 200 \*\*\*

**BIOL 288 3:3-3****Cell Biology**

This is an introductory course in cell biology covering the structure and function of cells and their organelles.

\*\*\* Prerequisite: BIOL 100 and 101, CHEM 104 \*\*\*

\* Note: CHEM 104 can be taken concurrently \*

**BIOL 302 3:3-3****Food Microbiology**

Students will be introduced to the importance of microbes in foods. Topics will include: microbial ecology in food environments, survey of microbes important in food spoilage and food borne illness, food fermentations, and control and detection of detrimental microbes with special emphasis on novel or emerging techniques. \*\*\*Prerequisite: BIOL 310\*\*\*

**BIOL 303 3:3-0****Medical Microbiology**

Aetiology, pathogenesis, diagnosis, treatment and epidemiology of infectious diseases of humans, caused by bacterial, viral, fungal and parasitic organisms.

\*\*\*Prerequisites: BIOL 205, 220, 288\*\*\*

**BIOL 305 3:3-3****Genetics**

This course covers the evolution of concepts of the gene. Topics will include: bacterial and viral genetics, genetic code and translation, transcription, processing of RNA and protein molecules, structural organization of prokaryotic and eukaryotic genes, and regulation of gene expression.

\*\*\* Prerequisite: BIOL 205 and CHEM 140, and one of BIOL 288 or BIOC 220\*\*\*

**BIOL 310 0-3:3-3****Microbial Diversity and Cell Function**

Students will be introduced to the tremendous diversity in microbial cell structure, function, and the environments they influence. Specific topics include: Microbial physiology, microbial symbionts, extremophiles, microbial cell sensing and adaptive responses, and viral diversity.

\*\*\*Prerequisite: BIOL 288 or BIOC 220\*\*\*

\*Note: Credit cannot be received for both BIOL 220 and BIOL 310.\*

**BIOL 316 3:3-0****Conservation Biology**

This course will examine processes that affect biodiversity. The goal of the course is to apply principles of ecology and evolution to understand the importance of biodiversity and the significance of recent human-induced changes. \*\*\*Prerequisites: BIOL 100 and 101, BIOL 275, STAT 100\*\*\*

**BIOL 335 3:3-3****Limnology**

Physical and chemical characteristics of lakes and streams. Nutrient cycling. Ecology of aquatic organisms. Food-web interactions in lakes. Human impact on freshwater ecosystems. History of lakes. Includes field work.

\*\*\*Prerequisite: BIOL 275 or BIOL 276.\*\*\*

**BIOL 341 3:3-0****Biometrics**

A practical and computer-assisted approach to the design of biological experiments and to multivariate analyses of discrete and continuous variables.

\*\*\* Prerequisite: BIOL 100 and 101, STAT 100 and STAT 200.\*\*\*

\*Note: Students with credit for STAT 342 cannot take BIOL 341 for credit.\*

### 24. Courses

<b>BIOL 356</b>	<b>0-3:3-3</b>	
<b>Ecosystems Since Glaciation</b>		
Long-term ecosystem structure and dynamics provide the context for present day global change. This course examines ecosystem dynamics in the last 10,000 years, focusing on the last few centuries. Paleoecological methods and results of reconstructing such phenomena as acid rain, range changes, island biogeographies, and fire histories will be studied.		and their role in regulating cell and organismal physiology. Examples of human endocrine disorders will be considered.
***Prerequisites: BIOL 275***		***Prerequisite: BIOL 288***
<b>BIOL 365</b>	<b>3:3-3</b>	
<b>Vascular Plants</b>		
Morphology and reproduction of vascular plants with particular reference to the interrelationships and evolutionary history of the major groups.		
*** Prerequisite: BIOL 275 ***		
<b>BIOL 366</b>	<b>3:3-3</b>	
<b>Advanced Plant Physiology</b>		
Environmental, physiological and biochemical regulation of photosynthesis and respiration, plant energetics, acclimation to abiotic stress, interactions between photosynthesis and stress.		Will provide an overview of the major cellular and molecular events during early embryonic development in animals. Following discussions from fertilization to an outline of the body plan, the development of selected organ systems will be studied in greater depth. The role of gene activity in development will be considered.
*** Prerequisite: BIOL 266 and 288***		*** Prerequisite: BIOL 288 ***
<b>BIOL 367</b>	<b>3:3-3</b>	
<b>Plant Taxonomy</b>		
This course covers plant classification and nomenclature with special emphasis on flowering plants. Techniques of identification and diagnostic features of selected groups of plants will be described.		
*** Prerequisite: BIOL 275 ***		
<b>BIOL 375</b>	<b>3:3-0</b>	
<b>Systems Ecology</b>		
An ecosystem approach to energy flow and nutrient cycling in Saskatchewan prairies, forests and lakes.		
*** Prerequisite: BIOL 275, STAT 160 and STAT 201 or higher ***		
<b>BIOL 376</b>	<b>0-3:3-3</b>	
<b>Population and Community Ecology</b>		
Explores the major processes governing population dynamics, species interactions, and community structure. Emphasizes a quantitative framework for understanding populations and communities using mathematical models and graphical analysis. ***Prerequisite: BIOL 275, MATH 110, and one of STAT 160 or 200***		
***Prerequisite: BIOL 288***		
*Note: Credit cannot be held for both BIOL 265 and BIOL 378.*		
<b>BIOL 378</b>	<b>0-3:3-3</b>	
<b>Animal Physiology</b>		
This course covers the general principles of animal physiology and includes discussion of the major physiological systems, including nervous, sensory, muscular, circulatory, respiratory, digestive, and reproductive systems.		
***Prerequisite: BIOL 288***		
*Note: Credit cannot be held for both BIOL 265 and BIOL 378.*		
<b>BIOL 380</b>	<b>3:3-3</b>	
<b>Animal Behaviour</b>		
An evolutionary approach to the study of the behaviour and ecology of individual animals. Compulsory field work for one week before lectures begin.		
*** Prerequisite: BIOL 275 and one of STAT 200, STAT 201 or higher or BIOL 341 ***		
<b>BIOL 385</b>	<b>3:3-3</b>	
<b>Vertebrate Animal Biology</b>		
The anatomy, evolution, taxonomy, distribution, phylogeny and fossil history of vertebrate animals. Laboratories will involve dissections to illustrate diversity of body form and function.		
***Prerequisite: BIOL 275***		
<b>BIOL 390</b>	<b>3:3-0</b>	
<b>General and Comparative Endocrinology</b>		
Principles and concepts of mammalian endocrine systems.		
Emphasis will be placed on the regulators of hormone synthesis and secretion, the cellular and molecular mechanisms of hormone action		
		and their role in regulating cell and organismal physiology. Examples of human endocrine disorders will be considered.
		***Prerequisite: BIOL 288***
<b>BIOL 395</b>	<b>3:3-0</b>	
<b>Animal Developmental Biology</b>		
Will provide an overview of the major cellular and molecular events during early embryonic development in animals. Following discussions from fertilization to an outline of the body plan, the development of selected organ systems will be studied in greater depth. The role of gene activity in development will be considered.		
*** Prerequisite: BIOL 288 ***		
<b>BIOL 396</b>	<b>3:1-0</b>	
<b>Independent Research in Biology</b>		
This course is intended as an introduction to independent research. Under the direct supervision of a Biology faculty member, students will undertake a well-defined research project suitable for completion in one semester. A written report with structure similar to a journal article within the discipline will be produced.		
***Prerequisite: 60 credit hours and permission of course instructor.***		
*Note: the written report cannot incorporate material or data derived from paid employment.*		
<b>BIOL 399</b>	<b>0-3:3-3</b>	
<b>Selected Topics/Reading Courses - an AA-ZZ series</b>		
Courses used to offer topical material.		
<b>BIOL 402</b>	<b>3:3-0</b>	
<b>Evolution</b>		
This course explores the evidence supporting evolution as a scientific theory, its role as the main unifying theory of biology, and how biologists use evolution to guide research. Topics covered include molecular evolution, phylogeny, the history of life, natural selection and adaptation, the evolution of life histories, speciation, and macroevolution. ***Prerequisite: BIOL 205 ***		
***Prerequisite: BIOL 205 ***		
<b>BIOL 405</b>	<b>3:3-0</b>	
<b>Molecular Genetics</b>		
Anatomy of the genome in prokaryotes and eukaryotes, evolution of genomes, molecular phylogenies, gene expression and its regulation in pro- and eukaryotes, recombination, and modern molecular methods.		
*** Prerequisite: BIOL 305 ***		
*Note: Formerly numbered BIOL 490BG. Students may not receive credit for both BIOL 406 and BIOL 490BG.*		
<b>BIOL 406</b>	<b>3:0-0</b>	
<b>Genomics and Bioinformatics</b>		
This course covers the fundamental theories and bioinformatic methodologies underlying comparative evolutionary and functional genomics with examples from bacteria, plants, animals and humans.		
***Prerequisites: CS 110, BIOL 305***		
*Note: Formerly numbered BIOL 490BG. Students may not receive credit for both BIOL 406 and BIOL 490BG.*		
<b>BIOL 407</b>	<b>3:3-0</b>	
<b>Neurophysiology</b>		
The focus of this course is the electrical and chemical properties of the nervous system (neural networks and neural development). We also cover the physiology and functional anatomy of sensory systems, memory, and movement. ***Prerequisites: BIOL 288 or both PSYC 102 and 255***		
***Prerequisites: BIOL 288 or both PSYC 102 and 255***		
<b>BIOL 410</b>	<b>3:3-3</b>	
<b>Microbial Genetics and Infection</b>		
This course will examine bacterial and viral genetic systems to understand host-pathogen interactions, with a focus on: gene regulation, gene transfer, mutation, evolution of host-pathogen interactions, and epidemiology.		
***Prerequisite: BIOL 305***		
<b>BIOL 425</b>	<b>3:3-1</b>	
<b>Ecological Methodology</b>		
A framework for research investigating ecological patterns and processes in natural populations and communities. Observational and		

**24. Courses**

experimental methodologies will be covered to enable the students to develop and test hypotheses.

\*\*\* Prerequisite: BIOL 275 and one of STAT 200, STAT 201 or higher or BIOL 341 \*\*\*

**BIOL 435** **3:3-3**

**Advanced Aquatic Ecology**

Regulation of plankton communities in freshwater and saline lakes. Experimental evidence for population control by predation, competition, and the physical environment. Experimental design. There will be individual field research projects.

\*\*\* Prerequisite: BIOL 335 \*\*\*

**BIOL 456** **3:3-0**

**Global Biogeochemistry**

The course will present an in-depth examination of elemental cycles within the context of global change. Topics will include the biogeochemical properties of water, carbon, nitrogen, sulphur, phosphorus, and some contaminants and the ways in which anthropogenic activities have altered the behaviour and movement of these elements.

