



Chaplinski, Victoria R

A00433586

Last, First Middle

Student ID

CREDENTIALS CONFERRED:

Bachelor of Science

Awarded 21 Mar 2025

EVERGREEN UNDERGRADUATE CREDIT:

Start	End	Credits	Title
09/2021	12/2021	14	Nature and Nurture: Human Development and the Environment 4 - <i>Developmental Psychology</i> 4 - <i>Human Biology</i> 3 - <i>Introduction to Human Anatomy</i> 3 - <i>Persuasive Writing</i>
09/2021	12/2021	2	Greener Foundations 2 - <i>Foundations of Student Success</i>
01/2022	03/2022	14	Biology and Climate Change in the Pacific Northwest 6 - <i>General Biology: Ecology and Evolutionary Biology with Lab</i> 2 - <i>General Biology: Animal and Plant Physiology</i> 3 - <i>Linguistics: Language and Culture</i> 3 - <i>Quantitative Reasoning in Biology</i>
01/2022	03/2022	2	TRiO at Evergreen: Funding Your Journey 2 - <i>Reflective Writing</i>
03/2022	06/2022	16	Tiny House Design 4 - <i>Tiny House Movement</i> 4 - <i>Tiny House Regulations</i> 4 - <i>Tiny House Design</i> 4 - <i>Design Project Practicum</i>
06/2022	09/2022	6	Anatomy and Physiology II with Laboratory 6 - <i>Anatomy and Physiology II with Laboratory</i>
06/2022	09/2022	6	Anatomy and Physiology: Foundations and Movement 6 - <i>Anatomy and Physiology 1 with Laboratory</i>
09/2022	06/2023	48	Integrated Natural Sciences 5 - <i>General Biology with Laboratory: Ecology and Evolution</i> 6 - <i>General Biology with Laboratory: Cell and Molecular</i> 6 - <i>General Biology with Laboratory: Metabolic Processes and Physiology</i> 5 - <i>General Chemistry I with Laboratory</i> 6 - <i>General Chemistry II with Laboratory</i> 6 - <i>General Chemistry III with Laboratory</i> 4 - <i>Introductory Statistics</i> 8 - <i>Precalculus I and II</i> 2 - <i>Science Seminar</i>



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EVERGREEN UNDERGRADUATE CREDIT:

Start	End	Credits	Title
09/2023	03/2024	32	Environmental Biology and Chemistry *5 - Organic Chemistry I with Laboratory *6 - Organic Chemistry II with Laboratory *4 - Organic Chemistry: Instrumentation and Spectroscopy *5 - Microbial Ecology with Laboratory *4 - General Microbiology with Laboratory *3 - Environmental Microbiology with Laboratory *3 - Biogeochemistry and Bioremediation with Field Methods *2 - Environmental Biology and Chemistry Seminar
04/2024	06/2024	16	Ecology of Grazing and Grasslands in the Pacific Northwest 4 - Ruminant Nutrition 4 - Ecology *4 - Rangeland Science *4 - Agroecology
09/2024	12/2024	14	Biological Oceanography of Puget Sound *5 - Biological Oceanography *5 - Biological Oceanography Lab *3 - Puget Sound Ecology *1 - Biological Oceanography Seminar
09/2024	12/2024	4	GIS: Introduction and Principles 4 - GIS: Introduction and Principles
01/2025	03/2025	4	Beginning Oil Painting 4 - Oil Painting
01/2025	03/2025	4	Film and Gender 2 - Film Studies 2 - Gender Studies
01/2025	03/2025	4	GIS: StoryMaps and Apps 4 - GIS: StoryMaps and Apps

Cumulative

186 Total Undergraduate Credits Earned



ACADEMIC STATEMENT

The Evergreen State College - Olympia, Washington 98505

OFFICIAL TRANSCRIPT DOCUMENT

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This transcript represents my academic achievements during my undergraduate studies, where I attended school full-time with a primary focus on Environmental Science. The knowledge and experience I gained through my classes prepared me for internships and full-time employment in the natural resource field during summer quarters. Within this transcript, you'll find a detailed list of the courses I completed, along with course descriptions and faculty evaluations of my work. The courses that best showcase the quality of my work and dedication to my education include Environmental Biology and Chemistry and Ecology of Grazing and Grasslands in the Pacific Northwest.



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January 2025 - March 2025: GIS: StoryMaps and Apps

4 Credits

DESCRIPTION:

Faculty: Georgianna E.S. Hupp

The course GIS: StoryMaps and Apps is an intermediate class that primarily utilizes ArcGIS StoryMaps to create engaging presentations of data and information. Students learn to combine spatial data with narrative text, photos and videos, and incorporate a variety of web applications in the ArcGIS suite.

The course consisted of 9 weekly labs and a final project of the students' design covering StoryMaps, Instant Apps, Dashboards, Business Analyst, Urban, Insights, Experience Builder, the Arcade scripting language, and QuickCapture.

EVALUATION:

Written by: Georgianna E.S. Hupp

Victoria (hereafter referred to as Tori) completed nine labs and participated thoughtfully in the weekly discussion boards. Tori excelled at Business Analyst, QuickCapture, and Experience Builder. Tori completed a final project.

Tori's final project focused on European Green Crabs. Tori created a detailed, compelling narrative, incorporated photos, videos, StoryMap elements such as a SideCar and a Tour, embedded Instant Apps, a Dashboard, and an Experience Builder.

Tori shows strong understanding of the concepts of this course, and of utilizing the ArcGIS Online product suite for web mapping and conveying information. Tori was qualified to continue GIS learning through future courses.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 4

4 - GIS: StoryMaps and Apps



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January 2025 - March 2025: Film and Gender

4 Credits

DESCRIPTION:

Faculty: Elizabeth Williamson

Why is it important to make room in the film industry for women, trans, and gender nonconforming directors? Students explored this question by reading essays and analyzing films, and they synthesized their ideas through short writing assignments and class discussions. Throughout the quarter, students shared writing with their peers in student-determined topic groups and created final group presentations based on what they learned in those groups.

Students who were fully successful in the course were able to demonstrate foundational skills in film analysis and apply an intersectional understanding of gender to film analysis.

EVALUATION:

Written by: Elizabeth Williamson

Victoria (Tori) was very successful in meeting the learning objectives for this course. Tori was an engaged contributor to class discussions, often asking important clarifying questions about my expectations, and completed nearly all of the required assignments.

In an end of quarter reflection, Tori mentioned that the writing assignments often served as springboards for further thinking, and the quality of Tori's analysis was quite strong across the board. When asked to research some of the structural barriers faced by non-male directors, Tori collected evidence for a detailed individual case study that effectively showcased those barriers. Tori's scene analysis essays were well-written and drew significant, relevant conclusions based on evidence from the films. Tori could use a little more practice slowing down and focusing on the implications of small details before zooming out to talk about thematic content. In an end of quarter synthesis assignment, Tori drew some very nuanced conclusions about spectatorship that really built on the work of other students in the course.

Together with two other students, Tori spent the quarter researching films created by members of the A24 collective, culminating in a final presentation for the rest of the class. The students' delivery of their findings was really effective, and their slides were visually stunning. When covering some of the structural barriers faced by women directors working with A24, the group was clear and emphatic, making the most of available evidence. I particularly appreciated their attention to the reception of these directors' work by mainstream media outlets. The centerpiece of the presentation was an extended close reading of Reijin's *Bodies, bodies, bodies*, which generated a significant amount of discussion among Tori's peers.

It was a pleasure working with and learning from Tori in this course!

