

Last, First Middle

CREDENTIALS CONFERRED:

Bachelor of Science

Awarded 16 Dec 2022

EVERGREEN UNDERGRADUATE CREDIT:

Start	End	Credits	Title
09/2018	12/2018	16	Teaching Through Performance 6 - Readings in U.S. History 1910-1945 4 - Script writing 6 - Musical and Theatrical performance
09/2018	12/2018	4	Calculus I 4 - Calculus and Analytical Geometry I
01/2019	03/2019	16	Dangerous Readings 4 - 20th Century Intellectual and Social History in Europe 4 - Literature: Homer's Iliad and Contemporary American Poetry 8 - Individual Project in History: Crafting a Counterfactual Civil War Narrative
01/2019	03/2019	4	Calculus and Analytical Geometry II 4 - Foundations of Calculus and Analytical Geometry II (Integral Calculus)
04/2019	06/2019	16	Writing the South 4 - History of the U.S. South 4 - Topics in Literature: Literature of the U.S. South 8 - Composition and Critical Writing
04/2019	06/2019	4	Calculus and Analytical Geometry III 4 - Calculus and Analytical Geometry III
09/2019	06/2020	38	 Mathematical Systems 4 - Euclidean and non-Euclidean Geometry 4 - Introductory Real Analysis 4 - Linear Algebra 3 - Seminar: History of Mathematics 4 - Introduction to Mathematical Proof *7 - Abstract Algebra *4 - Complex Analysis 4 - Seminar: Philosophy of Math 4 - Seminar: Math in education and literature
09/2019	12/2019	4	Statistics I 4 - Statistics
01/2020	03/2020	4	Physics II: Electromagnetism 4 - Physics: Electromagnetism (Non-Calculus)
03/2020	06/2020	4	Matter and Motion 4 - Calculus and Analytical Geometry III



OFFICIAL TRANSCRIPT DOCUMENT

A00412104

Student ID

Hom, Jacob Tyler

Last, First Middle

EVERGREEN UNDERGRADUATE CREDIT:

Start	End	Credits	Title
09/2020	06/2021	40	 Physical Systems and Applied Mathematics *4 - Linear Algebra 4 - Concepts of Differential Equations *4 - Multivariable and Vector Calculus *2 - Seminar in Applied Mathematics and Physics *6 - Electricity and Magnetism *4 - Optics 4 - Combinatorics *6 - Quantum Mechanics *6 - Statistical Mechanics
09/2020	12/2020	4	Audio Recording I 4 - Audio Recording
01/2022	06/2022	12	Mathematical Systems *8 - Abstract Algebra II and III *4 - Probability Theory
09/2022	12/2022	12	Data Structures and Algorithms *4 - Data Structures and Algorithms and Project *4 - Systems and Parallel and Distributed Computing *4 - Cracking the Coding Interview
04/2023	06/2023	2	Tutoring Math and Science 2 - Tutoring Math and Science

Cumulative

180 Total Undergraduate Credits Earned

INFORMATION FROM THIS RECORD MAY NOT BE RELEASED TO ANY OTHER PARTY WITHOUT OBTAINING CONSENT OF STUDENT



Last, First Middle

A00412104 Student ID

My intended area of specialization is teaching, with specifications in mathematics and history. I intend on achieving a Masters in Teaching at Evergreen State College with an endorsement in mathematics. Throughout my undergraduate years of education I learned through and through that teaching is the path that I want to attend. I have taken multiple courses in multiple areas of knowledge, even areas that I had historically known to not be that good at, purely to grasp more knowledge on how to be a better teacher for my future students. Classes like Teaching Through Performance and Writing the South, granted me complete opposite points of view in teaching style. One through creativity, interaction, and ingenuity. The other, through facts, lectures, and just pure work to get the job done. In Teaching Through Performance, I was given the chance to convey a historical event through hand crafting an entirely unique theatrical play that told the information, including music, costumes, and scripting. While, in Writing of the South, the final projects has been a essay and a lecture, on 2 different historical events that I had studied. The different styles of studies gave me insight to the complete array of learning styles that I would be facing at the head of the classroom. Which, in accordance to my Graduates studies, I hope will have me prepared for the task ahead.