\*\*\*Prerequisite: CHEM 104 and BIOL 275\*\*\*

**BIOL 457** **3:3-0**

**Environmental Microbiology**

Course focuses on understanding the interactions of microorganisms with their environment. Topics include ecology, diversity, and biotechnological applications of microbial communities, including those from extreme and unusual environments. The use of molecular approaches to identify and characterize microbial communities will be emphasized.

\*\*\*Prerequisite: BIOL 275 and BIOL 288\*\*\*

**BIOL 463** **3:3-0**

**Stable Isotope Ecology - Methods and Applications**

This course focuses on basic methodology and applications of stable isotope analysis in ecology. Discussing the classical and current literature in the field will enable students to critically evaluate published studies and help design their own research projects.

\*\*\*Prerequisite: BIOL 275\*\*\*

**BIOL 485** **3:3-3**

**Ornithology**

Classification, anatomy, physiology, behaviour, ecology and conservation of birds. Compulsory field work will be required.

\*\*\* Prerequisite: BIOL 385 \*\*\*

**BIOL 488** **0:1-0**

**Seminars in Biology**

All majors and honours students in their fourth year must attend the departmental seminar series.

**BIOL 490** **0-3:3-3**

**Selected Topics/Reading Courses - an AA-ZZ series.**

Courses used to offer topical material.

**BIOL 491** **0-3:3-3**

**Selected Topics/Reading Courses - an AA-ZZ series.**

Courses used to offer topical material.

**BIOL 492** **0-3:3-3**

**Selected Topics/Reading Courses - an AA-ZZ series.**

Courses used to offer topical material.

**BIOL 493** **0-3:3-3**

**Selected Topics/Reading Courses - an AA-ZZ series.**

Courses used to offer topical material.

**BIOL 494** **0-3:3-3**

**Selected Topics/Reading Courses - an AA-ZZ series.**

Courses used to offer topical material.

**BIOL 495** **0-3:3-3**

**Selected Topics/Reading Courses - an AA-ZZ series.**

Courses used to offer topical material.

**BIOL 498**

**3:1-0**

**Thesis Research I**

Individual student research conducted under the direction of a Biology faculty member. Students enrolling in BIOL 498 must also complete BIOL 499 which entails a continuation of the independent research, and the preparation and defence of a written thesis.

\*\*\*Prerequisites: Approval by Department Head.\*\*\*

**BIOL 499**

**3:1-0**

**Thesis Research II**

Preparation and defence of a written thesis. The defence will consist of a student seminar and oral examination of the thesis by a faculty committee.

\*\*\*Prerequisites: Approval by Department Head.\*\*\*

## Appendix V - Undergraduate Course Teaching History

Term	Subject	Course	Location	Course Enrollment	Course Instructor	Number of Labs	Lab Instructor
<b>200610</b>	BIOL	101	Science	218	Wilson, Scott	8 labs	Ross, Terry
	BIOL	101	Off Campus - Weyburn	5	Ziehl, Wendy	1 lab	Ziehl, Wendy
	BIOL	101	FNUiv	22	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus - La Ronge	14	Murawsky, Vlademir	1 lab	Murawsky, Vlademir
	BIOL	140	Web Delivered	43	Ambrose, Laura		
	BIOL	140	Luther College	104	Ambrose, Laura	3 labs	Ross, Terry
	BIOL	140	Luther College - in French	8	Gendron, Fidji	1 lab	Ross, Terry
	BIOL	140	FNUiv	20	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	150	Luther College	38	Hansen, Malin	3 labs	Lintott, Lauri
	BIOL	205	Science	73	Chapco, William	5 labs	Lintott, Lauri
	BIOL	220	Science	69	Wall, Michelle	5 labs	Dietz, Heather
	BIOL	266	Science	48	Weger, Harold	4 labs	Ross, Terry
	BIOL	275	Science	39	Brigham, R. Mark	3 labs	Grad Students
	BIOL	385	Science	20	Willis, Craig	1 lab	Grad Student
	BIOL	405	Science	7	Ashton, Neil	1 lab	Lintott, Lauri
	BIOL	410	Science	6	Yost, Christopher	1 lab	Dietz, Heather
	BIOL	425	Science	1	Peres-Neto, Pedro	1 lab	Grad Student
	BIOL	455	Science	8	Manzon, Richard		
	BIOL	490AY	Science	24	Lund, Susan		
	BIOL	490AZ	Science	9	Hall, Britt		
	BIOL	499	Science	5	Chapco, William		
	BIOL	835AG	Science	2	Peres-Neto, Pedro	1 lab	Grad Student
<b>200620</b>	BIOL	140	FNUiv	29	Gendron, Fidji	2 labs	Ross, Terry
	BIOL	490BB	Science	2	Brigham, R. Mark		
<b>200630</b>	BIOL	100	Science	340	Weger, Harold	11 labs	Dietz, Heather
	BIOL	100	Off Campus - Weyburn	8	Ziehl, Wendy		
	BIOL	100	Off Campus - La Ronge	14	Carriere, Naomi		
	BIOL	100	FNUiv	23	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	140	SUNTEP	16	MacDonald, John	1 lab	MacDonald, John
	BIOL	140	Luther College	65	Ambrose, Laura	2 labs	Ross, Terry
	BIOL	140	Off Campus-Prince Albert	34	Cannon-Levesque, Patti		
	BIOL	150	Luther College	60	Ambrose, Laura	2 labs	Lintott, Lauri
	BIOL	150	FNUiv	22	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	265	Science	41	Lund, Susan	5 labs	Ross, Terry
	BIOL	276	Science	50	Leavitt, Peter		
	BIOL	288	Science	63	Ashton, Neil	4 labs	Lintott, Lauri
	BIOL	302	Science	31	Yost, Christopher	2 labs	Dietz, Heather
	BIOL	305	Science	29	Ashton, Neil	2 labs	Lintott, Lauri
	BIOL	335	Science	18	Leavitt, Peter	1 lab	Grad Student
	BIOL	366	Science	9	Weger, Harold	1 lab	Harold
	BIOL	367	Luther College	9	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	380	Science	14	Brigham, R. Mark	1 lab	Grad Student
	BIOL	403	Science	12	Wall, Michelle	1 lab	Dietz, Heather
	BIOL	490BA	Science	3	Wissel, Bjoern		
	BIOL	498	Science	4	Brigham, R. Mark		
	BIOL	835AH	Science	2	Wissel, Bjoern		
	BIOL	850AF	Science	4	Manzon, Richard		
<b>200710</b>	BIOL	101	Science	221	Wilson, Scott	8 labs	Ross, Terry
	BIOL	101	Off Campus - Weyburn	6	Ziehl, Wendy	1 lab	Ziehl, Wendy
	BIOL	101	Off Campus - La Ronge	5	Carriere, Naomi	1 lab	Carriere, Naomi
	BIOL	101	FNUiv	21	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus - Meadow L.	10	Beaulieu, Patricia	1 lab	Beaulieu, Patricia
	BIOL	140	Off Campus - La Ronge	11	Murawsky, Vlademir	1 lab	Murawsky, Vlademir
	BIOL	140	Web Delivered	53	Ambrose, Laura		
	BIOL	140	Luther College	106	Ambrose, Laura	3 labs	Ross, Terry
	BIOL	140	French	10	Gendron, Fidji	1 lab	Ross, Terry
	BIOL	140	FNUiv	23	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus-Prince Albert	15	Cannon-Levesque, Patti	1 lab	Patti
	BIOL	140	Off Campus - Saskatoon	23	Das, Shankar	1 lab	Das, Shankar
	BIOL	150	Luther College	42	Ambrose, Laura	2 labs	Lintott, Lauri
	BIOL	205	Science	68	Somers, Christopher	4 labs	Lintott, Lauri

## Appendix V - Undergraduate Course Teaching History

Term	Subject	Course	Location	Course Enrollment	Course Instructor	Number of Labs	Lab Instructor
	BIOL	220	Science	64	Yost, Christopher	5 labs	Dietz, Heather
	BIOL	266	Science	38	Weger, Harold	3 labs	Ross, Terry
	BIOL	275	Science	28	Somers, Christopher	3 labs	Grad Student
	BIOL	385	Science	19	Brigham, R. Mark	1 lab	Grad Student
	BIOL	390	Science	24	Manzon, Richard		
	BIOL	395	Science	14	Manzon, Richard	1 lab	Manzon, Richard
	BIOL	405	Science	7	Ashton, Neil	1 lab	Lintott, Lauri
	BIOL	425	Science	6	Hansen, Malin	1 lab	Hansen, Malin
	BIOL	476	Luther College	13	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	490AU	Science	22	Levett, Paul		
	BIOL	490AZ	Science	11	Hall, Britt		
	BIOL	499	Science	4	Brigham, R. Mark		
	BIOL	835AI	Luther College	1	Vetter, Mary		
200720	BIOL	100	CCE	12	Dunbar, Miranda	1 lab	Dietz, Heather
	BIOL	140	FNU Univ	22	Gendron, Fidji	2 labs	Bellegarde, Jody
200730	BIOL	100	Science	253	Weger, Harold	10 labs	Dietz, Heather
	BIOL	100	CCE	8	Gillam, Erin	1 lab	Dietz, Heather
	BIOL	100	Off Campus - Swift Current	13	Simonson, Kristen	1 lab	Simonson, Kristen
	BIOL	100	Off Campus - Weyburn	8	Ziehl, Wendy	1 lab	Ziehl, Wendy
	BIOL	100	Off Campus - La Ronge	5	Carriere, Naomi	1 lab	Carriere, Naomi
	BIOL	100	FNU Univ	21	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	140	SUNTEP	11	MacDonald, John	1 lab	MacDonald, John
	BIOL	140	Luther - Web Delivered	36	Ambrose, Laura		
	BIOL	140	Luther College	70	Ambrose, Laura	2 labs	Ross, Terry
	BIOL	140	Off Campus - Prince Albert	10	Cannon-Levesque, Patti	1 lab	Patti
	BIOL	140	Off Campus - Meadow Lake	19	Beaulieu, Patricia	1 lab	Beaulieu, Patricia
	BIOL	150	Luther College	59	Ambrose, Laura	1 lab	Lintott, Lauri
	BIOL	150	FNU Univ	16	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	266	Science	56	Weger, Harold	3 labs	Ross, Terry
	BIOL	276	Science	39	Patoine, Alain		
	BIOL	288	Science	62	Manzon, Richard	4 labs	Lintott, Lauri
	BIOL	302	Science	35	Yost, Christopher	3 labs	Dietz, Heather
	BIOL	305	Science	31	Ashton, Neil	2 labs	Lintott, Lauri
	BIOL	335	Science	4	Finlay, Kerri	1 lab	Grad Student
	BIOL	341	Science	20	Chapco, William		
	BIOL	367	Luther College	11	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	375	Science	11	Wilson, Scott		
	BIOL	380	Science	8	Brigham, R. Mark	1 lab	Grad Student
	BIOL	485	Science	13	Davis, Stephen	1 lab	Grad Student
	BIOL	490BA	Science	6	Wissel, Bjoern		
	BIOL	490BC	Science	1	Chapco, William		
	BIOL	498	Science	8	Brigham, R. Mark		
	BIOL	803	Science	12	Weger, Harold		
	BIOL	835AH	Science	3	Wissel, Bjoern		
200810	BIOL	101	Science	182	Wilson, Scott	7 labs	Ross, Terry
	BIOL	101	CCE	16	Rever, Susan	1 lab	Ross, Terry
	BIOL	101	Off Campus - Swift Current	6	Rever, Susan	1 lab	Rever, Susan
	BIOL	101	Off Campus - Weyburn	4	Ziehl, Wendy	1 lab	Ziehl, Wendy
	BIOL	101	Off Campus - La Ronge	4	Carriere, Naomi	1 lab	Carriere, Naomi
	BIOL	101	FNU Univ	21	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus - Iqaluit	12	Forsberg, Nicholas	1 lab	Forsberg, Nicholas
	BIOL	140	Off Campus - La Ronge	9	Carriere, Naomi	1 lab	Carriere, Naomi
	BIOL	140	Luther - Web Delivered	39	Ambrose, Laura		
	BIOL	140	Luther College	110	Hansen, Malin	4 labs	Ross, Terry
	BIOL	140	FNU Univ	22	Hansen, Malin	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus - Saskatoon	11	Das, Shankar	1 lab	Das, Shankar
	BIOL	205	Science	50	Chapco, William	4 labs	Lintott, Lauri
	BIOL	220	Science	53	Yost, Christopher	4 labs	Dietz, Heather
	BIOL	265	Science	37	Lund, Susan	3 labs	Ross, Terry
	BIOL	275	Science	21	Somers, Christopher	2 labs	Grad Student
	BIOL	365	Luther College	12	Vetter, Mary	1 lab	Vetter, Mary