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 4

2 - Film Studies

2 - Gender Studies



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January 2025 - March 2025: Beginning Oil Painting

4 Credits

DESCRIPTION:

Faculty: Lauren Boilini, MFA

This course was an introduction to painting through an investigation of landscape, the figure and still-life. It provided a foundation for oil painting through hands-on learning, with a strong focus on color theory. Emphasis was placed on developing technical skills through observational painting, while researching historically significant works to develop a personal vision. We began by setting up the dedicated studio space with individual work areas for each student, granting access to the classroom for time to paint outside of class hours. Developing our dedicated studio space promoted a strong learning community that was designed to last beyond this single quarter. For our in-person sessions, I introduced a new challenge every week through a demonstration, which every student followed along with, preparing them for a related at-home assignment. During two of our sessions in the first half of the quarter, we utilized different organic specimens from the Biodiversity Center on campus as unique still-life setups. After some discussion of human proportions at mid-quarter, we brought in a live model for one session of figure painting. In class, students completed two still-lives, one figure painting, and one portrait (spanning two weeks). As homework, students completed four color charts, one landscape, one master copy, two portraits, and one still-life. I demonstrated how to stretch canvas, and we practiced underpainting for portraiture.

The quarter's work culminated in our second portrait, done in the style of a contemporary figurative painting of a suggested list of artists. During our final group critique, each student had to introduce their work and what they learned.

Our work was conducted primarily in-person, with handouts, presentations and videos shared over Canvas. We met for four hours in-person and spent roughly four to five hours on asynchronous coursework/independent work time per week. The studio was available for personal use throughout the quarter, which was utilized by a majority of the students, creating tremendous camaraderie and community.

EVALUATION:

Written by: Lauren Boilini, MFA

This winter of 2025, I had the pleasure of having Victoria, who goes by Tori, Chaplinski as a student in my Beginning Oil Painting course. Tori established interest in this class as someone with previous experience painting and drawing, looking to build skills with oil paint. Tori successfully achieved all of the learning objectives for this course with great work, constant communication and by attending eight of our nine sessions.

Tori submitted all of the assigned weekend projects, some of them on time: four color charts, one still-life, one landscape, one master copy and two portraits, growing an impressive portfolio. For our in-person classes, Tori also completed the required two still life studies of natural history specimens and one portrait underpainting, along with an additional self-portrait to experiment with technique. Tori's final project, a figure painting done in the style of a contemporary British painter, was ambitious, stretching Tori's comfort zone. This provided numerous challenges to problem solve, ultimately illustrating a great awareness of color and mark-making and highlighting the evolution of Tori skills. This final painting involved the most risk but was arguably the most successful of the quarter.

Tori improved steadily throughout our session, expanding both a vocabulary of mark-making along with a more comprehensive understanding of color theory, keeping an open mind and adjusting to each new



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challenge. Tori was able to dedicate a great deal of time to this class, turning in an array of engaging works while also building community with peers by asking fellow students for assistance and opinions, and readily volunteering tips and tricks for painting techniques, participating through every session. Tori was particularly open to feedback, always willing to hear constructive criticism from both peers and me, listening and contributing each week throughout class.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 4

4 - Oil Painting



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September 2024 - December 2024: GIS: Introduction and Principles**4 Credits****DESCRIPTION:**

Faculty: Jonathan Batchelor, PhD

The course GIS: Introduction and Principles is an introductory class utilizing ArcGIS online web maps to cover basic cartography and the use of simple web applications. The course consisted of 8 weekly labs covering core concepts of Geographic Information Systems.

Course concepts were:

- Online data management
- Principles of Map Making and Cartography
- Data model types
- Geographic and Projected coordinate systems
- Vector and Raster data
- Feature creation and editing
- Intro to Demography and Census Data
- 3D mapping and elevation
- Intro to Temporal Satellite Imagery

EVALUATION:

Written by: Jonathan Batchelor, PhD

Victoria Chaplinki did outstanding and high-quality work for the class GIS: Introduction and Principles. Victoria submitted 8 out of 8 labs on time. Victoria designed and presented work on a final project that included mapping gray whale activity in Washington state as well as mapping the locations of the invasive species, European green crabs.

During this course, Victoria worked extensively with Esri's ArcGIS Online environment. Victoria demonstrated an understanding of basic cartography and online mapping. Victoria worked with online data repositories such as ArcGIS Online and Living Atlas along with adding their own tabular XY data and geocoding. ESRI instant apps were used to share data via QR codes. The course final project required the use of an external graphics program to create a cartographic layout of multiple GIS layers along with the creation of online apps that were linked to the paper map via QR code. Final projects were presented for peer review with an in-person map gallery.

Victoria demonstrated a very high level of skill in using ESRI applications for online map creation and basic cartography.

Victoria developed an extremely solid foundation in online GIS applications and was qualified to continue GIS learning through future courses.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 4

4 - GIS: Introduction and Principles



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September 2024 - December 2024: Biological Oceanography of Puget Sound

14 Credits

DESCRIPTION:

Faculty: Erik V. Thuesen, Ph.D.

Students in this junior/senior level program studied biological oceanography, with particular emphasis on Puget Sound organisms, through lectures, readings, laboratory sessions, fieldwork, data analysis labs, and seminars. Students' understanding of the material was assessed through mid-term and final, in-class exams. In seminar, students were each responsible for presenting a research article from the primary scientific literature. Each student was assigned a topic specific to Puget Sound at the beginning of the program, conducted research on it throughout the term, and delivered a 15-minute presentation on their findings during the final week of the quarter.

Developing laboratory and field skills was a significant focus of the program. Weekly laboratory sessions (~6-7 hours per week) included lab observations of wave/stratification tanks; T/S/O₂ measurements and water sampling in southern Puget Sound from small boats; lab measurements of [NO₃⁻], total alkalinity, and DIC; measurements of major ions in seawater using ICP-MS; collection, identification, dissection, and diversity calculations of intertidal bivalves; and sediment collection, sieving, combustion, and analysis of DOC. Students spent two to three hours in the computer lab each week examining lab results and analyzing their own and class-wide data. Laboratory results were presented in worksheets and short reports. There were two laboratory practical exams at the end of the quarter.

This program utilized primary/secondary scientific literature and sections of several textbooks:

Seawater: Its Composition, Properties and Behaviour (Wright & Colling, 2013, Butterworth-Heinemann)

Biological Oceanography (Miller & Wheeler, 2012, John Wiley & Sons)

Biological Oceanography: an Introduction (Lalli & Parsons, 1997, Elsevier)

Descriptive Physical Oceanography: an Introduction (Talley, et al. 2011, Elsevier)

EVALUATION:

Written by: Erik V. Thuesen, Ph.D.

Victoria (Tori) met all of the major learning objectives for this program and made significant progress in understanding biological oceanography. Tori's overall performance on exams was excellent. She did a very good job on the midterm exam. Tori did excellent work graphing vertical profiles and questions related to plankton ID and tides. On the final exam at the end of the quarter, Tori demonstrated excellent knowledge of ecological and oceanographic topics related directly to Puget Sound.

Tori's total alkalinity/DIC lab assignment was well-accomplished, with accurate measurements and calculations. The assignment would have been enhanced by incorporating more quantitative comparisons with the primary literature. Tori performed very well on the nitrate analysis lab assignment. She correctly calculated DIN from nitrate concentration, and her discussion paragraph was clear and accurate. For the bivalve biodiversity assignment, Tori provided complete and correct calculations. Her data presentation was clear, and her discussion section was satisfactory. On the final lab practical, Tori



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demonstrated excellent breadth of knowledge and good depth. She also performed well on the final data analysis exam.