Another advancement in the diversity and ingenuity that I hope to achieve in the future is the strict switch into a pure online format of learning. As noted on my transcript, there is an incomplete for Physics 3, this was due to my lack of preparation for the switch to online schooling. Which, as shown through the multiple other quarters in my Junior year, which had all been in an online format, I quickly was able to pick up the slack from the previous guarters. Eventually, succeeding even more than I had done in my In-person learning. This displays the adaptability that I was able to learn in these years. The mistakes that I had conveyed here allowed my to adapt and learn, one of my self credited strengths. Mistakes are only another way to grow, which, I will gladly make mistakes to learn, especially for the benefit of others. I quickly started to help organize better online formats and learning for other students in my class in my aim to help myself learn in the online format. I continuously struggled in multiple areas and failed multiple times during this exploration. But, it allowed me to display information and help my fellow students as well as myself. Be it helping with ways to set up for class or organizing with other students on study days in the online school supplied tutoring hours. Or just talking through homework in a text platform. The mistakes I gladly portrayed allowed me to grow immensely and help other students grow. I hope to apply this to teaching as well, allowing me to show humility as a adult figure. Which, a lot of students these days have a lack of. The ability to teach students basic human interactions, like leadership, humility, and growth is one of my main goals as I join the workforce.

My final year is when I learned everyone is human, there are so much life that is left unsheltered and protected. It's okay to breath because you can help everyone.



Last, First Middle

A00412104

Student ID

April 2023 - June 2023: Tutoring Math and Science

2 Credits

DESCRIPTION:

Faculty: Margaret Blankenbiller, MPA

Tutoring Math and Science was designed to enhance students' skills working with diverse groups, and to introduce students to a variety of student-centered pedagogies and discuss their effectiveness. In addition, students explored the educational impact of race, gender, sex, socioeconomic status, and neurotype and how these impact teaching and learning.

Students read excerpt from many texts including: Whistling Vivaldi by Claude M. Steele, Demarginalizing the Intersection of Race and Sex by Kimberle Crenshaw, Supporting Neurodiverse College Student Success by Coghill and Coghill, and A Framework for Understanding Poverty by Ruby K. Payne. Students wrote reflections, summaries of reading, participated in weekly seminars and completed a final summative paper connecting and evaluating approaches to tutoring.

EVALUATION:

Written by: Margaret Blankenbiller, MPA

Jacob successfully completed all required components of the course and was a fully engaged member of our learning community. Jacob completed all required homework assignments and a final project. Jacob was consistently prepared for class discussions and engaged actively in the learning environment.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 2

2 - Tutoring Math and Science



Last, First Middle

A00412104

Student ID

September 2022 - December 2022: Data Structures and Algorithms

12 Credits

DESCRIPTION:

Faculty: Gordon Gul and Richard Weiss

This program Data Structures and Algorithms consisted of 3 threads: 1) Data Structures and Algorithms, 2) Systems and Parallel and Distributed Computing, and 3) Cracking the Coding Interview. Some students opted to take portions of the program.

Data Structures and Algorithms and Final Project

One of the learning goals of the Data Structures and Algorithms portion was for the students to implement and apply various linear and non-linear data structures including: Array Lists, Linked Lists, Stacks, Queues, Binary Search Trees, Graphs, and Hash Tables. Students wrote programs in the Java programming language. Another goal was to understand and apply time and space complexity analysis to the methods associated with these data structures. Students learned how to compare various data structures and use the most appropriate ones for a given problem (based on the time and/or space complexity). Students also applied complexity analysis to searching, sorting, and tree and graph traversal algorithms. Each week, the students were assigned a set of problems, and they started developing solutions in the Lab in teams of 2-4 students. They had about one week for each assignment. Students were required to submit their own individual solutions. Students worked in small groups on a project that demonstrated one of the data structures covered in class.

Systems and Parallel and Distributed Computing

The learning goals for Systems and Parallel and Distributed Computing were to learn the essentials of C programming, assembly language and performance analysis. Student also wrote parallel programs to solve computational problems on parallel hardware, identifying parallel design patterns, and understanding the interactions between hardware and software. Students wrote programs in C with pthreads and OpenMP. The text was *Dive Into Systems* by Matthews et al. The reading assignments covered through chapter 14, and students were required to answer basic questions on the reading. In the Lab, students worked in teams on several small programming exercises including Game of Life. They also studied the interaction between hardware and software using cachegrind to measure cache misses. There were ten reading assignments, nine lab reports and four quizzes.