## Appendix V - Undergraduate Course Teaching History

Term	Subject	Course	Location	Course Enrollment	Course Instructor	Number of Labs	Lab Instructor
	BIOL	366	Science	10	Weger, Harold	1 lab	Harold
	BIOL	385	Science	8	Gillam, Erin	1 lab	Grad Student
	BIOL	395	Science	28	Manzon, Richard	2 labs	Manzon, Richard
	BIOL	405	Science	8	Ashton, Neil	1 lab	Lintott, Lauri
	BIOL	410	Science	7	Yost, Christopher	1 lab	Dietz, Heather
	BIOL	490AZ	Science	24	Hall, Britt		
	BIOL	490BD	Science	1	Weger, Harold		
	BIOL	499	Science	8	Brigham, R. Mark		
	BIOL	880AJ	Science	2	Hall, Britt		
200820	BIOL	100	CCE	16	Dunbar, Miranda	1 lab	Dietz, Heather
	BIOL	140	FNU Univ	19	Hart, Catherine	2 labs	Bellegarde, Jody
200830	BIOL	100	Science	288	Weger, Harold	9 labs	Dietz, Heather
	BIOL	100	CCE	22	Gillam, Erin	1 lab	Gillam, Erin
	BIOL	100	Off Campus - Swift Current	12	Rever, Susan	1 lab	Rever, Susan
	BIOL	100	FNU Univ	21	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus - Big River	16	Murawsky, Vlademir	1 lab	Murawsky, Vlademir
	BIOL	140	Battleford	22	Murawsky, Vlademir	1 lab	Murawsky, Vlademir
	BIOL	140	SUNTEP	11	MacDonald, John	1 lab	MacDonald, John
	BIOL	140	Luther College	89	Hansen, Malin	3 labs	Ross, Terry
	BIOL	150	FNU Univ	19	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	265	Science	40	Lund, Susan	4 labs	Ross, Terry
	BIOL	276	Science	41	Leavitt, Peter		
	BIOL	288	Science	68	Manzon, Richard	4 labs	Lintott, Lauri
	BIOL	302	Science	19	Yost, Christopher	2 labs	Dietz, Heather
	BIOL	305	Science	31	Ashton, Neil	2 labs	Lintott, Lauri
	BIOL	335	Science	15	Leavitt, Peter	1 lab	Grad Student
	BIOL	341	Science	22	Wissel, Bjoern		
	BIOL	366	Science	11	Weger, Harold	1 lab	Harold
	BIOL	367	Luther College	8	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	380	Science	7	Brigham, R. Mark	1 lab	Grad Student
	BIOL	498	Science	3	Brigham, R. Mark		
	BIOL	803	Science	7	Weger, Harold		
	BIOL	850AG	Science	1	Yost, Christopher		
200910	BIOL	101	Science	189	Wilson, Scott	7 labs	Ross, Terry
	BIOL	101	CCE	29	Rever, Susan	1 lab	Rever, Susan
	BIOL	101	FNU Univ	23	Gendron, Fidji	1 lab	Bellegarde, Jody
	BIOL	140	Off Campus - Iqaluit	6	Forsberg, Nicholas	1 lab	Forsberg, Nicholas
	BIOL	140	unspecified	17	Forsberg, Nicholas	1 lab	Forsberg, Nicholas
	BIOL	140	Luther College	95	Hansen, Malin	3 labs	Ross, Terry
	BIOL	140	Luther - Taught in French	13	Gendron, Fidji	1 lab	Ross, Terry
	BIOL	140	Luther - Web Delivered	43	Ambrose, Laura		
	BIOL	140	FNU Univ	21	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus - Saskatoon	10	Das, Shankar	1 lab	Das, Shankar
	BIOL	201	Science	13	Brigham, R. Mark		
	BIOL	205	Science	71	Somers, Christopher	3 labs	Lintott, Lauri
	BIOL	220	Science	62	Antonishyn, Nick	4 labs	Dietz, Heather
	BIOL	266	Science	49	Weger, Harold	4 labs	Ross, Terry
	BIOL	275	Science	29	Somers, Christopher	2 labs	Grad Student
	BIOL	385	Science	15	Dunbar, Miranda	1 lab	Grad Student
	BIOL	390	Science	25	Manzon, Richard		
	BIOL	405	Science	16	Ashton, Neil		
	BIOL	476	Luther	10	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	490AU	Science	25	Levett, Paul		
	BIOL	490BE	Science	6	Brigham, R. Mark		
	BIOL	498	Science	1	Brigham, R. Mark		
	BIOL	499	Science	3	Brigham, R. Mark		
	BIOL	825AE	Science	5	Brigham, R. Mark		
200920	BIOL	100	CCE	14	Dunbar, Miranda	1 lab	Dietz, Heather
	BIOL	140	FNU Univ	23	Hart, Catherine	2 labs	Bellegarde, Jody
200930	BIOL	100	Science	321	Weger, Harold	9 labs	Dietz, Heather
	BIOL	100	CCE	19	Foreman, Dallas	1 lab	Dietz, Heather

## Appendix V - Undergraduate Course Teaching History

Term	Subject	Course	Location	Course Enrollment	Course Instructor	Number of Labs	Lab Instructor
	BIOL	100	Off Campus - Swift Current	16	Crouch, Wendy	1 lab	Crouch, Wendy
	BIOL	100	FNUiv	16	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	140	SUNTEP	8	MacDonald, John	1 lab	MacDonald, John
	BIOL	140	Luther College	84	Ambrose, Laura	4 labs	Ross, Terry
	BIOL	140	Off Campus - Prince Albert	23	Lipsit, Scott		
	BIOL	150	FNUiv	11	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	265	Science	63	Finlay, Kerri	4 labs	Ross, Terry
	BIOL	276	Science	53	Leavitt, Peter		
	BIOL	288	Science	62	Manzon, Richard	4 labs	Lintott, Lauri; Erhardt, N
	BIOL	305	Science	29	Ashton, Neil	2 labs	Lintott, Lauri
	BIOL	335	Science	15	Leavitt, Peter	1 lab	Grad Student
	BIOL	366	Science	8	Weger, Harold	1 lab	Harold
	BIOL	367	Luther College	21	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	380	Science	12	Brigham, R. Mark	1 lab	Grad Student
	BIOL	485	Science	8	Davis, Stephen	1 lab	Grad Student
	BIOL	490BA	Science	10	Wissel, Bjoern		
	BIOL	498	Science	3	Yost, Christopher		
	BIOL	499	Science	1	Yost, Christopher		
	BIOL	835AH	Science	5	Wissel, Bjoern		
	BIOL	850AH	Science	1	Yost, Christopher		
201010	BIOL	101	Science	236	Finlay, Kerri	8 labs	Ross, Terry
	BIOL	101	CCE	10	Pinno, Brad	1 lab	Ross, Terry
	BIOL	101	Off Campus - Swift Current	7	Crouch, Wendy	1 lab	Crouch, Wendy
	BIOL	101	FNUiv	21	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus - Iqaluit	7	No record	1 lab	No record
	BIOL	140	Off Campus - Meadow L.	7	Beaulieu, Patricia	1 lab	Beaulieu, Patricia
	BIOL	140	Luther - Web Delivered	51	Ambrose, Laura		
	BIOL	140	Luther College	104	Ambrose, Laura	3 labs	Ross, Terry
	BIOL	140	Luther-taught in French	10	Gendron, Fidji	1 lab	Ross, Terry
	BIOL	140	FNUiv	20	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus - Prince Albert	18	Lipsit, Scott	1 lab	Lipsit, Scott
	BIOL	150	Luther College	25	Ambrose, Laura	2 labs	Lintott, Lauri
	BIOL	201	Science	13	Brigham, R. Mark		
	BIOL	205	Science	70	Somers, Christopher	4 labs	Lintott, Lauri
	BIOL	220	Science	64	Stavriniades, John	4 labs	Dietz, Heather
	BIOL	266	Science	38	Weger, Harold	4 labs	Ross, Terry
	BIOL	275	Science	38	Finlay, Kerri	3 labs	Grad Student
	BIOL	365	Luther College	16	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	405	Science	16	Ashton, Neil		
	BIOL	456	Science	19	Hall, Britt		
	BIOL	490BF	Science	25	Hall, Britt		
	BIOL	498	Science	1	Brigham, R. Mark		
	BIOL	499	Science	3	Brigham, R. Mark		
	BIOL	880AJ	Science	1	Hall, Britt		
201020	BIOL	100	CCE	12	Dunbar, Miranda	1 lab	Erhardt, Nola
	BIOL	140	FNUiv	25	Hart, Catherine	2 labs	Dietz, Heather
	BIOL	140	Off Campus - Saskatoon	54	Das, Shankar	1 lab	Das, Shankar
	BIOL	499	Science	1	Yost, Christopher		
201030	BIOL	100	Science	306	Finlay, Kerri	10 labs	Erhardt, Nola
	BIOL	100	CCE	23	Kilgour, Roslyn	1 lab	Kilgour, Julia
	BIOL	100	Off Campus - Swift Current	14	Crouch, Wendy	1 lab	Crouch, Wendy
	BIOL	100	FNUiv	26	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus - Iqaluit	8	Ryan, Heather	1 lab	Unknown
	BIOL	140	Off Campus - Inlet	5	Ryan, Heather	1 lab	Unknown
	BIOL	140	Off Campus - Pangnirtu	10	Ryan, Heather	1 lab	Unknown
	BIOL	140	Off Campus - Qikiqtarj	6	Ryan, Heather	1 lab	Unknown
	BIOL	140	Off Campus - Dorset	12	Ryan, Heather	1 lab	Unknown
	BIOL	140	SUNTEP	6	MacDonald, John	1 lab	MacDonald, John
	BIOL	140	Luther College	123	Ambrose, Laura	4 labs	Ross, Terry
	BIOL	140	FNUiv	21	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus - Prince Albert	23	Lipsit, Scott		