By prior arrangement, Tori did not participate in the seminar section of the program. For her final presentation, Tori discussed Marine Protected Areas in Puget Sound. The presentation was very thorough, well-cited, and delivered professionally. This presentation was an excellent highlight that demonstrated her abilities as the quarter ended.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 14

- *5 - Biological Oceanography
- *5 - Biological Oceanography Lab
- *3 - Puget Sound Ecology
- *1 - Biological Oceanography Seminar

* indicates upper-division science credit



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April 2024 - June 2024: Ecology of Grazing and Grasslands in the Pacific Northwest
16 Credits

DESCRIPTION:

Faculty: Mike Paros DVM

This rigorous, field-based course provided students with the fundamental tools to manage livestock and grasslands by exploring the ecological relationships between ruminants and the land. Time was divided equally between intensive grazing West of the Cascades and extensive rangeland systems in the East. Students studied topics in grass morphology and physiology, co-evolutionary relationships between ruminants and grasses, rotational grazing, pasture establishment and management, forage production and quality, ruminant nutrition and digestive physiology, and animal foraging behavior. Ecological assessments of energy flow and nutrient cycling in grassland and agro-ecosystems were emphasized, while utilizing the online textbook *Grazing Management: An Ecological Perspective* by Heitschmidt and Stuth. Students also reviewed targeted and multi-species grazing practices. Shrub steppe rangeland systems were assessed, culminating in a multiple day short course (Threat Based Strategic Conservation Workshop) on rangeland management, remote sensing, and monitoring in Eastern Oregon and Central Washington. The class participated in a formal debate on wild horse management on public lands, public land cattle grazing, and wolf-livestock interactions. Diverse topics such as prairie ecology and dairy science were covered in-depth. Students were introduced to basic research in plant breeding, grass seed management, and forage production. Classroom lectures and exercises corresponded with numerous field trips to dairy, beef, and sheep grazing farms in Western Washington and Oregon. Students looked at agricultural sustainability issues and precision agriculture by visiting some intensive large scale farm operations including dry land wheat farms and Three Mile Canyon Farms--the largest integrated crop and livestock farm in the world.

EVALUATION:

Written by: Mike Paros, DVM

Victoria consistently took advantage of learning opportunities in field trips, lectures, and workshops through active engagement of the subject material. Victoria completed assigned reading and study questions throughout the quarter demonstrating, good preparation prior to lectures and workshops. Based on weekly exams, Victoria showed excellent comprehension of all major concepts covered in the course. Victoria shows great persistence and dedication to her studies and is an enthusiastic learner. Victoria acquired proficient knowledge of livestock grazing systems and grassland ecology. Victoria is able to identify common forage species and assess pasture/rangeland health. Victoria can formulate appropriate grazing plans based on available pasture, paddocks, season, and animal nutritional needs. Victoria has an excellent understanding of how to use species-specific foraging behaviors in order to improve habitat. Victoria prepared and articulated lucid arguments in a mock debate on wolf-livestock conflict. Victoria can skillfully review and interpret primary scientific papers from a critical perspective. Victoria is one of the more perceptive students in her class, demonstrating outstanding observational skills on field trips to farms. Victoria is definitely ready for advanced work in agriculture, ecology, or natural resource management.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 16

- 4 - Ruminant Nutrition
- 4 - Ecology
- *4 - Rangeland Science
- *4 - Agroecology



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* indicates upper-division science credit



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September 2023 - March 2024: Environmental Biology and Chemistry

32 Credits

DESCRIPTION:

Faculty: Andrew D. Brabban, Ph.D. and Paula Schofield, Ph.D.

Environmental Biology and Chemistry is an interdisciplinary science program that uses topics and theoretical concepts within microbiology and organic chemistry to study the natural world and human interaction with it, including anthropogenic pollution. It includes upper division subject matter within organic chemistry and chemical instrumentation, environmental and general microbiology, microbial ecology, bioremediation and biogeochemistry. Although each subject is listed separately, the material was delivered in an integrated manner, approaching many concepts from both biological and chemical perspectives. Each week, students spent 11 hours in lecture and small group problem solving sessions, 7 hours in the laboratory and in the field, and on selected weeks 2 hours in seminar discussions. Students were evaluated based on weekly homework assignments, seminar assignments, laboratory reports and notebooks and their performance on many on-line quizzes, and 10 in-class examinations. Most students took the entire program, for 32 credits, while others elected to take just some of the components listed below.

Organic Chemistry I and II with Laboratory: In fall quarter, students studied the relationship between the structure and behavior of organic molecules. Specific concepts included: electronic structure, physical properties, chemical bonding, acid-base properties, stereochemistry, nomenclature of most functional groups within organic chemistry, electron delocalization and resonance. The chemistry of alkanes, alkenes, and alkynes were examined in detail, and the fundamental mechanism of electrophilic addition was emphasized. The laboratory work introduced common techniques in synthetic organic chemistry, including reflux, extraction, recrystallization, steam and simple distillation. Analytical techniques included thin layer chromatography, melting point analysis, gas chromatography, GC-MS, and infrared spectroscopy. In winter quarter, the chemistry of alkyl halides, carboxylic acids and their derivatives, benzene and its derivatives, aldehydes and ketones, as well as free radical reactions were covered. Emphasis was placed on the mechanisms of nucleophilic substitution and elimination, electrophilic aromatic substitution, nucleophilic acyl substitution, and nucleophilic addition. Thermodynamics and kinetics were highly emphasized as fundamental and guiding principles within each topic. For the winter lab work, in addition to a Grignard synthesis, students conducted a 5-week interdisciplinary project to characterize microorganisms in soil via phospholipid fatty acid (PLFA) analysis. Students took soil samples from the Evergreen State College Campus, extracted the phospholipids from the membranes of microorganisms, chemically derivatized them to fatty acid methyl esters (FAMES), then used GC-MS analysis to identify biomarkers and profile microbial communities. The culmination of this intensive project was a comprehensive group laboratory report. The textbook used was *Organic Chemistry* by Paula Yurkanis Bruice (8th Ed.).

Organic Chemistry: Instrumentation and Spectroscopy: Students gained significant hands-on training through individual and group workshops on the following instruments: FT-IR spectrophotometer, Gas Chromatograph, Gas Chromatograph-Mass Spectrometer, and FT-NMR spectrometer. They also learned significant background theory through lectures and readings and were required to take several online quizzes tailored to the theory and safe practice of these instruments. Practical training emphasized sample preparation, operation, and analysis of spectra/data for each instrument, and students used this knowledge to analyze organic compounds produced in lab. Students also applied their analysis skills to elucidate the structures of many unknown compounds through workshops and homework assignments. In addition, students used tailored GC-MS methods for the separation and analysis of fatty acid methyl ester (FAME) biomarkers to study microbial communities in soil, as well as to examine the lipid profile of Pacific salmon.



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General and Environmental Microbiology with Laboratory: This component of the program began by examining the broad variety of microorganisms so far identified, ways of growing microorganisms and measuring growth, the biochemistry of these species and their varying cellular structure. It then progressed to examining the roles microorganisms play in the environment and the broad diversity of ecosystems they occupy. Specifically, we examined microbial metabolism and biogeochemical cycling at a biochemical level, examining the many modes of aerobic and anaerobic catabolism, such as chemolithotrophy. The laboratory component was structured to teach the basic techniques of microbiology required to safely and precisely manipulate microorganisms, such as aseptic technique, making media and growing cultures. Students learned to work quantitatively with organisms carrying out MPN and dilution series to examine water samples, bacterial and phage replication. Students also used quantitative methods to examine cellular processes such as electron transport, using biochemical assays such as the Hill Reaction. The textbook used was Madigan, M., Martinko, J., Bender, K.S., Buckley, G.H., Sattley, W.M., and Stahl, D.A. *Brock's Biology of Microorganisms* 15/e. New Jersey: Pearson: Benjamin Cummings, 2017.

Microbial Ecology and Bioremediation with Laboratory and Field Methods: Students gained an understanding of the relationships between, and the role of, microorganisms in natural and polluted environments. Course material examined microbial metabolism and biogeochemical cycling, water pollution, toxicology, wastewater treatment, methods of measuring microbial numbers and microbial activity, abiotic and biotic interactions within microbial communities, and bioremediation. Remediation of both organic and inorganic chemicals using active/passive, in situ/ex situ, chemical/biological processes including the design and use of wetlands was covered. Lab and field work focused on developing both quantitative and qualitative methods of measuring microbial growth and pollution including DO and BOD5 assays, MPN, viable and total cell count methods, culture enrichment, soil analysis and genetic methods such as PCR detection of microorganisms in water samples. The textbook used was Madigan, M., Martinko, J., Bender, K.S., Buckley, G.H., Sattley, W.M., and Stahl, D.A. *Brock's Biology of Microorganisms* 15/e. New Jersey: Pearson: Benjamin Cummings, 2017.