Cracking the Coding Interview

The learning goals for this portion were to develop the coding and writing skills necessary for software development. Students solved design and coding problems found in *Cracking the Coding Interview* by Gayle McDowell.

EVALUATION:

Written by: Gordon Gul and Richard Weiss

Jacob successfully completed all of the portions of the computer science program Data Structures and Algorithms. Jacob's accomplishments in individual parts of the program are presented in detail below.

Data Structures and Algorithms and Final Project

Jacob did a great job in Data Structures and Algorithms. Jacob submitted most of the lab and in-class assignments. Jacob worked on a final project that was well written and demonstrated Jacob's ability to write code and follow the best practices of coding.

Cracking the Coding Interview

INFORMATION FROM THIS RECORD MAY NOT BE RELEASED TO ANY OTHER PARTY WITHOUT OBTAINING CONSENT OF STUDENT



OFFICIAL TRANSCRIPT DOCUMENT

Hom, Jacob Tyler

Last, First Middle

A00412104

Student ID

Jacob did a good job in Cracking the Coding Interview. Jacob submitted almost all of the lab and in-class assignments. The work demonstrated by Jacob demonstrates a good understanding of the questions and problems encountered during interviews.

Systems and Parallel and Distributed Computing

Jacob's performance in Systems and Parallel and Distributed Computing was weak. Nevertheless, he completed the necessary assignments. Jacob submitted 7 out of 10 reading assignments and 7 out of 10 lab assignments. His attendance was good. Jacob took 3 of the 4 quizzes. He turned them in at the end of the quarter. They indicated that he had familiarity with some of the content but also had some gaps.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 12

- *4 Data Structures and Algorithms and Project
- *4 Systems and Parallel and Distributed Computing
- *4 Cracking the Coding Interview

* indicates upper-division science credit



Last, First Middle

A00412104 Student ID

January 2022 - June 2022: Mathematical Systems

12 Credits

DESCRIPTION:

Faculty: Brian L. Walter, Ph.D.

Mathematical Systems students engaged in intensive study of various subjects in upper-division pure mathematics. Aside from learning the subjects covered, the main goals of the program were for students to learn to read and write rigorous proofs, to develop their facility with mathematical syntax, and to develop their ability to express their ideas in writing. Students were evaluated on the basis of their participation in program activities, their written work, and their performance on examinations.

In *Abstract Algebra*, students learned standard topics in Group Theory (including cosets, direct products, normal subgroups, group homomorphisms, and the Fundamental Theorem of Finite Abelian Groups), Ring Theory (including integral domains, ideals and factor rings, ring homomorphisms, and polynomial rings), and Galois Theory (including the construction of splitting fields, separable polynomials, Galois groups and Galois extensions, the Fundamental Theorem of Galois Theory, and solution by radicals). The text used was Gallian's *Contemporary Abstract Algebra*, 10th edition, from which chapters 7-23 and 30 were covered. Students submitted weekly problem sets and took two exams.

In *Probability Theory*, students learned standard topics in Probability Theory, including axioms of probability, conditional probability and independence, and discrete and continuous random variables (including several specific distributions). The text used was Ross's *A First Course in Probability*, 8th edition, from which Chapters 1-5 were covered. Students submitted weekly homework assignments and took two exams.

EVALUATION:

Written by: Brian L. Walter, Ph.D.

In Abstract Algebra, Jacob submitted about 2/3 of the assigned homework problems, with work that showed engagement with the ideas of that subject. Jacob's midterm exam was fine work, including successful arguments about most of the covered topics. Jacob's final exam was similarly good, with work that demonstrated Jacob's capacity for detailed symbolic reasoning.