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Term	Subject	Course	Location	Course Enrollment	Course Instructor	Number of Labs	Lab Instructor
	BIOL	150	Luther College	32	Ambrose, Laura	2 labs	Lintott, Lauri
	BIOL	220	Science	88	Stavrinides, John	5 labs	Dietz, Heather
	BIOL	265	Science	72	Finlay, Kerri	5 labs	Ross, Terry
	BIOL	276	Science	55	Leavitt, Peter		
	BIOL	305	Science	23	Ashton, Neil	2 labs	Lintott, Lauri
	BIOL	335	Science	12	Leavitt, Peter	1 lab	Grad Student
	BIOL	341	Science	25	Wissel, Bjoern		
	BIOL	366	Science	10	Weger, Harold	1 lab	Harold
	BIOL	367	Luther College	10	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	375	Science	8	Wilson, Scott		
	BIOL	490BG	Science	23	Stavrinides, John		
	BIOL	490BJ	Science	1	Yost, Christopher		
	BIOL	498	Science	8	Yost, Christopher		
	BIOL	803	Science	13	Weger, Harold		
	BIOL	880AK	Science	6	Stavrinides, John		
201110	BIOL	101	Science	209	Finlay, Kerri	8 labs	Ross, Terry
	BIOL	101	CCE	24	Bogard, Holly Jayne	1 lab	Bogard, Holly Jayne
	BIOL	101	Off Campus - Swift Current	10	Crouch, Wendy	1 lab	Crouch, Wendy
	BIOL	101	FNU Univ	25	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	140	Luther College	106	Ambrose, Laura	3 labs	Ross, Terry
	BIOL	140	Luther-taught in French	11	Gendron, Fidji	1 lab	Ross, Terry
	BIOL	140	Luther - Web Delivered	45	Ambrose, Laura		
	BIOL	140	Off Campus - Prince Albert	10	Lipsit, Scott	1 lab	Lipsit, Scott
	BIOL	150	FNU Univ	19	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	205	Science	92	Somers, Christopher	4 labs	Lintott, Lauri
	BIOL	223	Science	15	Yost, Christopher		
	BIOL	266	Science	44	Weger, Harold	3 labs	Ross, Terry
	BIOL	275	Science	16	Finlay, Kerri	3 labs	Grad Students
	BIOL	288	Science	50	Manzon, Richard	3 labs	Erhardt, Nola
	BIOL	302	Science	17	Yost, Christopher	2 labs	Dietz, Heather
	BIOL	395	Science	24	Manzon, Richard		
	BIOL	405	Science	15	Ashton, Neil		
	BIOL	425	Science	5	Wilson, Scott		
	BIOL	456	Science	11	Hall, Britt		
	BIOL	490AU	Science	19	Levett, Paul		
	BIOL	490BF	Science	7	Hall, Britt		
	BIOL	490BH	Science	32	Somers, Christopher		
	BIOL	490BL	Science	1	Yost, Christopher		
	BIOL	499	Science	8	Yost, Christopher		
	BIOL	835AK	Science	1	Stavrinides, John		
	BIOL	850AE	Science	2	Yost, Christopher		
201120	BIOL	100	CCE	26	Foreman, Dallas	1 lab	Erhardt, Nola
	BIOL	140	Off Campus - Kugluktuk	3	Ryan, Heather	1 lab	Unknown
	BIOL	140	Off Campus - Baker Lake	8	Ryan, Heather	1 lab	Unknown
	BIOL	140	FNU Univ	25	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus - Prince Albert	7	Unknown	1 lab	Unknown
	BIOL	845AB	Science	1	Somers, Christopher		
	BIOL	880AL	Luther College	1	Vetter, Mary		
201130	BIOL	100	Science	334	Weger, Harold	10 labs	Erhardt, Nola
	BIOL	100	CCE	13	Ziehl, Wendy	1 lab	Ziehl, Wendy
	BIOL	100	Off Campus - Swift Current	25	Crouch, Wendy		Crouch, Wendy
	BIOL	100	FNU Univ	23	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	100	Off Campus - Prince Albert	42	Doolittle, Edward	2 labs	Doolittle, Edward
	BIOL	101	FNU Univ	15	Gendron, Fidji	1 lab	Bellegarde, Jody
	BIOL	110	Science	189	Finlay, Kerri	4 labs	SIAST
	BIOL	110	Science - Saskatoon	146	Belak, Zachery	12 labs	SIAST
	BIOL	140	SUNTEP	7	MacDonald, John	1 lab	MacDonald, John
	BIOL	140	Luther College	129	Ambrose, Laura	4 labs	Ross, Terry
	BIOL	140	FNU Univ	21	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	150	Luther College	36	Ambrose, Laura	2 labs	Lintott, Lauri
	BIOL	220	Science	95	Stavrinides, John	5 labs	Dietz, Heather

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Term	Subject	Course	Location	Course Enrollment	Course Instructor	Number of Labs	Lab Instructor
	BIOL	265	Science	71	Finlay, Kerri	5 labs	Ross, Terry
	BIOL	276	Science	64	Vogt, Richard		
	BIOL	305	Science	22	Ashton, Neil	3 labs	Lintott, Lauri
	BIOL	335	Science	11	Leavitt, Peter	1 lab	Grad Student
	BIOL	366	Science	9	Weger, Harold	1 lab	Harold
	BIOL	367	Luther College	7	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	380	Science	8	Brigham, R. Mark	1 lab	Grad Student
	BIOL	475	Science	9	Wilson, Scott		
	BIOL	485	Science	13	Davis, Stephen	1 lab	Grad Student
	BIOL	490BA	Science	8	Wissel, Bjoern		
	BIOL	490BG	Science	26	Stavrinides, John		
	BIOL	490BM	Science	1	Stavrinides, John		
	BIOL	490BN	Science	2	Somers, Christopher		
	BIOL	498	Science	7	Yost, Christopher		
	BIOL	835AH	Science	3	Wissel, Bjoern		
	BIOL	835AJ	Science	4	Somers, Christopher		
	BIOL	845AB	Science	1	Stavrinides, John		
	BIOL	880AK	Science	4	Somers, Christopher		
201210	BIOL	101	Science	212	Finlay, Kerri	8 labs	Ross, Terry
	BIOL	101	Off Campus - Swift Current	16	Crouch, Wendy	1 lab	Nagy, Shaun
	BIOL	101	FNU Univ	22	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	111	Science	176	Buttigieg, Joseph	4 labs	Hill, Trina
	BIOL	111	Science - Saskatoon	141	Belak, Zachery	12 labs	SIAST
	BIOL	140	Off Campus - Gjoa Haven	7	Ryan, Heather	1 lab	Unknown
	BIOL	140	Luther College	112	Ambrose, Laura	3 labs	Ross, Terry
	BIOL	140	Luther - Web Delivered	45	Ambrose, Laura		
	BIOL	140	Off Campus - Prince Albert	8	Lipsit, Scott	1 lab	Marchand, Joanne
	BIOL	150	FNU Univ	19	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	205	Science	88	Somers, Christopher	3 labs	Lintott, Lauri
	BIOL	223	Science	31	Yost, Christopher		
	BIOL	266	Science	56	Weger, Harold	4 labs	Ross, Terry
	BIOL	275	Science	53	Finlay, Kerri		
	BIOL	288	Science	63	Manzon, Richard	4 labs	Erhardt, Nola
	BIOL	302	Science	23	Yost, Christopher	1 lab	Dietz, Heather
	BIOL	385	Science	17	Brigham, R. Mark	1 lab	Grad Student
	BIOL	390	Science	28	Manzon, Richard		
	BIOL	395	Science	15	Manzon, Richard		
	BIOL	405	Science	7	Ashton, Neil		
	BIOL	476	Luther College	10	Marie	1 lab	Marie
	BIOL	490BF	Science	6	Yost, Christopher		
	BIOL	490BM	Science	2	Stavrinides, John		
	BIOL	490BP	Science	1	Finlay, Kerri		
	BIOL	490BQ	Science	2	Buttigieg, Joseph		
	BIOL	499	Science	7	Yost, Christopher		
	BIOL	820AA	Science	1	Manzon, Richard		
	BIOL	835AK	Science	1	Stavrinides, John		
201220	BIOL	100	CCE	21	Foreman, Dallas	1 lab	Erhardt, Nola
	BIOL	140	Off Campus - Iqaluit	6	Ryan, Heather		
	BIOL	140	Off Campus - Rankin Inlet	1	Ryan, Heather		
	BIOL	140	FNU Univ	23	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	490BM	Science	1	Stavrinides, John		
	BIOL	830AH	Science	1	Ashton, Neil		
	BIOL	835AL	Science	1	Stavrinides, John		
201230	BIOL	100	Science	333	Weger, Harold	11 labs	Erhardt, Nola
	BIOL	100	CCE	13	Cooper, Ryan	1 lab	Erhardt, Nola
	BIOL	101	Off Campus - Swift Current	12	Crouch, Wendy	1 lab	Crouch, Wendy
	BIOL	100	FNU Univ	24	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	100	Off Campus - Prince Albert	30	Belaoussoff, Maria	2 labs	Belaoussoff, Maria
	BIOL	110	Science	176	Finlay, Kerri	8 labs	SIAST
	BIOL	110	Science - Saskatoon	141	Finlay, Kerri	8 labs	SIAST
	BIOL	140	Off Campus - Meadow Lake	19	Snodgrass, James	1 lab	Snodgrass, James