Environmental Biology and Chemistry Seminar: Students read primary literature and other texts, and completed detailed homework assignments on each reading. Topics covered include green chemistry, the effect of sunscreen use on coral reefs, the anthropogenic carbon cycle, electric vehicles, hydrogen as an alternative fuel source, and nuclear energy and power. Readings were taken from: *Journal of the American Chemical Society*, *Environmental Sciences Europe*, *Green Chemistry*, *Chemical Engineering Online*, *Union of Concerned Scientists*, *US Energy Information Administration* (EIA). In addition, we had a guest speaker: a Senior Materials Engineer & Technology Strategist from the company Modern Hydrogen, who is focused on producing clean hydrogen from methane.

EVALUATION:

Written By Andrew D. Brabban, PhD and Paula Schofield, PhD

Victoria (Tori) entered this program to learn advanced concepts, as well as lab and field techniques within biology and chemistry to prepare for a future career in environmental science.

Coursework:

In the organic chemistry component of the program, Tori submitted all required assignments, and completed all online and in-person quizzes and exams. Overall, Tori demonstrated an excellent grasp of the fundamentals of organic chemistry, specifically, nomenclature, structure-property relationships, stereochemistry, and thermodynamic principles governing molecular structure and reactions. In addition, she showed a mostly excellent understanding of organic reactions, mechanisms, and multi-step synthetic sequences. As a result, Tori was successful in applying her knowledge to solve applied synthetic and mechanistic problems.



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Tori showed a good grasp of both general and environmental microbiology, being able to solve the qualitative and quantitative problems, including growth, cell quantification, cell morphology and structure, and metabolism. In the environmental component, Tori showed she could solve all the quantitative redox and thermodynamic problems as they relate to the environment. Tori completed all of the online quizzes and homeworks; these were her best work and were always very good. In microbial ecology and bioremediation, Tori's understanding improved through the quarter, and this culminated in an excellent final examination. She showed a strong understanding of the theory covered and the ability to apply both quantitative and qualitative methods to measure microbial numbers and activity in the environment. Tori was also able to apply her biogeochemical knowledge to assess polluted sites, and then design the appropriate remediation processes. Tori completed all the online quizzes and homeworks in winter quarter, and these were very good and often excellent.

Tori came to seminar discussions well prepared, completing detailed assignments on the readings. Her work showed she had a solid understanding of the topics and had thoroughly read the texts. In addition, Tori was an engaged member of seminar discussions, contributing rigorously to the dialogue.

Laboratory and Field Work:

Tori performed well in labs and overall, she learned the basic laboratory bench skills and techniques in organic chemistry and microbiology. In conjunction with her lab partner, Tori wrote four of the five microbiology lab reports during fall quarter. These clearly presented the data they had collected and were generally excellent. Tori also worked very well with her group members on all aspects of the interdisciplinary field assessment and lab projects. These included an in-depth study (discharge, dissolved oxygen, conductivity, pH, temperature) of Snyder Cove Creek, a rural creek that drains into Eld Inlet of Puget Sound; a BOD5 study of the college campus natural waters; and the examination of ground water flow in reference to petrochemical pollution. Tori's data collection was efficient and thorough. Overall, her group's project reports were organized, included site descriptions, the appropriate calculations, tables, and figures. The two larger group reports on McLane Creek and BOD5 were both excellent.

Tori also contributed significantly to the 5-week group project on the characterization of soil microbial communities via phospholipid fatty acid/FAME analysis. Tori's group successfully obtained and characterized numerous FAMEs as microbial biomarkers. Following feedback on a draft report, Tori's group submitted an absolutely excellent final, extensive, lab report of this work. It was extremely organized and detailed and contained excellent data presentation and analysis. Tori's organic chemistry lab notebook was absolutely excellent in all areas and is a model for a lab notebook at this level of chemistry.

Chemical Instrumentation and Spectroscopy:

Tori learned the theory and practical application of chemical instrumentation typically used in organic chemistry. Specifically, Tori learned how to prepare samples, operate, and analyze data from the FT-IR, GC, and GC-MS instruments, and used these to analyze products from organic reactions. In addition, Tori and her project group successfully used tailored GC-MS methods for the separation and analysis of fatty acid methyl ester (FAME) biomarkers to study microbial communities in soil, as well as to examine the lipid profile of Pacific salmon.

Tori learned the theory of FT-NMR and successfully analyzed spectra, as evidenced by homework assignments and performance on quizzes. Tori also took two hands-on FT-NMR instrumentation training workshops.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 32

*5 - Organic Chemistry I with Laboratory



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- *6 - Organic Chemistry II with Laboratory
- *4 - Organic Chemistry: Instrumentation and Spectroscopy
- *5 - Microbial Ecology with Laboratory
- *4 - General Microbiology with Laboratory
- *3 - Environmental Microbiology with Laboratory
- *3 - Biogeochemistry and Bioremediation with Field Methods
- *2 - Environmental Biology and Chemistry Seminar

* indicates upper-division science credit



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September 2022 - June 2023: Integrated Natural Sciences

48 Credits

DESCRIPTION:

Faculty: Andrew D. Brabban Ph.D., Vauhn Foster-Grahler, M.S., Mike Paros, D.V.M, Paula Schofield, Ph.D., and Erik V. Thuesen, Ph.D.

Integrated Natural Science is a full year interdisciplinary science program that includes general biology, general chemistry, statistics and pre-calculus. In the following description, although each subject is listed separately, the material was delivered in an integrated manner, approaching many concepts from biological, chemical and quantitative perspectives. Some students were enrolled all year and in all components listed below, for 48 credits, while other students opted to take selected components, for fewer credits. Students were assessed on completion of weekly homework assignments, quality of laboratory reports and laboratory notebooks, and performance on weekly online quizzes and several in-class examinations.

General Biology with Laboratory: For this yearlong sequence the textbook was Hillis et al. 2020. *Life: The Science of Biology*, 12th Ed. This study was divided into:

General Biology: Ecology and Evolution: In fall quarter students studied evolution, the diversity of life and some selected topics in ecology. Studies in evolutionary biology included natural selection, macroevolution and speciation. The diversity of life included in-depth study of bacteria, archaea, fungi, protists, plants, and animals. Particular attention was made to learning about synapomorphies for clades on the Tree of Life in the textbook. Topics in ecology included Red Queen Hypothesis, Intermediate Disturbance Hypothesis, Biodiversity, primary production, and energy flow in food webs. Laboratory investigations included diversity of bacteria, diversity of Fungi, field collection and measurement of local tardigrades using light microscopy, and measurements of marine bivalve biodiversity, among other activities.

General Biology: Cell and Molecular: In winter quarter students learned core concepts in genetics, cellular biology, molecular biology, and biochemistry. Topics included mitosis and meiosis, Mendelian and non-Mendelian Genetics, chromosomal basis of inheritance, DNA biology and gene expression, protein structure and function, cell membrane transport and signaling. Laboratory sessions focused on basic cellular and molecular techniques such as microbial growth curves, cytology, PCR, and gel electrophoresis.

General Biology: Metabolic Processes and Physiology: In spring quarter student learning focused on both the molecular and organismal levels of biology, examining the relationship between form and function. We began with biochemicals, progressed through key metabolic processes (glycolysis, citric acid cycle, chemiosmosis, and photosynthesis) to important concepts in animal physiology (homeostasis, the cardiovascular and pulmonary systems). Laboratory sessions focused on students conducting experiments, collecting data and the subsequent processing of that data to final report form. Experiments included osmosis, enzyme kinetics, electron transport, and respiratory/cardiovascular measurement.