In Probability Theory, Jacob again submitted about 2/3 of the assigned homework problems; those assignments showed Jacob's work with the relevant techniques. Jacob's midterm exam was not passing work, but Jacob's much stronger exam corrections suggested good understanding of the material. Jacob's final exam was just adequate for credit, showing understanding of some of the relevant topics.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 12

*8 - Abstract Algebra II and III

*4 - Probability Theory

* indicates upper-division science credit



Last, First Middle

A00412104

Student ID

September 2020 - December 2020: Audio Recording I

4 Credits

DESCRIPTION:

Faculty: Zenaida Vergara

This is the first of a three-quarter sequence in which students are introduced to the subject of audio production and its relation to modern media. Fall quarter will focus on recording technologies and digital editing. The main topics will include field recording, digital audio editing, microphone design and application, multi-track editing and mixing concepts. Students will have weekly reading assignments, discussion posts, and Pro Tools training. A final recording and mixing project will be due at the end of the quarter using the foundational principles of field recording and mixing.

EVALUATION:

Written by: Zenaida Vergara

Jacob Hom completed all class requirements, which assures a basic understanding of sound theory fundamentals, field recording, editing, and digital mixing using Pro Tools. Jacob Hom completed all required audio exercises, and his work demonstrates comprehension of the class objectives. Jacob participated in class discussions, gave online feedback to his peers, and completed weekly exercises in building the foundational elements of digital production. Jacob began to develop an ear for balance, tonal characteristics, and digital processing through listening exercises. Jacob learned and quickly adapted to the proper approaches to mix organization and techniques found in modern digital production. Jacob's projects conveyed an understanding of audio principles, critical listening, and the application of tools to form a creative and unique interpretation of his work. Because of the complications around remote work, Jacob ran into computer and software challenges that prevented him from fully participating in some projects. Nonetheless, Jacob kept up with the course material and did his best, given the circumstances.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 4

4 - Audio Recording



Last, First Middle

A00412104

Student ID

September 2020 - June 2021: Physical Systems and Applied Mathematics 40 Credits

DESCRIPTION:

Faculty: John M. Caraher, Ph.D. and Brian L. Walter, Ph. D.

In the fall quarter of Physical Systems and Applied Mathematics, students undertook full-time study of sophomore-level mathematics (multivariable and vector calculus, differential equations, and linear algebra). Students also engaged in a seminar on applied mathematics and physics and studied experimental applications of Arduino microcontrollers for data collection and experiment control. Students opted to study some or all of the available program subjects. All lecture content and workshop/lab/ seminar work occurred remotely via Zoom.

Evaluation of student achievement in mathematics subjects was based primarily on exams and exam revisions, supplemented by completion of homework assignments and solutions submitted to collaborative solutions sets. Particularly noteworthy class participation was taken into account, but synchronous participation in class activities was optional. For electronics, evaluation focused on completion and documentation of the activities through submission of code, narrative descriptions of the work performed, and video clips of experiments in action. For seminar, written responses to pre- and post-seminar writing prompts were the primary measure of achievement, supplemented by engaged participation in the synchronous seminar meetings for those able to attend.

<u>Multivariable and Vector Calculus</u>: Texts used were Boas's *Mathematical Methods for the Physical Sciences*, 3rd ed. (chapters 4-6) and Schey's *Div, Grad, Curl, and All That*, 4th ed. Topics in multivariable calculus included partial derivatives, multiple integrals and their applications (finding extrema and gradients, mass, density, center of mass, and moments of inertia) in rectangular, cylindrical, and spherical coordinates. Topics in vector calculus included gradient, divergence, and curl, and line integrals and surface integrals for scalar-valued functions and vector fields, culminating in the fundamental theorems of vector calculus (the Gradient Theorem for Line Integrals, Green's Theorem, the Divergence Theorem, and the Curl (Stokes') Theorem). Students were assigned nine weekly homework sets and contributed to weekly collaborative solution sets. They also took one midterm and one final exam, and optionally submitted exam revisions (except in cases of poor initial performance, where revisions were mandatory).

<u>Differential Equations</u>: The text used was Boas's *Mathematical Methods in the Physical Sciences*, 3rd edition, from which Chapters 7, 8, and parts of 2 and 12 were covered. Topics included complex numbers, ordinary differential equations (separable equations, linear first-order equations, second-order linear equations with constant coefficients, and other techniques, including the Laplace transform), Fourier series and transforms (including Fourier coefficients, and the sine-cosine and complex form of Fourier series), and series solutions of differential equations (including Legendre's equation and Legendre polynomials). Students submitted 9 homework assignments and contributed to weekly collaborative solutions sets. They also took one midterm and one final exam, and optionally submitted exam revisions (except in cases of poor initial performance, where revisions were mandatory).