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Term	Subject	Course	Location	Course Enrollment	Course Instructor	Number of Labs	Lab Instructor
	BIOL	140	SUNTEP	11	MacDonald, John	1 lab	MacDonald, John
	BIOL	140	Luther College	140	Ambrose, Laura	4 labs	Ross, Terry
	BIOL	140	Luther-taught in French	17	Gendron, Fidji	1 lab	Ross, Terry
	BIOL	140	FNUiv	24	Ambrose, Laura	2 labs	Bellegarde, Jody
	BIOL	150	Luther College	40	Ambrose, Laura	2 labs	Lintott, Lauri
	BIOL	220	Science	76	Yost, Christopher	3 labs	Dietz, Heather
	BIOL	222	Science	177	Cameron, Andrew		
	BIOL	222	Science - Saskatoon	142	Vanderlinde, Elizabeth		
	BIOL	265	Science	76	Finlay, Kerri; Buttigieg, Jo	5 labs	Ross, Terry
	BIOL	276	Science	61	Leavitt, Peter		
	BIOL	305	Science	29	Ashton, Neil	3 labs	Lintott, Lauri
	BIOL	335	Science	22	Leavitt, Peter	1 lab	Grad Student
	BIOL	341	Science	35	Wissel, Bjoern		
	BIOL	366	Science	8	Weger, Harold	1 lab	Harold
	BIOL	367	Luther College	18	Ranali, Melissa	1 lab	Ranali, Melissa
	BIOL	375	Science	15	Steinaker, Diego		
	BIOL	380	Science	16	Brigham, R. Mark	1 lab	Grad Student
	BIOL	396	Science	1	Buttigieg, Joseph		
	BIOL	396	Science	1	Weger, Harold		
	BIOL	410	Science	12	Yost, Christopher		
	BIOL	490BL	Science	1	Yost, Christopher		
	BIOL	490BM	Science	3	Stavrinides, John		
	BIOL	498	Science	8	Yost, Christopher		
	BIOL	803	Science	8	Hall, Britt		
	BIOL	835AK	Science	1	Stavrinides, John		
201310	BIOL	101	Science	225	Finlay, Kerri	8 labs	Ross, Terry
	BIOL	101	CCE	23	Cooper, Ryan	1 lab	Ross, Terry
	BIOL	101	Off Campus - Swift Current	8	Crouch, Wendy	1 lab	Crouch, Wendy
	BIOL	101	FNUiv	22	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	101	FNUiv - Web Delivered	10	Gendron, Fidji	1 lab	Bellegarde, Jody
	BIOL	111	Science	183	Buttigieg, Joseph	4 labs	SIAST
	BIOL	111	Science - Saskatoon	139	Buttigieg, Joseph	12 labs	SIAST
	BIOL	140	Off Campus - Iqaluit	10	Ryan, Heather	1 lab	Unknown
	BIOL	140	Luther College	120	Ambrose, Laura	4 labs	Ross, Terry
	BIOL	140	Luther - Web Delivered	34	Ambrose, Laura		
	BIOL	150	FNUiv	10	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	205	Science	87	Somers, Christopher	4 labs	Lintott, Lauri
	BIOL	223	Science	31	Yost, Christopher		
	BIOL	266	Science	48	Weger, Harold	3 labs	Ross, Terry
	BIOL	275	Science	33	Finlay, Kerri		
	BIOL	288	Science	63	Manzon, Richard	4 labs	Erhardt, Nola
	BIOL	385	Science	11	Brigham, R. Mark	1 lab	Grad Student
	BIOL	390	Science	20	Manzon, Richard		
	BIOL	405	Science	7	Ashton, Neil		
	BIOL	456	Science	12	Hall, Britt		
	BIOL	457	Science	10	Hall, Britt		
	BIOL	490AU	Science	22	Alexander, David		
	BIOL	490BG	Science	14	Stavrinides, John		
	BIOL	490BH	Science	19	Somers, Christopher		
	BIOL	490BO	Science	3	Stavrinides, John		
	BIOL	490BR	Science	37	Finlay, Kerri		
	BIOL	499	Science	8	Yost, Christopher		
	BIOL	835	Science	1	Brigham, R. Mark	1 lab	Grad Student
	BIOL	880AJ	Science	1	Hall, Britt		
201320	BIOL	100	CCE	26	Baerwald, Brandon	1 lab	Erhardt, Nola
	BIOL	140	Off Campus - Prince Albert	19	Lipsit, Scott	1 lab	Lanoie, Michelle
	BIOL	140	Off Campus-Black Lake	13	Ziegler, Corey	1 lab	Ziegler, Corey
	BIOL	140	FNUiv	23	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	396	Science	1	Stavrinides, John		
	BIOL	490BM	Science	1	Stavrinides, John		
	BIOL	490BO	Science	1	Stavrinides, John		

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Term	Subject	Course	Location	Course Enrollment	Course Instructor	Number of Labs	Lab Instructor
<b>201330</b>	BIOL	100	Science	346	Weger, Harold	10 labs	Erhardt, Nola
	BIOL	100	CCE	26	Cooper, Ryan	1 lab	Erhardt, Nola
	BIOL	100	Off Campus - Swift Current	29	Crouch, Wendy	1 lab	Crouch, Wendy
	BIOL	100	FNUiv	21	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	100	Off Campus - Prince Albert	28	Belaoussoff, Maria	2 labs	Belaoussoff, Maria
	BIOL	110	Regina	168	Finlay, Kerri	16 labs	SIAST
	BIOL	110	Saskatoon/Kelsey	143	Finlay, Kerri	12 labs	SIAST
	BIOL	140	SUNTEP	8	MacDonald, John	1 lab	MacDonald, John
	BIOL	140	Luther College	112	Ambrose, Laura	4 labs	Ross, Terry
	BIOL	140	Luther - Taught in French	16	Gendron, Fidji	1 lab	Ross, Terry
	BIOL	140	FNUiv	18	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	140	Off Campus - Ft Qu'Appelle	20	Lipoth, Sarah	2 labs	Lipoth, Sarah
	BIOL	150	Luther College	29	Vetter, Mary	2 labs	Lintott, Lauri
	BIOL	220	Science	83	Yost, Christopher	3 labs	Dietz, Heather
	BIOL	222	Science	185	Cameron, Andrew		
	BIOL	222	Science - Saskatoon	136	Cameron, Andrew		
	BIOL	265	Science	65	Finlay, Kerri; Buttigieg, Jo	5 labs	Ross, Terry
	BIOL	275	Science	27	Finlay, Kerri	2 labs	Grad Students
	BIOL	276	Science	55	Hall, Britt		
	BIOL	302	Science	24	Yost, Christopher	2 labs	Grad Student
	BIOL	305	Science	11	Ashton, Neil	2 labs	Lintott, Lauri
	BIOL	335	Science	11	Leavitt, Peter	1 lab	Grad Student
	BIOL	366	Science	4	Weger, Harold	1 lab	Weger, Harold
	BIOL	367	Luther College	11	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	380	Science	4	Brigham, R. Mark	1 lab	Grad Student
	BIOL	395	Science	17	Manzon, Richard		
	BIOL	396	Science	2	Brigham, R. Mark		
	BIOL	396	Science	1	Yost, Christopher		
	BIOL	396	Science	1	Buttigieg, Joseph		
	BIOL	475	Science	8	Wilson, Scott		
	BIOL	490BE	Science	1	Brigham, R. Mark		
	BIOL	490BM	Science	1	Stavriniades, John		
	BIOL	490BT	Science	18	Buttigieg, Joseph		
	BIOL	498	Science	3	Yost, Christopher		
	BIOL	803	Science	8	Hall, Britt		
	BIOL	880A	Science	3	Buttigieg, Joseph		
<b>201410</b>	BIOL	100	Off Campus - Prince Albert	9	Belaoussoff, Maria	1 lab	Belaoussoff, Maria
	BIOL	101	Science	190	Finlay, Kerri	7 labs	Dietz, Heather
	BIOL	101	CCE	7	Jacobsen, Marianne	1 lab	Dietz, Heather
	BIOL	101	Off Campus - Swift Current	19	Bainard, Jillian	1 lab	Bainard, Jillian
	BIOL	101	FNUiv	22	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	101	FNUiv - Web Delivered	10	Gendron, Fidji	1 lab	Bellegarde, Jody
	BIOL	111	Science	169	Buttigieg, Joseph	4 labs	SIAST
	BIOL	111	Science - Saskatoon	145	Buttigieg, Joseph	12 labs	SIAST
	BIOL	140	Off Campus - Iqualit	5	Mulholland, Valerie	1 lab	Mulholland, Valerie
	BIOL	140	Off Campus - Arviat	13	Mulholland, Valerie	1 lab	Mulholland, Valerie
	BIOL	140	Luther College	101	Ambrose, Laura	4 labs	Dietz, Heather
	BIOL	140	Luther - Web Delivered	51	Ambrose, Laura		
	BIOL	140	Off Campus - Prince Albert	22	Lipsit, Scott	1 lab	Lanoie, Michelle
	BIOL	140	Off Campus - Onion Lake	16	Schroh, Teagan	1 lab	Schroh, Teagan
	BIOL	140	Off Campus - Piapot	20	Ambrose, Laura	1 lab	Ambrose, Laura
	BIOL	150	FNUiv	18	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	205	Science	121	Somers, Christopher		
	BIOL	266	Science	56	Weger, Harold	4 labs	Lintott, Lauri
	BIOL	288	Science	66	Manzon, Richard	4 labs	Erhardt, Nola
	BIOL	365	Luther College	12	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	385	Science	14	Brigham, R. Mark	1 lab	Grad Student
	BIOL	390	Science	20	Manzon, Richard		
	BIOL	396	Science	1	Weger, Harold		
	BIOL	396	Science	1	Somers, Christopher		
	BIOL	396	Science	2	Buttigieg, Joseph		