General Chemistry with Laboratory: For this yearlong sequence the textbook was *Chemistry: The Central Science*, 14th Ed., by Brown, Le May and Bursten. This study was divided into:

General Chemistry I: Topics covered included measurement, nomenclature of inorganic compounds, stoichiometry, aqueous reactions and ionic equations (acid-base, precipitation, redox), periodic properties of the elements, electron configuration and thermochemistry. Laboratory exercises and techniques included UV and visible spectroscopy to determine the concentration of unknowns via standard curve methods; titrations, including an EPA method to determine the hardness of water, and a back titration; use of coffee-cup and bomb calorimeters to determine enthalpies of solutions and calorie content of foods.



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General Chemistry II: Topics covered included Lewis structures, chemical bonding, molecular shape, intermolecular forces, and properties of liquids and solutions. More detailed topics included chemical kinetics, chemical equilibria and acid-base equilibria. Aspects of introductory chemistry as they relate to both biological and chemical processes such as enzyme kinetics, catalysis, and thermodynamics were also presented. Laboratory exercises and techniques included TLC and column chromatography; determination of partition coefficients; determination of the activation energy of a chemical and enzymatic reaction. Students also worked on their scientific writing skills; they were required to write comprehensive formal lab reports of all lab experiments and were given detailed feedback on each.

General Chemistry III: Topics covered included more complex concepts of chemical bonding (hybrid orbital and molecular orbital models) and thermodynamics, aqueous equilibria: acid-base, buffers, and solubility product, as well as electrochemistry, and gas laws. Laboratory exercises included preparation of buffers; polyprotic acid titrations (inorganic acid and amino acids); steam distillation; the separation of proteins in spirulina using size exclusion chromatography, agarose gel electrophoresis, and spectrophotometry. Students also continued to work on their scientific writing skills through comprehensive formal lab reports, with detailed feedback.

Introductory Statistics: The textbook was *Elementary Statistics*, 10th Ed., by Mario Triola. This portion of INS was an introduction to the analysis of data using descriptive statistics, probability, and inferential statistics. Topics included sampling and data collection methods, percent, percentile, and percent change; measures of central tendency and variation; graphical representation of data; probability; normal distribution; hypothesis tests of one and two parameters using Student-t and chi-square distributions; linear correlation and regression. In addition, students learned, and applied to Chemistry and Biology labs, Excel techniques for much of the above content.

Precalculus I and II: The text was *Functions Modeling Change: A Preparation for Calculus*, 5th Ed. Connally, Hughes-Hallett, Gleason, et al. Chapters 1-8, 10 and 11. This study was a problem-solving-based overview of functions that model change. Content included procedures and applications of functions and functional notation, linear, exponential, logarithmic, sinusoidal, polynomial, and rational functions. In addition, students studied trigonometric identities and developed and interpreted models using right and non-right triangles. Students represented and worked with the content algebraically, numerically, graphically, and verbally. There was an emphasis on context-based problem solving, developing and interpreting mathematical models, and collaborative learning. In addition to the content of the course, the students were assessed and self-assessed on the following process outcomes: use of correct mathematical notation and procedures, development and interpretation of mathematical models, appropriate use of technology, demonstrating an understanding of and linking multiple representations of functions, use of critical thinking and communicating mathematics effectively.

Science Seminar: Each week students read primary literature and other texts, and discussed the science and societal implications of each topic, in both small and large groups. Topics covered included microbial degradation of petroleum hydrocarbons, the human microbiome, energy use in the USA, biofuels from algae, PPCP pollution in wastewater and surrounding environments, mycorrhizal networks. Readings were taken from: *Frontiers in Marine Science*, *National Geographic*, *US Energy Information Administration (EIA) Annual Outlook 2022*, *Bioresource Technology*, *Trends in Ecology and Evolution*, *PNAS*, and *Nature*.

EVALUATION:

Written by: Andrew D. Brabban Ph.D., Vauhn Foster-Grahler, M.S., Mike Paros, D.V.M, Paula Schofield, Ph.D., and Erik V. Thuesen, Ph.D.

Victoria (Tori) did an overall very good job in biology during fall quarter. Her homework assignments were completed with good results. Tori's quiz scores were excellent. Tori did very well on the midterm biology



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exam and very well on the final cumulative biology exam at the end of fall quarter. She was attentive in laboratory, developed her biology lab skills and did excellent work on her lab assignments.

Based on weekly quizzes, Tori achieved very good comprehension of the major biology concepts covered in winter quarter. Tori showed a great understanding of Mendelian and non-Mendelian Genetics, the cellular and molecular basis of mitosis and meiosis, DNA biology, protein structure and function, and cell communication. Tori completed all of the assigned reading and homework assignments, demonstrating excellent preparation prior to lecture. Tori consistently took advantage of learning opportunities in biology lectures, workshops, and labs through active engagement of the subject material.

Tori worked highly effectively in this final quarter of biology (metabolic processes and physiology) to assimilate all the concepts covered. This led to Tori acquiring all of the concepts discussed. She demonstrated a solid understanding in her good final examination, which contained complete answers to the qualitative and quantitative questions asked. Tori's performance in biology laboratory was very good, where she further developed her techniques and data analysis skills. Her lab reports were excellent well-crafted documents containing clear tables, calculations, graphs, figures, and solid inferences drawn from the data.

Tori's performance in the general chemistry component of the program was excellent. She attended class activities regularly and completed homework and laboratory assignments to a high standard. Overall, Tori demonstrated a very strong understanding of the fundamentals of general chemistry, such as chemical equations, chemical bonding, and stoichiometry. In addition, she showed an excellent grasp of more complex and quantitative topics such as chemical kinetics, thermodynamics and chemical equilibria. Her exams demonstrated her understanding of the concepts and her excellent ability to solve quantitative problems in chemistry. In lab, Tori carried out her experiments in a safe and professional manner, and learned the basic laboratory bench skills and techniques in general chemistry. In addition, Tori developed excellent scientific writing skills; her chemistry formal lab reports improved over the year, and by spring quarter they were excellent in detail, presentation and analysis. Her chemistry lab notebook was very good to excellent in detail and organization, and showed excellent pre-lab preparation.

Tori was an active and positive participant in statistics and often contributed to group and class discussions. Tori was fully engaged and prepared for class. Tori completed almost all homework assignments. Tori's quizzes and exams consistently demonstrated excellent understanding of the course content. Tori successfully completed Excel workshops related to statistics content and applied these to biology and chemistry labs.

Tori completed all homework assignments for precalculus I and II and was always prepared for class. Tori completed all assessments and overall demonstrated satisfactory to proficient performance for the precalculus I process outcomes, and proficient performance for the precalculus II process outcomes for the math content. Tori's resource-limited, timed exams showed good to very good understanding of the concepts and procedures of precalculus I and II. Tori is prepared for calculus.

Tori came to seminar discussions well prepared, completing the required assignments. She was a very engaged member of seminar discussions, contributing well to small and large group dialogues.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 48

- 5- General Biology with Laboratory: Ecology and Evolution
- 6- General Biology with Laboratory: Cell and Molecular
- 6- General Biology with Laboratory: Metabolic Processes and Physiology
- 5- General Chemistry I with Laboratory



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6 - General Chemistry II with Laboratory
6 - General Chemistry III with Laboratory
4 - Introductory Statistics
8 - Precalculus I and II
2 - Science Seminar



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Student Self Evaluation for Integrated Natural Sciences

09/2022 - 06/2023

I am extremely proud of my accomplishments this quarter in Integrated Natural Sciences Fall 2022. I pushed myself to complete all but one homework assignment and attend all class dates with the exception of one week due to having Covid. I greatly enlarged my knowledge of chemistry and statistics and learned new information in biology. I am most proud of my chemistry midterm and final scores (94% and 93% respectively) and the amount of time I put into studying and preparing for all of the class tests. Moving forward in the INS program my goals include to dedicate more time to my biology studies and continue to hold myself to a high standard. I am excited to see what the subsequent quarters bring.