Linear Algebra: The text used was Lay's *Linear Algebra and its Applications*, 2nd edition, from which chapters 1, 2, 4 and parts of 3 and 6 were covered. Topics included: vectors, solving systems of linear equations, matrix operations, vector spaces, orthogonality, determinants, eigenvalues & eigenvectors, and linear transformations. Students submitted 9 homework assignments and contributed to weekly collaborative solutions sets. They also took one midterm and one final exam, and optionally submitted exam revisions (except in cases of poor initial performance, where revisions were mandatory).



Last, First Middle

A00412104 Student ID

<u>Electronics</u>: Students engaged in a series of activities drawn from Chapter 8 of W. F. Smith's *Experimental Physics*. These included an introduction to the Arduino microcontroller and its C-based programming environment, applications of digital inputs and outputs including pulse-width modulation, basic analog data input and processing, temperature control using bang-bang, proportional, and proportional-integral control models, and control of brushed motors and stepper motors. Students submitted code samples, progress and troubleshooting narratives, observations and videos showing successful completion of project objectives.

<u>Seminar</u>: Students engaged with a series of readings and associated writing exercises designed to help them reflect on the structure and purposes of higher education in general and physics and math education in particular, to help them develop their plans for their own academic paths, and to update drafts of their annual academic statements. They also were introduced briefly to mathematical typesetting in LaTeX.

In the winter quarter of Physical Systems and Applied Mathematics, students undertook full-time study of the theory of electricity and magnetism, classical mechanics, and optics. Students opted to study some or all of the available program subjects. All lecture content and workshop/lab work occurred remotely via Zoom.

Evaluation of student achievement in electricity and magnetism and classical mechanics was based primarily on two exams exams and optional exam revisions in each subject, supplemented by completion of weekly homework assignments. Particularly noteworthy class participation was taken into account, but synchronous participation in class activities was optional. For optics, evaluation focused on completion and documentation of the activities through submission of answers to exercises on Canvas.

<u>Electricity & Magnetism</u>: The text used was the 4th edition of David Griffiths' *Introduction to Electrodynamics*. Topics included electrostatics, potentials, electric fields in matter, magnetostatics, magnetic fields in matter and a brief introduction to electrodynamics (Ch. 1-7 of Griffiths, with only cursory coverage of Ch. 7). Students were assigned eight weekly homework sets and contributed to weekly collaborative solution sets. They also took one midterm and one final exam, and optionally submitted exam revisions (except in cases of poor initial performance, where revisions were mandatory).

<u>Classical Mechanics</u>: The texts used was John Taylor's *Classical Mechanics*. Topics included oscillations, calculus of variations, Lagrangian mechanics, two-body central force problems, mechanics in non-inertial reference frames, rigid body rotation, coupled oscillators and normal modes, Hamiltonian mechanics, and a brief introduction to special relativity. Students were assigned eight weekly homework sets and contributed to weekly collaborative solution sets. They also took one midterm and one final exam, and optionally submitted exam revisions (except in cases of poor initial performance, where revisions were mandatory).

<u>Optics:</u> Students engaged in a series of activities, primarily *Physlet*[®] *Physics 3E: Optics* simulations (chapters 32-39), with some LabVIEW Runtime simulations drawn from Chapters 10 and 11 of W. F. Smith's *Experimental Physics*. The simulation work was supplemented with some hands-on qualitative explorations of polarization and diffraction using simple take-home kits. Background readings from OpenStax *University Physics* and Justin Peatross and Michael Ware's *Optics* informed the simulation work. Topics included electromagnetic waves, geometric optics and simple applications, interference, diffraction, and polarization (including the Jones matrix and Jones vector formalism). Students submitted answers to the Physlet problems and questions from Smith.

In the spring quarter of Physical Systems and Applied Mathematics, students undertook full-time study of the quantum mechanics, statistical mechanics, and combinatorics. Students opted to study some or all of the available program subjects. All lecture content and workshop work occurred remotely via Zoom.