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Term	Subject	Course	Location	Course Enrollment	Course Instructor	Number of Labs	Lab Instructor
	BIOL	402	Science	30	Stavrinides, John		
	BIOL	456	Science	8	Hall, Britt		
	BIOL	457	Science	11	Hall, Britt		
	BIOL	490BE	Science	6	Brigham, R. Mark		
	BIOL	490BG	Science	13	Stavrinides, John		
	BIOL	490BM	Science	2	Stavrinides, John		
	BIOL	490BO	Science	1	Stavrinides, John		
	BIOL	499	Science	3	Yost, Christopher		
	BIOL	820	Science	1	Manzon, Richard		
<b>201420</b>	BIOL	100	CCE	35	Baerwald, Brandon	1 lab	Erhardt, Nola
	BIOL	140	Off Campus - Nipawin	25	Cross, Kimberly		
	BIOL	140	Off Campus - Rankin Inlet	8	Mulholland, Valerie		
	BIOL	140	Off Campus - Prince Albert	4	Belaoussoff, Maria	1 lab	Lanoie, Michelle
	BIOL	140	FNU Univ	26	Hart, Catherine	2 labs	Bellegarde, Jody
	BIOL	222	Science	101	Cameron, Andrew		
	BIOL	222	Science - Saskatoon	96	Cameron, Andrew		
	BIOL	222	Science - Swift Current	10	Cameron, Andrew		
	BIOL	396	Science	1	Brigham, R. Mark		
	BIOL	830AG	Science	1	Yost, Christopher		
	BIOL	835AK	Science	1	Cameron, Andrew		
<b>201430</b>	BIOL	100	Science	322	Weger, Harold	10 labs	Erhardt, Nola
	BIOL	100	CCE	41	Cooper, Ryan	2 labs	Erhardt, Nola
	BIOL	100	Off Campus - Swift Current	17	Bainard, Jillian	1 lab	Nagy, Shaun
	BIOL	100	FNU Univ	23	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	100	Off Campus - Prince Albert	2	Belaoussoff, Maria	2 labs	Belaoussoff, Maria
	BIOL	110	Science	170	Finlay, Kerri		
	BIOL	110	Science - Saskatoon	146	Finlay, Kerri		
	BIOL	140	Off Campus - Toloyoak	8	Pittman, Ronald		
	BIOL	140	SUNTEP	10	MacDonald, John	1 lab	MacDonald, John
	BIOL	140	Luther College	87	Ambrose, Laura	4 labs	Dietz, Heather
	BIOL	140	Luther-taught in French	14	Gendron, Fidji	1 lab	Dietz, Heather
	BIOL	140	FNU Univ	19	Hansen, Malin	2 labs	Bellegarde, Jody
	BIOL	150	Luther College	34	Vetter, Mary	2 labs	Jacobsen, Marianne
	BIOL	220	Science	60	Yost, Christopher	3 labs	Dietz, Heather
	BIOL	222	Science	67	Cameron, Andrew		
	BIOL	222	Science - Saskatoon	35	Cameron, Andrew		
	BIOL	223	Science	35	Yost, Christopher		
	BIOL	265	Science	58	Finlay, Kerri; Buttigieg, Jo	4 labs	Grad Students
	BIOL	275	Science	33	Finlay, Kerri	2 labs	Grad Students
	BIOL	276	Science	31	Hall, Britt		
	BIOL	302	Science	35	Yost, Christopher		
	BIOL	305	Science	22	Ashton, Neil	3 labs	Lintott, Lauri
	BIOL	335	Science	13	Leavitt, Peter	1 lab	Grad Student
	BIOL	341	Luther College	21	Wissel, Bjoern		
	BIOL	366	Science	2	Weger, Harold	1 lab	Weger, Harold
	BIOL	367	Luther College	7	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	380	Science	4	Brigham, R. Mark	1 lab	Grad Student
	BIOL	395	Science	22	Manzon, Richard		
	BIOL	396	Science	2	Cameron, Andrew		
	BIOL	396	Science	1	Buttigieg, Joseph		
	BIOL	490BT	Science	18	Buttigieg, Joseph		
	BIOL	498	Science	2	Yost, Christopher		
	BIOL	803	Science	9	Hall, Britt		
	BIOL	830AG	Science	1	Cameron, Andrew		
<b>201510</b>	BIOL	100	Off Campus - Prince Albert	14	Greenwood, Hamilton	2 labs	Meckelborg, Shawn
	BIOL	101	Science	199	Finlay, Kerri	8 labs	Dietz, Heather
	BIOL	101	CCE	13	Jacobsen, Marianne	1 lab	Dietz, Heather
	BIOL	101	Off Campus - Swift Current	8	Bainard, Jillian	1 lab	Nagy, Shaun
	BIOL	101	FNU Univ	26	Gendron, Fidji	2 labs	Bellegarde, Jody
	BIOL	101	Luther - Web Delivered	11	Gendron, Fidji	1 lab	Bellegarde, Jody
	BIOL	111	Science	164	Buttigieg, Joseph		

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Term	Subject	Course	Location	Course Enrollment	Course Instructor	Number of Labs	Lab Instructor
	BIOL	111	Science - Saskatoon	137	Buttigieg, Joseph		
	BIOL	140	Off Campus-Iqaluit	6	Pittman, Ronald	1 lab	Pittman, Ronald
	BIOL	140	Luther College	119	Ambrose, Laura	4 labs	Dietz, Heather
	BIOL	140	Luther - Web Delivered	47	Ambrose, Laura		
	BIOL	140	Off Campus-Prince Albert	19	Lipsit, Scott	1 lab	Meckelborg, Shawn
	BIOL	150	FNUiv	9	Hansen, Malin	2 labs	Bellegarde, Jody
	BIOL	205	Science	81	Somers, Christopher		
	BIOL	266	Science	47	Weger, Harold	4 labs	Jacobsen, Marianne
	BIOL	288	Science	56	Manzon, Richard	3 labs	Erhardt, Nola
	BIOL	316	Science	23	Somers, Christopher		
	BIOL	396	Science	1	Leavitt, Peter		
	BIOL	396	Science	1	Yost, Christopher		
	BIOL	396	Science	1	Cameron, Andrew		
	BIOL	402	Science	40	Stavrinides, John		
	BIOL	405	Science	19	Cameron, Andrew		
	BIOL	406	Science	7	Stavrinides, John		
	BIOL	456	Science	5	Hall, Britt		
	BIOL	457	Science	16	Hall, Britt		
	BIOL	490BF	Science	1	Yost, Christopher		
	BIOL	490BU	Luther College	16	Sheffield, Cory	1 lab	Grad Student
	BIOL	490B	Science	2	Vanderwel, Mark		
	BIOL	498	Science	1	Yost, Christopher		
	BIOL	499	Science	2	Yost, Christopher		
	BIOL	835A	Science	5	Vanderwel, Mark		
	BIOL	880AK	Science	2	Stavrinides, John		
<b>201520</b>	BIOL	100	CCE	41	Baerwald, Brandon	1 lab	Erhardt, Nola
	BIOL	140	Off Campus - Meadow Lake	26	Beaulieu, Patricia		
	BIOL	140	FNUiv	20	Hansen, Malin	2 labs	Bellegarde, Jody
	BIOL	490BM	Science	2	Stavrinides, John		
	BIOL	490BO	Science	1	Stavrinides, John		
	BIOL	498	Science	1	Yost, Christopher		
<b>201530</b>	BIOL	100	Science	350	Weger, Harold	9 labs	Erhardt, Nola
	BIOL	100	CCE	30	Cooper, Ryan	1 lab	Erhardt, Nola
	BIOL	100	Off Campus - Swift Current	10	Bainard, Jillian	1 lab	Nagy, Shaun
	BIOL	100	FNUiv	31	Gendron, Fidji	3 labs	Bellegarde, Jody
	BIOL	100	Off Campus - Prince Albert	15	Lipsit, Scott	2 labs	Meckelborg, Shawn
	BIOL	110	Science	183	Finlay, Kerri		
	BIOL	110	Science - Saskatoon	146	Finlay, Kerri		
	BIOL	110	Science - Swift Current	8	Finlay, Kerri		
	BIOL	140	Off Campus - Yorkton	7	Lipoth, Sarah	1 lab	Lipoth, Sarah
	BIOL	140	SUNTEP	6	MacDonald, John	1 lab	MacDonald, John
	BIOL	140	Luther College	103	Ambrose, Laura	4 labs	Dietz, Heather
	BIOL	140	Luther-taught in French	16	Gendron, Fidji	1 lab	Dietz, Heather
	BIOL	140	Off Campus-Yorkton	22	Lipoth, Sarah	1 lab	Lipoth, Sarah
	BIOL	150	Luther College	42	Vetter, Mary	2 labs	Lintott, Lauri
	BIOL	220	Science	85	Yost, Christopher	3 labs	Dietz, Heather
	BIOL	222	Science	168	Cameron, Andrew		
	BIOL	222	Science - Saskatoon	151	Cameron, Andrew		
	BIOL	222	Science - Swift Current	7	Cameron, Andrew		
	BIOL	223	Science	60	Yost, Christopher		
	BIOL	265	Science	67	Finlay, Kerri; Buttigieg, Jo	4 labs	Hart, Mel
	BIOL	275	Science	23	Brigham, R. Mark	2 labs	Grad Students
	BIOL	276	Science	39	Hall, Britt		
	BIOL	302	Science	32	Yost, Christopher		
	BIOL	305	Science	13	Ashton, Neil	2 labs	Lintott, Lauri
	BIOL	366	Science	5	Weger, Harold	1 lab	Weger, Harold
	BIOL	367	Luther College	12	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	380	Science	10	Brigham, R. Mark	1 lab	Brigham, R. Mark
	BIOL	395	Science	22	Manzon, Richard		
	BIOL	396	Science	1	Leavitt, Peter		
	BIOL	396	Science	2	Somers, Christopher		