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Student ID

June 2022 - September 2022: Anatomy and Physiology: Foundations and Movement

6 Credits

DESCRIPTION:

Faculty: Amanda Kugel, D.C.

Anatomy and Physiology I with Laboratory was designed to assist students in developing foundational knowledge and understanding of the structures and physiologic processes in the human body, while also learning to communicate properly using anatomical terminology. Topics covered during the first session included a review of cellular structure and the fluid mosaic model, a detailed discussion of the four primary tissues types, as well as exploration of the integumentary, muscular, skeletal and nervous systems. The course used the text "Anatomy and Physiology, 2e" by Open Stax licensed under CC BY 4.0. The course also used the Visible Body Web Suite for three-dimensional human anatomy and organ systems.

Students were expected to locate and identify pertinent tissues and organs of each body system, describe physiologic processes within individual systems, and the contribution of each system to the overall homeostasis of the human body. Anatomical position and terminology were integrated throughout the course to give students the necessary tools for communicating effectively with others in health-related fields.

Hybrid laboratory activities included a virtual compound light microscope through University of Delaware, virtual tissue/organ slides available at the Histology Guide website, and the 3D software platform Visible Body to accomplish identification for major bones, skeletal muscles and actions, and nervous system and special sense structures. Students utilized the interactive 3D brain model available at BrainFacts.org for their virtual dissection of the human brain external and internal gross features. Students had the opportunity to attend some laboratories in person to work with human skeleton and disarticulated bones, perform BIOPAC muscle contraction physiology simulations, elicit reflexes, and dissect mammalian brain and eye specimens.

Students were evaluated through multiple modalities. Dynamic quiz modules within the Canvas learning management system included standardized questioning and short-answer essays for each body system. Laboratory reports were submitted for each major topic to show the student's ability to identify structures and explain physiologic processes. Online exams were conducted for the final laboratory practical to identify skeletal and muscular system components.

EVALUATION:

Written by: Amanda Kugel, D.C.

Overall Victoria turned in consistently very good to excellent quality work, submitting all required assignments in a timely manner. Victoria's performance was excellent in tissue and organ identification, as evident in virtual laboratory activities and associated lab reports, as well as final assessment quizzes for each body system. Victoria wrote short answer essays containing detailed explanations to demonstrate advanced comprehension of the physiology for each body system covered this session. Victoria successfully identified major bones and muscles of the human body with very good to excellent recognition on all laboratory practical exam sections. Based upon participation and work submitted over the course, Victoria accomplished a solid foundation in anatomy and physiology 1 topics and is well prepared to succeed in subsequent health related courses.



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Student ID

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 6

6- Anatomy and Physiology 1 with Laboratory



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Student ID

June 2022 - September 2022: Anatomy and Physiology II with Laboratory

6 Credits

DESCRIPTION:

Faculty: Amanda Kugel, D.C.

Anatomy and Physiology II with Laboratory was designed to complete student knowledge of human body systems related to transport and exchange, including cardiovascular components, the respiratory, digestive, lymphatic, urinary and reproductive systems. The course used the text "Anatomy and Physiology, 2e" by OpenStax licensed under CC BY 4.0

Students were expected to locate and identify pertinent tissues, organs, and describe physiologic processes of individual systems that contributed to overall homeostasis. Laboratory was completed through a combination of virtual work with online histology slides at Histology Guide.org, anatomy software through Visible Body Web Suite, and on-campus hands-on laboratories including dissection of animal hearts and fetal pigs, blood typing with Eldon cards, blood pressure measurement skills, and respiratory physiology with Biopac simulation.

Students were evaluated through multiple modalities. Online exams conducted within the Canvas learning management system included standardized questioning and short-answer essays for each body system. Laboratory reports were submitted to assess the student's ability to locate organs and explain physiologic processes.

EVALUATION:

Written by: Amanda Kugel, D.C.

Victoria consistently submitted the highest quality work in a timely manner for all required assignments and laboratory activities from beginning to end of the quarter. Victoria demonstrated excellent command of information covered in the course, including organ identification and physiology concepts assessed through online lab reports, short answer essays, and final assessment quizzes for every topic. Their strongest work involved narrating complex physiology concepts in well constructed and detailed essays. Victoria's communication style was professional and respectful with their instructor and peers during synchronous online meetings. Based upon participation and work submitted over the course, Victoria is unquestionably prepared to succeed in subsequent health related courses.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 6

6 - Anatomy and Physiology II with Laboratory



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Student ID

March 2022 - June 2022: Tiny House Design

16 Credits

DESCRIPTION:

Faculty: Steve Scheuerell, Ph.D.

The *Tiny House Design* program introduced students to the Tiny House Movement and diverse approaches to designing and building tiny homes, generally considered smaller than 400 square feet. The text *The Tiny House Movement* by Harris was used to frame its history, social, environmental, economic, and philosophical dimensions. Students read recent research articles and popular webpages to further learn about people who choose tiny house living as a deliberate act to downsize and downshift their lives along with tiny houses as an affordable route to home ownership for marginalized people excluded from the overpriced housing market including municipal programs to construct tiny house villages for the unhoused. Learning about the legal and regulatory realms of tiny houses included readings and discussions on the International Building Code Tiny House Appendix Q, zoning, permitting, utilities, waste management, easements, setbacks, deed restrictions, trailer Transport Regulations, and recreational vehicle certification. The study of designing and building tiny houses had students research and share ideas from library, internet, and media sources together with the step-by-step design and build process detailed in the book *The Joy of Tiny House Living* by Schapdick. Class sessions covered foundation and mobile build options, architectural styles, design layouts, building material properties, costs, and sustainable systems thinking as a way to understand and vet options for weather proofing, natural lighting, kitchens and cooking, sleeping, bathrooms, HVAC, and off-grid solar, water, and waste management systems.

The program was offered for offered for 12 or 16 credits, with the extra 4 credits associated with competing a series of tiny house design workshops and final design project. Students who chose this option have their project description included in the following narrative evaluation of student achievement.

EVALUATION:

Written by: Steve Scheuerell, Ph.D.

Victoria successfully completed the *Tiny House Design* program, with all assignments showing overall excellent growth in learning the program description contents. Focusing on the Tiny House Movement, Victoria's work demonstrated superior understanding of the multiple and intersecting dimensions that make up this movement including the historical, social, environmental, economic, and political forces that continue to shape tiny house thinking and advocacy. In learning about tiny house legal and regulatory matters, Victoria gained an excellent understanding of the role that local zoning laws, permitting and the adoption of International Building Code Tiny House Appendix Q has on determining suitable locations for a tiny home, along with requirements and options for utilities and waste management. Victoria's work showed a complete understanding of the difference requirements for foundation verses trailer built tiny homes together with the Washington State process for certifying a custom-built Recreational Vehicle alongside towing specifications and transport regulations. In learning about tiny house design, Victoria demonstrated excellent learning about how to determine what type, size, style and budget may meet someone's housing needs and interests while matching these to DIY and commercial built tiny home options. While learning about the many systems and amenities that make up a modern home, Victoria showed excellent learning about these with reference to the important role of designing around HVAC needs and water, electric, and propane appliance specifications and system demands.

Victoria completed several design workshops and actively participated in the process of giving and receiving peer feedback on design projects as part of completing a final tiny house design. Victoria



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created plans for a foundation built tiny house suited to Western Washington's climate while incorporating systems, elements, and personal touches that would meet the occupants needs and aesthetics.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 16

- 4 - Tiny House Movement
- 4 - Tiny House Regulations
- 4 - Tiny House Design
- 4 - Design Project Practicum



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Student ID

January 2022 - March 2022: TRiO at Evergreen: Funding Your Journey

2 Credits

DESCRIPTION:

Faculty: Emily Pieper

In this 2-credit, TRiO @Evergreen course, students were offered the academic supports, tools, and resources to understand the financial cost of their education. Over the quarter students accessed resources that allowed them to identify the most effective means for funding or reducing the cost of their education at Evergreen. Selected lessons supported the development of each students' knowledge, competencies, and skills directly related to understanding how finances influenced their educational and life decisions. Additionally, students participated in academic workshops that supported the development of their writing and communication skills. For their final project, students submitted a completed personal statement to be used in applying for the Evergreen Scholarship.