OFFICIAL TRANSCRIPT DOCUMENT

Hom, Jacob Tyler

Last, First Middle

A00412104 Student ID

Evaluation of student achievement in quantum mechanics and statistical mechanics was based primarily on two exams and optional exam revisions, supplemented by completion of student-selected problems from weekly homework assignments. For Combinatorics, evaluation of student learning was based on weekly homework assignments, two exams, and optional exam revisions.

<u>Combinatorics</u>: The text used was Fred S. Roberts and Barry Tesman's *Applied Combinatorics*, 2nd edition. Topics included permutations and combinations, occupancy problems, sampling problems, the pigeonhole principle, discrete probability, graph theory, generating functions, recurrence relations, and the principle of inclusion/exclusion (selected sections from Ch. 2, 3, 5, 6, and 7). Students were assigned seven weekly homework sets. They also took one midterm and one final exam, and optionally submitted exam revisions.

<u>Quantum Mechanics:</u> The text used was Mark Beck's *Quantum Mechanics: Theory and Experiment*. Topics included the postulates of quantum mechanics (developed through study of polarization states of single photons), operators, expectation values, commutation and indeterminacy relations, spin-1/2 particles, angular momentum operators (including raising and lowering operators), eigenvalues and eigenstates, two-particle systems and entanglement, unitary time evolution operators and the time-dependent Schrödinger equation, position and momentum operators, wave functions of particles in position and momentum space, the Schrödinger equation in one dimension (including square well potentials, potential barriers, and tunneling), the quantum harmonic oscillator (wave functions, creation/ annihilation operators, Fock states and coherent states), and the Schrödinger equation in three dimensions (central potentials and the hydrogen atom). From the text this encompassed almost all of chapters 1-13 plus some complements. Students were assigned nine weekly homework sets. For each week they were asked to turn in two selected problems. They also took one midterm and one final exam, and optionally submitted exam revisions.

<u>Statistical Mechanics</u>: The text used was Daniel V. Schroeder's *Thermal Physics*. Topics included energy, heat and work; the equipartition theorem; the Second Law of Thermodynamics introduced via study of Einstein solids, systems of paramagnets, and ideal gases; the relationships among entropy and various physical quantities (temperature, pressure, chemical potential; idealized heat engines and refrigerators; thermodynamic potentials and phase transitions; Maxwell relations; Boltzmann statistics, the partition function and its applications; and quantum statistics (including applications to Fermi gases and blackbody radiation (Chapters 1-3,6, and selections from 4, 5, and 7). Students were assigned eight weekly homework sets. For each week they were asked to turn in two selected problems. They also took one midterm and one final exam, and optionally submitted exam revisions.

EVALUATION:

Written by: John M. Caraher, Ph.D.

In linear algebra, Jacob showed a good apprehension of the material on the midterm but poor grasp of the material on the final exam. Jacob submitted corrections to the final exam that displayed a just adequate understanding of the concepts. Jacob submitted four of the assigned weekly homework problems and contributed three detailed solutions to the community-contributed solutions document. Overall, Jacob has a marginally sound foundation in linear algebra. Further review of this material would be helpful to succeed in more advanced work.

In differential equations, Jacob showed a poor understanding of the material on the midterm and final exams. Jacob submitted corrections to the final exam that displayed a still-inadequate grasp of the concepts. Jacob submitted three of the assigned weekly homework problems. Overall, Jacob has not shown evidence of adequate preparation for further work requiring knowledge of ordinary differential equations.

INFORMATION FROM THIS RECORD MAY NOT BE RELEASED TO ANY OTHER PARTY WITHOUT OBTAINING CONSENT OF STUDENT



Last, First Middle

A00412104 Student ID

In multivariable and vector calculus, Jacob showed just adequate understanding of the material on the midterm and poor understanding on the final exam. Jacob submitted corrections to the final exam that displayed a just adequate of the concepts. Jacob submitted three of the assigned weekly homework problems and contributed one detailed solution to the community-contributed solutions document. Overall, Jacob is poorly prepared for further advanced work requiring a background in vector calculus. The quality of work was just adequate to earn credit, but the level of knowledge displayed is not truly sufficient to move on to further advanced work.