## Appendix V - Undergraduate Course Teaching History

Term	Subject	Course	Location	Course Enrollment	Course Instructor	Number of Labs	Lab Instructor
	BIOL	396	Science	1	Buttigieg, Joseph		
	BIOL	463	Luther College	9	Wissel, Bjoern		
	BIOL	490BM	Science	3	Stavrinides, John		
	BIOL	490BO	Science	1	Stavrinides, John		
	BIOL	490BT	Science	10	Buttigieg, Joseph		
	BIOL	498	Science	5	Yost, Christopher		
	BIOL	499	Science	2	Yost, Christopher		
	BIOL	803	Science	9	Hall, Britt		
	BIOL	835	Science	3	Wissel, Bjoern		
<b>201610</b>	BIOL	100	FNU Univ	32	Gendron, Fidji	3 labs	Hansen, Malin
	BIOL	101	Science	221	Stavrinides, John	7 labs	Dietz, Heather
	BIOL	101	CCE	31	Jacobsen, Marianne	1 lab	Dietz, Heather
	BIOL	101	Off Campus - Swift Current	8	Bainard, Jillian	1 lab	Nagy, Shaun
	BIOL	101	FNU Univ	22	Gendron, Fidji	2 labs	Hansen, Malin
	BIOL	101	FNU Univ - Web Delivered	16	Gendron, Fidji	1 lab	Hansen, Malin
	BIOL	111	Science	175	Buttigieg, Joseph		
	BIOL	111	Science - Saskatoon	148	Buttigieg, Joseph		
	BIOL	111	Science - Swift Current	8	Buttigieg, Joseph		
	BIOL	140	Off Campus - Iqualit	7	Kalaraq, Marjorie	1 lab	Kalaraq, Marjorie
	BIOL	140	Off Campus - Pond Inlet	9	Pittman, Ronald	1 lab	Pittman, Ronald
	BIOL	140	Off Campus - Clyde River	10	Pittman, Ronald	1 lab	Pittman, Ronald
	BIOL	140	Off Campus - Sanikilua	8	McKeown, Carissa	1 lab	McKeown, Carissa
	BIOL	140	Luther College	103	Ambrose, Laura	4 labs	Heather
	BIOL	140	Luther - Web Delivered	59	Ambrose, Laura	1 lab	Ambrose, Laura
	BIOL	140	Off Campus - FNPAI	28	Lipsit, Scott	2 labs	Meckelborg, Shawn
	BIOL	205	Science	85	Somers, Christopher	4 labs	Lintott, Lauri
	BIOL	266	Science	52	Weger, Harold	4 labs	Lintott, Lauri
	BIOL	288	Science	77	Manzon, Richard	4 labs	Erhardt, Nola
	BIOL	365	Luther College	16	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	376	Science	8	Vanderwel, Mark		
	BIOL	385	Science	16	Brigham, R. Mark	1 lab	Grad Student
	BIOL	390	Science	32	Manzon, Richard		
	BIOL	396	Science	1	Brigham, R. Mark		
	BIOL	396	Science	1	Yost, Christopher		
	BIOL	396	Science	1	Wissel, Bjoern		
	BIOL	396	Science	1	Buttigieg, Joseph		
	BIOL	396	Science	1	Vanderwel, Mark		
	BIOL	402	Science	33	Stavrinides, John		
	BIOL	406	Science	5	Stavrinides, John		
	BIOL	410	Science	11	Cameron, Andrew		
	BIOL	490BM	Science	1	Stavrinides, John		
	BIOL	490BO	Science	1	Stavrinides, John		
	BIOL	490BW	Science	9	Simpson, Gavin	1 lab	Simpson, Gavin
	BIOL	490BX	Science	1	Hall, Britt		
	BIOL	490BY	Science	1	Leavitt, Peter		
	BIOL	499	Science	5	Yost, Christopher		
	BIOL	835AJ	Science	2	Somers, Christopher		
	BIOL	835A	Science	7	Vanderwel, Mark	1 lab	Simpson, Gavin
	BIOL	880AK	Science	4	Stavrinides, John		
<b>201620</b>	BIOL	100	CCE	33	Baerwald, Brandon	1 lab	Erhardt, Nola
	BIOL	140	Off Campus -Cape Dorset	6	McKeown, Carissa	1 lab	McKeown, Carissa
	BIOL	140	FNU Univ	32	Hansen, Malin	3 labs	Bellegarde, Jody
	BIOL	396	Science	1	Stavrinides, John		
	BIOL	396	Science	1	Manzon, Richard		
	BIOL	396	Science	1	Cameron, Andrew		
	BIOL	396	Science	1	Stavrinides, John		
	BIOL	490BM	Science	1	Stavrinides, John		
	BIOL	490BO	Science	1	Stavrinides, John		
	BIOL	490BX	Science	1	Hall, Britt		
<b>201630</b>	BIOL	100	Science	364	Weger, Harold	10 labs	Erhardt, Nola
	BIOL	100	CCE	33	Cooper, Ryan	1 lab	Erhardt, Nola

## Appendix V - Undergraduate Course Teaching History

Term	Subject	Course	Location	Course Enrollment	Course Instructor	Number of Labs	Lab Instructor
	BIOL	100	Off Campus - Swift Current	26	Bainard, Jillian	2 labs	Bainard, Jillian
	BIOL	100	FNUiv	33	Gendron, Fidji	3 labs	Bellegarde, Jody
	BIOL	110	Science	168	Finlay, Kerri		
	BIOL	110	Science - Saskatoon	155	Finlay, Kerri		
	BIOL	110	Science - Swift Current	8	Finlay, Kerri		
	BIOL	140	SUNTEP	5	MacDonald, John	1 lab	MacDonald, John
	BIOL	140	Luther College	83	Ambrose, Laura	3 labs	Hart, Mel
	BIOL	140	Luther-taught in French	19	Gendron, Fidji	1 lab	Hart, Mel
	BIOL	150	Luther College	43	Vetter, Mary	2 labs	Dietz, Heather
	BIOL	222	Science	162	Cameron, Andrew		
	BIOL	222	Science - Saskatoon	140	Cameron, Andrew		
	BIOL	222	Science - Swift Current	8	Cameron, Andrew		
	BIOL	222	Science (Pre-Professional)	35	Cameron, Andrew		
	BIOL	223	Science	100	Yost, Christopher		
	BIOL	266	Science	50	Weger, Harold	3 labs	Lintott, Lauri
	BIOL	275	Science	51	Vanderwel, Mark	3 labs	Hart, Mel
	BIOL	276	Science	48	Leavitt, Peter		
	BIOL	302	Science	18	Yost, Christopher	1 lab	Dietz, Heather
	BIOL	305	Science	29	Ashton, Neil	2 labs	Lintott, Lauri
	BIOL	310	Science	8	Yost, Christopher	1 lab	Dietz, Heather
	BIOL	335	Science	14	Leavitt, Peter	1 lab	Grad Student
	BIOL	341	Luther College	24	Wissel, Bjoern		
	BIOL	356	Science	18	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	367	Luther College	12	Vetter, Mary	1 lab	Vetter, Mary
	BIOL	380	Science	9	Brigham, R. Mark	1 lab	Brigham, R. Mark
	BIOL	396	FNUiv	1	Gendron, Fidji		
	BIOL	407	Science	18	Buttigieg, Joseph		
	BIOL	490BM	Science	1	Cameron, Andrew		
	BIOL	490BY	Science	1	Finlay, Kerri		
	BIOL	498	Science	11	Yost, Christopher		
	BIOL	803	Science	8	Hall, Britt		
	BIOL	880A	Science	1	Buttigieg, Joseph		

Appendix VI - Composition of Biology Undergraduate Students (data from the Office of Resource Planning)

Census Date Students, Programs by Majors & Minors for **EBIO MBIO BI&S BIBC BIGE C&MB E&EB ENVB BIOL**

LEVEL	MajMin Level	MajMinLevelDetail	Degr Code 1	Program	Major Code 1	Fall 2010	Fall 2011	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016
						201030	201130	201230	201330	201430	201530	201630
UG	Major	MJ1 First Major (BI&S)	BSC	SCBSC Bachelor of Science	BI&S			1	2	2	1	1
				SCQUAL Science Qualifying	BI&S					1	1	
		MJ1 First Major (BIBC)	BSC	SCBSC Bachelor of Science	BIBC	6	3	1	3	4	3	3
		MJ1 First Major (BIGE)	BSC	SCBSC Bachelor of Science	BIGE	1	2	3	2	1		
				SCBSCC Bachelor of Science (Co-op)	BIGE						1	
		MJ1 First Major (BIOL)	BA	ARBA Bachelor of Arts	BIOL	1						
				SCBSC Bachelor of Science	BIOL	127	144	170	139	120	147	156
				SCBSCC Bachelor of Science (Co-op)	BIOL	1	8	8	5	6	3	3
				SCQUAL Science Qualifying	BIOL				5	15	16	18
		BSCHON	BSCHON	SCBSCHON Bachelor of Science Honours	BIOL	14	13	10	6	2	7	8
				SCBSCHONC B of Science Honours (Co-op)	BIOL						1	1
		MJ1 First Major (EBIO)	BED	EDSEC BEd Secondary	EBIO	20	24	18	20	15	14	21
				EDSECAD BEd Secondary (after degree)	EBIO	3	3	2	8	9	10	8
		MJ1 First Major (ENVB)	BSC	SCBSCENVBIO BSc Environmental Biology	ENVB	12	17	17	11	10	10	8
				SCBSCHONC B of Science Honours (Co-op)	ENVB	2	1	1	1			1
		MJ2 Added Major (BIOL)	BSC	SCBSC Bachelor of Science	PHYS	1	1	1				
		<b>Total</b>				188	216	232	202	185	214	228
Minor	Minor	MN1 Added Minor (BIOL)	BA	ARBA Bachelor of Arts	ANTH					1	1	
					INDG	1						
					PSYC	1	2					
				SOC							1	
		BAHON	ARBAC	ARBAC Bachelor of Arts (Co-op)	PSYC							1
				ARBAHON Bachelor of Arts Honours	PSYC					1		
			BSCHON	ARBAHONC Bachelor of Arts Honours Co-op	PSYC				1			
				SCBSC Bachelor of Science	CHEM	1				1	1	1
		BSCHON	SCBSCHON	CS			1	2				
				GEOL		1	1	1				
			SCBSCHONC B of Science Honours (Co-op)	PSYC						1	3	
				GEOG					1			
		MN1 Added Minor (EBIO)	BACED	SCBSCHONC B of Science Honours (Co-op)	CHEM						1	
		MN1 Added Minor (EBIO)	BACED	EDBACSEAD Bac en éduc sec (après dipl)	DFLL			1	1			

Appendix VI - Composition of Biology Undergraduate Students (data from the Office of Resource Planning)

Census Date Students, Programs by Majors & Minors for EBIO MBIO BI&S BIBC BIGE C&MB E&EB ENVB BIOL