EVALUATION:

Written by: Emily Pieper

Victoria was a welcome presence in our TRiO class. Victoria's personal statement showcased a powerful balance of vulnerability and self-awareness. Her past experience as a Washington Conservation Corps member has deeply impacted her future goals and her final personal statement shows clear focus and drive as she continues her time in college. I look forward to seeing what she does next.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 2

2- Reflective Writing



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Student ID

January 2022 - March 2022: Biology and Climate Change in the Pacific Northwest

14 Credits

DESCRIPTION:

Faculty: Rachel Hastings, PhD., Amy Cook, PhD.

Biology and Climate Change in the Pacific Northwest was a full-time coordinated studies program in which students studied the biology of ecosystems and evolution together with language and culture, with a focus on the Pacific Northwest and impacts of climate change. To support the biology and prepare for future work in science, we also studied quantitative reasoning and mathematical modelling each week. Class activities included online lecture and workshop sessions, seminar and problem-solving sessions, and weekly in-person lab and/or field experiences.

In Linguistics, we focused on language and culture with emphasis on languages of the Pacific Northwest. Topics included introductions to language change, language contact, regional dialect features, Traditional Ecological Knowledge, and Indigenous language revitalization. Students read most chapters in Denham's *Northwest Voices* as well as additional articles on biocultural diversity and connections between language and the environment. Students wrote two short papers and completed a final assignment in small groups, exploring the analogy between language family trees and phylogenetic trees.

In Quantitative Reasoning, we focused on modeling environmental data using linear, exponential, and power functions. We covered Chapters 4-6 of Langkamp & Hull's *Quantitative Reasoning and the Environment*, with students completing weekly homework problems from the book, participating in online discussions, and taking two assessments covering linear functions and exponential functions respectively. Emphasis in each chapter was on using manual as well as technology-based methods to find models, including linear regression in conjunction with log graphs. Students also worked in small groups to complete a final assignment, modeling some of our fieldwork data according to the quantitative reasoning methods we covered.

In Biology, we focused on evolutionary biology, ecology, and several aspects of organismal biology and the intersection of these topics with the effects of climate change from the organismal level to the biosphere level. The evolutionary biology piece covered evolutionary processes, hybridization, and phylogenetics. The ecology piece covered ecological processes at the level of populations, behavior, communities, ecosystems, and the biosphere. Work in the biology portion of the program included topics in organismal biology that are tied to climate change including photosynthesis, cellular respiration, and thermoregulation. Labs focused on the animal and plant diversity and field work provided students with the opportunity to observe ecological structures and processes in the field and gain experience in basic field techniques including the use of quadrats and transects and the measurements and calculations behind determining carbon content in trees, stream flow, and taxonomic and functional diversity in several ecological communities. Students had weekly readings from *Hurricane Lizards and Plastic Squid* by Thor Hansen which provided examples of concepts that they were learning in lectures, labs, and fieldwork. Assessments were based on weekly lab and field assignments and a midterm and final exam.

EVALUATION:

Written by: Amy Cook, Ph.D., and Rachel Hastings, Ph.D.

Victoria, who goes by Tori, took full advantage of the learning opportunities presented in the program and was a fully engaged member of the learning community. She attended class regularly, completed all assignments and earned full credit.



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Tori's assignments and exams demonstrated a very good grasp of the key concepts in plant and animal organismal biology, ecology and evolutionary biology presented in the program and made clear connections between concepts in these fields and climate change. In plant and animal organismal biology she demonstrated a very good understanding of how an organism's physiology affects its response to changes in abiotic conditions, like the way that increasing water temperatures affect the health and vulnerability of fishes. Tori demonstrated an excellent grasp of the BIDE population model (Birth, Immigration, Death, Emigration) and a detailed understanding of how climate change affects vital rates in a variety of organisms. On the exams, Tori demonstrated a detailed understanding of how the principles of evolutionary biology are integrated with climate change and its affects on species and populations. In community ecology, Tori provided in-depth discussions of how changes in abiotic conditions influence things like ecological interactions, a species' distribution, and disturbance regimes. Tori's entries for the organismal diversity labs demonstrated a solid understanding of plant and animal diversity and phylogeny.

In the field portion of the program Tori proved to be a capable and competent field scientist and maintained a field notebook that was complete, detailed and easy to follow. In the field activities, Tori gained skills in the use of a variety of field ecology techniques including the use of quadrats and transects, measurement of tree height and diameter and stream characteristics, and collecting data and doing the calculations for carbon content in trees, species diversity in an intertidal community and functional diversity in a riparian plant community. Tori's Field Notebook entries provided further evidence of their ability to make connections between observations in the field and ecological concepts covered in lecture.

In quantitative reasoning, Tori demonstrated an excellent understanding of linear, exponential, and power functions as applied to environmental sciences. Tori completed all of the weekly homework discussion assignments on time and did excellent work on the two assessments and final collaborative assignment. Tori's math notebook was complete and showed very strong success on the problems as well as a great ability to organize and present quantitative information.

In linguistics, Tori showed very good insight into our core topics of language change, language and culture, and the intersections between language and landscape. Tori wrote both short essays and completed all the annotation/discussion assignments as well as the final collaborative assignment. Tori participated actively in class discussions and volunteered to share small-group discussion content. Tori's essays were very well written, with excellent discussion of humans' role in shaping landscapes, and demonstrating a very good ability to synthesize themes shared by our core texts on climate change biology and Pacific Northwest languages.

Tori met the program learning goals and developed a solid foundation in biology, linguistics, and climate change over the course of the quarter. Tori clearly demonstrated interdisciplinary thinking and the ability to integrate information from a variety of sources.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 14

- 6- General Biology: Ecology and Evolutionary Biology with Lab
- 2- General Biology: Animal and Plant Physiology
- 3- Linguistics: Language and Culture
- 3- Quantitative Reasoning in Biology



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September 2021 - December 2021: Greener Foundations**2 Credits****DESCRIPTION:**

Faculty: Rebecca Chamberlain, M.A., and Michael Joseph, Staff

First-Year students' academic skill development was supported by their participation in Foundations of College Success, a module of instruction and community-building activities where students were introduced to college support services and practices, wellness strategies, seminar skills, reflective writing, time management strategies, and more to foster both personal and academic growth.

EVALUATION:

Written By: Michael Joseph with Rebecca Chamberlain, M.A.

Victoria (Tori) demonstrated that they were a thoughtful student in the Foundations of College Success program. They submitted their work in a timely fashion and consistently reflected on academic and personal support systems. In the fall, they developed their writing, journaling, and reading skills, and demonstrated that they were developing robust time-management skills and were able to meet challenges while also managing external stressors outside the classroom. They demonstrated healthy collaboration and leadership skills through participating in discussions and workshops. Additionally, they demonstrated a resilient understanding of how to develop personal and academic goals, as well as balancing their internal needs with competing external stressors and remaining present for their peers.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 2

2- Foundations of Student Success



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Student ID

September 2021 - December 2021: Nature and Nurture: Human Development and the Environment

14 Credits

DESCRIPTION:

Faculty: Ada Vane, MA and Paul Przybylowicz, Ph.D.

Developmental Psychology: Using Ricardo & Rymond's *Understanding the Whole Child* as a framework, we explored psychological theories in human development from biological, socio-emotional, and cognitive perspectives, with a focus on the period from *in utero* through adolescence. Emphasis was placed on development in a cultural and environmental context. Student learning was assessed using weekly reflections in response to the material, as well as a final quiz.