In seminar, Jacob was an active participant in discussions. Jacob submitted most of the required written assignments.

In electricity and magnetism, Jacob showed inadequate understanding of the material on the midterm exam. On the final exam Jacob's initial work was also inadequate, but exam revisions reflected good grasp of the material. Jacob turned in five of the weekly homework problems. Overall Jacob's work was just sufficient to earn credit, but Jacob should revisit this material before proceeding to any more advanced academic work that relies on an understanding of upper-level undergraduate electricity and magnetism

In optics, Jacob turned in three assignments showing a satisfactory mastery of the material. This just sufficed to earn credit.

In combinatorics, Jacob's work was minimally sufficient for credit. Jacob turned in less than half of the assigned homework; the work Jacob submitted would have benefited from significantly more attention to readability and to explanation of the underlying ideas. Jacob's midterm exam was not passing work, showing limited exposure to the ideas from the first half of the quarter. Jacob's final exam was a stronger effort, showing some good thinking about various topic areas, and Jacob did some additional thoughtful work on revisions to that exam.

In quantum mechanics, Jacob's midterm exam showed inadequate understanding of the material. Jacob showed a basic mastery of the skills and concepts on the final exam and the revisions submitted. Jacob should revisit this material before engaging in further study in quantum mechanics, or subjects that rely on understanding upper-level undergraduate quantum mechanics; nevertheless, Jacob did demonstrate enough understanding to earn credit.

In statistical mechanics, Jacob's midterm demonstrated an adequate grasp of the concepts, while Jacob's final exam and revisions showed a weak understanding of the material. Jacob should revisit this material before engaging in further study in statistical mechanics, or subjects that rely on understanding upper-level undergraduate statistical mechanics; nevertheless, Jacob did demonstrate enough understanding to earn credit.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 40

- *4 Linear Algebra
- 4 Concepts of Differential Equations
- *4 Multivariable and Vector Calculus
- *2 Seminar in Applied Mathematics and Physics
- *6 Electricity and Magnetism
- *4 Optics
- 4 Combinatorics
- *6 Quantum Mechanics
- *6 Statistical Mechanics



FACULTY EVALUATION OF STUDENT ACHIEVEMENT The Evergreen State College - Olympia, Washington 98505

OFFICIAL TRANSCRIPT DOCUMENT

Hom, Jacob Tyler

Last, First Middle

* indicates upper-division science credit

Student ID



OFFICIAL TRANSCRIPT DOCUMENT

Hom, Jacob Tyler

Last, First Middle

A00412104 Student ID

March 2020 - June 2020: Matter and Motion

4 Credits

DESCRIPTION:

Faculty: Vauhn Foster-Grahler, MS, M.Ed.

Calculus and Analytical Geometry III was embedded in the full-time program, Matter and Motion. Students studied sequences and series, including tests for convergence, power series, and Taylor and Maclaurin Series. In addition, students learned the concepts and procedures related to R3 including vectors, dot and cross products, lines, planes, surfaces, spherical and cylindrical coordinates, and the gradient and directional derivative. Students were introduced to multivariable calculus including level curves, partial derivatives and multiple integrals. Students worked with these concepts and procedures algebraically, numerically, graphically, and verbally. There was an emphasis on context-based problem solving and collaborative learning. Students used Mathematica to complete a group project that modeled cancer tumors in spherical coordinates. Due to the Corona Virus pandemic, instruction was held remotely and all assessments were completed as take-home exams. Text: James Stewart. Calculus: Concepts and Contexts, 4th Ed. Chapters 8-10 and parts of 11 and 12. The students' exams were assessed and self-assessed on the following eight outcomes:

- 1. Used correct mathematical notation.
- 2. Used appropriate mathematical procedures.
- 3. Developed and/or correctly interpreted mathematical models.
- 4. Used technology appropriately to investigate and solve problems.
- 5. Linked algebraic, graphic, verbal, and numeric representations and solutions.
- 6. Demonstrated an understanding of functions.
- 7. Used logical and correct critical reasoning.
- 8. Communicated mathematics for the clarity of the receiver.

EVALUATION:

Written by: Vauhn Foster-Grahler, MS, M.Ed.