LEVEL	MajMin Level	MajMinLevelDetail	Degr Code 1	Program	Major Code 1	Fall 2010	Fall 2011	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016
						201030	201130	201230	201330	201430	201530	201630
UG	Minor	MN1 Added Minor (EBIO)	BACED	EDBACSEC Bac en éduc sec	DFLL				1	1	1	1
				EDBACSECBA Combine Bac Ed Sec/BA French	DFLL							1
			BED	EDSEC BEd Secondary	ECHM	2	2	3	4	2	2	1
					EENG	4	5	3	2	4	2	3
					EHE	1	1	1				1
					EMTH	1		1	1	1	2	
					EPE		5	2		2	1	2
					ESST		2	2		3	1	1
			BEDINS	EDBEDINSAD BEd Sec Indig Educ (After Deg)	ESST						1	1
			BMUSED	FABMUSED Bachelor of Music Education	EMUS			1		1	1	1
		MN2 Added Minor (EBIO)	BED	EDSEC BEd Secondary	EPE		1	1	1	1		
		<b>Total</b>				9	19	19	15	18	16	17
GR	Major	MJ1 First Major (BIOL)	MSC	GSCMSBIOLM MSc Biology Thesis	BIOL	22	25	22	20	29	29	29
			PHD	GSCPHBIOLD1 PhD BIOL Thesis Post Bach	BIOL	4	5	2	3	2	2	2
				GSCPHBIOLD2 PhD Biology Thesis Post-Mast	BIOL	6	7	8	11	10	12	13
		<b>Total</b>				32	37	32	34	41	43	44
<b>Grand Total</b>						229	272	283	251	244	273	289

CensusDate Students **MJ&MN3**, Oct. 2016, University of Regina Office of Resource Planning, orp@uregina.ca

URegina FB Convocations of Majors & Minors for BIOL - Biology  
codes: EBIO MBIO BI&S BIBC BIGE C&MB E&EB ENVB BIOL

Appendix VII - Undergraduate Convocations (data from the Office of Resource Planning)

MajMin Level	Conv Level	MajMinLevelDetail	PROG_DESC	Conv Calendar Year													Grand Total	
				2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
<b>Major</b>	Grad	MJ1 First Major (BIOL)	~Doctor of Philosophy	1	6													7
			~Master of Science	1	3													4
			MSc Biology Thesis			4	2	3	2	4	8	3	8	10	2	8	61	
			Phd BIOL Thesis Post Bach				1						3	1	1	1	7	
			PhD Biology Thesis Post-Mast			1		2			1	1	1		2		8	
			<b>Total</b>	2	9	1	4	5	3	2	4	9	4	12	11	5	9	87
<b>Under Grad</b>	MJ1 First Major (BI&S)	Bachelor of Science	1													1		2
		MJ1 First Major (BIBC)	Bachelor of Science					2	1							1		4
	MJ1 First Major (BIGE)	Bachelor of Science	2		1	1	1							1			6	
		Bachelor of Science (Co-op)														1	1	
		MJ1 First Major (BIOL)	B of Science Honours (Co-op)										1			1	2	
	MJ1 First Major (EBIO)	Bachelor of Science	17	14	16	19	21	25	26	21	21	17	20	30	23	20	24	314
		Bachelor of Science (Co-op)											3	2	1	2	1	9
		Bachelor of Science Honours	3	4	1	7	5	3	6	5	3	6	5	7	2	5	64	
	MJ1 First Major (ENVB)	BEd Secondary	3		4	2	2	2	2	4	2	1	6	6	4	4	1	43
		BEd Secondary (after degree)	8	5	4	5	3	3	3	1	1	2	1	1	5	2	2	44
	MJ1 First Major (ENVB)	BSc Environmental Biology	1	4	3	4	6	6	7	6	5	6	9	7	2	3	69	
		BSc Hons Environmental Biology									1			1			2	
	<b>Total</b>		34	24	30	37	36	41	44	38	33	33	42	55	40	35	38	560
	<b>Total</b>		36	33	31	41	41	44	46	42	42	37	54	66	45	44	45	647
<b>Minor</b>	Under Grad	MN1 Added Minor (BIOL)	B of Science Honours (Co-op)						1							1	2	
			Bachelor of Arts	2	1		2	1	1			2		3	2		14	
			Bachelor of Arts Honours	1	1				1	1		1					5	
			Bachelor of Science	2	2	1	1	1		5	1	1		1	1	2	1	19
			Bachelor of Science (Co-op)		1		1										2	
			Bachelor of Science Honours	1		2		4							1	2	10	
	MN1 Added Minor (EBIO)	~BEd Sec (Ind Ed After Degree)							1								1	
		~BEd Sec (Indian Education)							1								1	
		Bac en éduc sec									1						1	
		Bac en éduc sec (après dipl)												1			1	
		BEd Secondary	5	2	3	1	1	3	1			2		2	1	3	1	25
		BEd Secondary (after degree)	1	1		1		1	1	1	1	2					8	
		Combined BEd Sec/BA								1							1	
		MN2 Added Minor (BIOL)	Bachelor of Science	1											1		2	
	MN2 Added Minor (EBIO)	BEd Secondary													1		1	
		<b>Total</b>	13	8	6	6	7	8	9	3	7	2	4	4	3	8	5	93

MajMin Level	Conv Level	MajMinLevelDetail	PROG_DESC	Conv Calendar Year													Grand Total		
				2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015		
Minor	Total			13	8	6	6	7	8	9	3	7	2	4	4	3	8	5	93
				49	41	37	47	48	52	55	45	49	39	58	70	48	52	50	740

FB Convocations ConvMJ&MN2, Nov. 2015, URegina Office of Resource Planning

## Appendix VIII – Finance Details for 2015-16

Period Apr-2016 (Year End) | Budget Apr-2016 YTD Adjusted Budget | Chart = U | Fund = 10000 General  
Operating | Orgn = 2555 Biology

Acct	Title	Apr-2016 Month Actual	Apr-2016 YTD Actual	O/S Commitments	YTD Total Activity	Apr-2016 YTD Adjusted Budget	Budget Available	Budget Fav/Unfav
<b>Academic Salaries</b>								
6012	Sessionals	0.00	351.36	0.00	351.36	0.00	-351.36	U
6014	Teaching Assistants	0.00	97,674.82	0.00	97,674.82	101,935.00	4,260.18	4.2%F
	<b>Subtotal</b>	<b>0.00</b>	<b>98,026.18</b>	<b>0.00</b>	<b>98,026.18</b>	<b>101,935.00</b>	<b>3,908.82</b>	<b>3.8%F</b>
<b>Benefits</b>								
6080	Benefits	0.00	5,833.19	0.00	5,833.19	5,833.19	0.00	
	<b>Subtotal</b>	<b>0.00</b>	<b>5,833.19</b>	<b>0.00</b>	<b>5,833.19</b>	<b>5,833.19</b>	<b>0.00</b>	<b>0%</b>
<b>Awards and Financial Assistance</b>								
6264	Masters Awards	0.00	762.40	0.00	762.40	0.00	-762.40	U
	<b>Subtotal</b>	<b>0.00</b>	<b>762.40</b>	<b>0.00</b>	<b>762.40</b>	<b>0.00</b>	<b>-762.40</b>	<b>0%U</b>
	<b>Total Labour</b>	<b>0.00</b>	<b>104,621.77</b>	<b>0.00</b>	<b>104,621.77</b>	<b>107,768.19</b>	<b>3,146.42</b>	<b>2.9%F</b>
<b>Non-Capital Expenditures</b>								
6102	General Materials & Supplies	0.00	26,209.87	0.00	26,209.87	0.00	-26,209.87	U
6131	Printing & Duplicating	0.00	749.01	0.00	749.01	0.00	-749.01	U
6140	Courier Charges	0.00	510.73	0.00	510.73	0.00	-510.73	U
6143	Housekeeping	0.00	162.05	0.00	162.05	0.00	-162.05	U
6151	Telephone Fax Sponsorship - student groups/events	0.00	2,466.47	0.00	2,466.47	0.00	-2,466.47	U
6156	Books Subscriptions Paper Format	0.00	250.00	0.00	250.00	0.00	-250.00	U
6160	Cash Over & Short	0.00	181.95	0.00	181.95	0.00	-181.95	U
6178	Dues & Memberships	0.00	0.03	0.00	0.03	0.00	-0.03	U
6182	Entertainment	0.00	266.23	0.00	266.23	0.00	-266.23	U
6183	General Alterations	0.00	203.66	0.00	203.66	0.00	-203.66	U
6202	Equipment Maintenance & Repairs	0.00	759.27	0.00	759.27	0.00	-759.27	U
6204	Computer Maintenance & Repairs	0.00	2,533.86	0.00	2,533.86	0.00	-2,533.86	U
6241	Travel	0.00	1,017.81	0.00	1,017.81	0.00	-1,017.81	U
6243	Visiting Scientist	0.00	1,482.74	0.00	1,482.74	0.00	-1,482.74	U

Appendix VIII – Finance Details for 2015-16

6244	Field Trips	0.00	429.36	0.00	429.36	0.00	-429.36	U
6400	Miscellaneous	0.00	208.92	0.00	208.92	0.00	-208.92	U
POOL	Miscellaneous Expenditures Budget	0.00	0.00	0.00	0.00	40,000.00	40,000.00	100%F
	<b>Subtotal</b>	<b>0.00</b>	<b>37,496.96</b>	<b>0.00</b>	<b>37,496.96</b>	<b>40,000.00</b>	<b>2,503.04</b>	<b>6.3%F</b>
<b>Capital Expenditures</b>								
8310	Work by Facilities Management	0.00	30.00	0.00	30.00	0.00	-30.00	U
8602	Scientific Lab Equipment	0.00	-9,402.91	0.00	-9,402.91	0.00	9,402.91	F
	<b>Subtotal</b>	<b>0.00</b>	<b>-9,372.91</b>	<b>0.00</b>	<b>-9,372.91</b>	<b>0.00</b>	<b>9,372.91</b>	<b>0%F</b>
	<b>Total Direct Expenditures</b>	<b>0.00</b>	<b>28,124.05</b>	<b>0.00</b>	<b>28,124.05</b>	<b>40,000.00</b>	<b>11,875.95</b>	<b>29.7%F</b>
<b>Transfers</b>								
7020	Transfer from General Operating	0.00	-1,621.00	0.00	-1,621.00	0.00	1,621.00	F
	<b>Subtotal</b>	<b>0.00</b>	<b>-1,621.00</b>	<b>0.00</b>	<b>-1,621.00</b>	<b>0.00</b>	<b>1,621.00</b>	<b>0%F</b>
	<b>Total Transfers</b>	<b>0.00</b>	<b>-1,621.00</b>	<b>0.00</b>	<b>-1,621.00</b>	<b>0.00</b>	<b>1,621.00</b>	<b>0%F</b>
	<b>Total All Expenses</b>	<b>0.00</b>	<b>131,124.82</b>	<b>0.00</b>	<b>131,124.82</b>	<b>147,768.19</b>	<b>16,643.37</b>	<b>11.3%F</b>
	<b>Total Revenues Less Expenses and Transfers</b>	<b>0.00</b>	<b>-131,124.82</b>	<b>0.00</b>	<b>-131,124.82</b>	<b>-147,768.19</b>	<b>16,643.37</b>	<b>11.3%F</b>