Human Biology & Experiential Anatomy: We explored topics in human biology using *College Human Biology* by Brainard & Henderson and *The Body: A Guide for Occupants* by Bill Bryson. The material was covered through readings, lectures, discussions and workshops. Student learning was assessed through weekly study questions.

The Yoga Anatomy Coloring Book anchored our explorations of musculoskeletal anatomy through coloring and movement. The weekly workshops focused on the bones and muscles of a portion of the body and experiencing these in a yoga session. Students created a model of a synovial joint to illustrate movement and anatomy as a final project. Students were required to memorize the names and locations of 39 bones and 35 muscles. Learning was assessed through a final exam.

Writing/Research: Students engaged with weekly writing workshops that introduced the various aspects of academic persuasive writing and allowed students to practice those skills. Over the course of the quarter, students used learnings from this workshop in groups to generate drafts, and to receive feedback from faculty on this group effort. These workshops culminated in an individual persuasive essay on a topic of the student's choice. Students were evaluated on their drafts each week, and on their final essay, which included structured paragraphs in APA format, written in academic tone.

Seminar/Facilitation: Students participated in weekly seminar sessions that engaged their ability to analyze a text and engage in thoughtful discussion based on that analysis. The texts, *What's Going On In There?*, *The Ethical Brain*, *I Contain Multitudes*, and *How We Learn*, explored nature/nurture from psychological and biological perspectives. Students also facilitated seminar in pairs and demonstrated their ability to plan and facilitate a group discussion, as well as listen to, explore, and share ideas in discussion and informal presentations.

EVALUATION:

Written by: Ada Vane, MA and Paul Przybylowicz, Ph.D.

Victoria Chaplinski had a successful quarter in Nature and Nurture. The student attended most of the program meetings and completed all of the work. The quality of the work was generally excellent and often outstanding. Victoria is leaving this program with a solid background for further studies in psychology, biology, anatomy, and academic writing.

In developmental psychology, Victoria completed all the weekly reflections, which expressed an excellent understanding of the concepts and laid ground for strong engagement in workshops. Performance on the final quiz demonstrated an outstanding understanding of key terms and theories. Victoria's understanding of developmental psychology broadened and deepened significantly this quarter.



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Victoria completed all the work in human biology. Answers on the weekly study questions demonstrated an excellent understanding of main concepts and supporting details. Victoria chose a challenging joint, the hip, to model. The model included the lower spine and half the pelvis, along with the femur. The model was very detailed with all the required tissues. The knitted muscles took this work over the top, outstanding work. Overall, Victoria's work showed an excellent grasp of introductory human biology.

In experiential anatomy, Victoria completed all the work. Engagement during the weekly experiential anatomy session was excellent. Victoria's final exam illustrated an excellent ability to identify the bones and the ability to identify the major muscles of the human body was good.

Victoria honed academic writing skills this quarter. Victoria completed all the preparation work and was highly engaged with group writing sessions that focused on various areas of academic writing. Overall, the student demonstrated an excellent ability to generate persuasive paragraphs in a group setting. Victoria's final individual essay focused on the benefits of teaching a second language in early childhood, which indicated an excellent understanding of academic tone, paragraph structure, and APA format.

Victoria also engaged with discussions of seminar texts, attended all the seminar discussions, and completed all the preparation assignments. Victoria was an active contributor to group discussions. These contributions were thoughtful and relevant to the text. With two other students, Victoria facilitated a seminar session. Overall, Victoria demonstrated a high level of responsibility and commitment to this learning community through preparation of critical questions for discussion.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 14

- 4 - Developmental Psychology
- 4 - Human Biology
- 3 - Introduction to Human Anatomy
- 3 - Persuasive Writing



The Evergreen State College • Olympia, WA 98505 • www.evergreen.edu

EVERGREEN TRANSCRIPT GUIDE

Accreditation: The Evergreen State College is fully accredited by the Northwest Commission on Colleges and Universities.

Degrees Awarded: The Evergreen State College awards the following degrees: Bachelor of Arts, Bachelor of Science, Master of Environmental Studies, Master of Public Administration and Master In Teaching. Degree awards are listed on the Record of Academic Achievement.

Educational Philosophy:

Our curriculum places high value on these modes of learning and teaching objectives:

- Interdisciplinary Learning
- Collaborative Learning
- Learning Across Significant Differences
- Personal Engagement
- Linking Theory with Practical Applications

Our expectations of Evergreen Graduates are that during their time at Evergreen they will:

- Articulate and assume responsibility for their own work
- Participate collaboratively and responsibly in our diverse society
- Communicate creatively and effectively
- Demonstrate integrative, independent, critical thinking
- Apply qualitative, quantitative and creative modes of inquiry appropriately to practical and theoretical problems across disciplines, and,
- As a culmination of their education, demonstrate depth, breadth and synthesis of learning and the ability to reflect on the personal and social significance of that learning.

Our students have the opportunity to participate in frequent, mutual evaluation of academic programs, faculty and students. In collaboration with faculty and advisors, students develop individual academic concentrations.

Academic Program

Modes of Learning: Evergreen's curriculum is primarily team-taught and interdisciplinary. Students may choose from among several modes of study:

- **Programs:** Faculty members from different disciplines work together with students on a unifying question or theme. Programs may be up to three quarters long.
- **Individual Learning Contract:** Working closely with a faculty member, a student may design a one-quarter-long, full-time or part-time research or creative project. The contract document outlines both the activities of the contract and the criteria for evaluation. Most students are at upper division standing.
- **Internship Learning Contract:** Internships provide opportunities for students to link theory and practice in areas related to their interests. These full- or part-time opportunities involve close supervision by a field supervisor and a faculty sponsor.
- **Courses:** Courses are 2-6 credit offerings centered on a specific theme or discipline.

The numerical and alpha characters listed as Course Reference Numbers designate modes of learning and are in a random order.

Evaluation and Credit Award:

Our transcript consists of narrative evaluations. Narrative evaluations tell a rich and detailed story of the multiple facets involved in a student's academic work. A close reading of the narratives and attention to the course equivalencies will provide extensive information about student's abilities and experiences. Students are not awarded credit for work considered not passing. Evergreen will not translate our narrative transcript into letter or numeric grades.

Transcript Structure and Contents: The Record of Academic Achievement summarizes credit awarded, expressed in quarter credit hours. Transcript materials are presented in inverse chronological order so that the most recent evaluation(s) appears first.

Credit is recorded by:

Quarter Credit Hours: Fall 1979 to present

Evergreen Units: 1 Evergreen Unit (1971 through Summer 1973) equals 5 quarter credit hours

1 Evergreen Unit (Fall 1973 through Summer 1979) equals 4 quarter credit hours

Each academic entry in the transcript is accompanied by (unless noted otherwise):

- The Program Description, Individual Contract or Internship Contract which explains learning objectives, activities and content of the program, course or contract.
- The Faculty Evaluation of Student Achievement provides information on specific work the student completed and about how well the student performed in the program or contract.
- The Student's Own Evaluation of Personal Achievement is a reflective document written by the student evaluating his or her learning experiences. Students are encouraged but not required to include these documents in their official transcript, unless specified by faculty.
- The Student's Summative Self Evaluation is an optional evaluation summarizing a student's education and may be included as a separate document or as a part of the student's final self- evaluation.

Transfer credit for Evergreen programs, courses and individual study should be awarded based upon a careful review of the transcript document including the course equivalencies which are designed to make it easier for others to clearly interpret our interdisciplinary curriculum. These course equivalencies can be found at the conclusion of each of the Faculty Evaluation of Student Achievement.

The college academic calendar consists of four-eleven week quarters. Refer to the college website (www.evergreen.edu) for specific dates.

This record is authentic and official when the Record of Academic Achievement page is marked and dated with the school seal.

All information contained herein is confidential and its release is governed by the Family Educational Rights and Privacy Act of 1974 as amended.

If, after a thorough review of this transcript, you still have questions, please contact Registration and Records: (360) 867-6180.