Jacob was present in class and in breakout rooms. Jacob's written take-home assessments inconsistently demonstrated satisfactory performance for each of the outcomes above for the entire course content. Jacob did not complete the project using Mathematica to model cancer tumors in spherical coordinates. Jacob has a keen intellect. With more consistent effort, Jacob is marginally prepared for more advanced mathematics.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 4

4 - Calculus and Analytical Geometry III



Last, First Middle

A00412104 Student ID

January 2020 - March 2020: Physics II: Electromagnetism

4 Credits

DESCRIPTION:

Faculty: Allen Olson

This course provided a standard introduction to the physics of static electricity, current electricity, magnetism, and electromagnetism. Mathematical approaches to problem solving focused on conceptual understanding and algebraic manipulation with occasional hints at calculus when calculating rates of change. Laboratory activities included introductory verification labs with minimal work on experimental design. The online OpenStax *College Physics* text by Urone and Hinrichs was used in combination with was the twelfth edition of *Schaum's Outline of College Physics* by Eugene Hecht.

The course was divided into four sections. The first covered static electricity including how charges interact with both charged and neutral matter, how objects can become charged, and how to solve introductory problems involving electric force, fields, and potential. We then covered simple electrical circuits. Students gained experience connecting simple circuits; measuring voltage, current, and resistance; and calculating expected values for voltage, current, and power in series and parallel circuits involving voltage sources and resistors. The third section covered magnetic fields and their interactions with charges and currents including applications in electromagnets, motors, generators, transformers, and mass spectrometry. The last section covered capacitance, inductance, and time-dependent circuits as well as a very brief introduction to electromagnetic waves.

EVALUATION:

Written by: Allen Olson

Jacob Hom attended class regularly and seemed genuinely interested in the topics of this course. He completed multiple exams through which he demonstrated good understanding of the first two sections of the course and fair understanding of the last two sections. On his final exam, he made only a couple conceptual errors on multiple choice questions. He completed computational exercises involving the Lorentz force and Ohm's law. His solutions effectively used standard notation and usually had only a few computational errors. Jacob participated in class when given lab activities or practice exercises to complete in group settings. However, outside of class, he completed almost no assignments. That is an area to focus on for improvement in future quarters. Jacob has clear potential and a good foundation on which to build future studies.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 4

4 - Physics: Electromagnetism (Non-Calculus)



Last, First Middle

A00412104 Student ID

September 2019 - December 2019: Statistics I

4 Credits

DESCRIPTION:

Faculty: Alvin Josephy, MES

Students in Statistics One learned the basics of descriptive and inferential statistics. Statistical concepts covered in depth included central tendency, variance, spread and shape of distributions; other concepts included the normal distribution, standardizing scores, correlation, regression, experimental design, confidence intervals, and hypothesis testing. Understanding of these concepts was reinforced and evaluated through four Excel labs, homework assignments, midterm and final exams, and individual presentations by students of popular media articles that utilized statistics. In addition, students worked in groups to provide a narrative discussion using statistics to "tell a story" about a topic chosen by the students. The combination of these exercises was ultimately intended to provide students with an appreciation of the use of data in making informed decisions in the real world.

EVALUATION:

Written by: Alvin Josephy, MES

Jacob Hom completed the requirements of this introductory statistics course, doing good work. His work on the class exams was well done. Jacob presented an article that discussed how having children affects the length of your life. In general having children can be expected to increase your life expectancy by one to three years. Adopting a child can be expected to increase your life by three years. The more children you have the longer, you can expect to live. Jacob worked with his group on a presentation that considered incarceration rates, national and global. Jacob focused on international data, which showed that rates in the US far exceed any other nations in the world. As evidenced by his work in this class, Jacob is prepared to do more advanced work in statistics.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 4

4 - Statistics



Last, First Middle

A00412104 Student ID

September 2019 - June 2020: Mathematical Systems

38 Credits

DESCRIPTION:

Faculty: Rachel Hastings, Ph.D., Cleveland Waddell, Ph.D.

Mathematical Systems was a year-long upper-division program integrating several areas of pure mathematics. Students studied all or some of the following topics: Real Analysis, Euclidean and Non-Euclidean Geometry, Linear Algebra, Abstract Algebra, Topology, Complex Analysis and the history, philosophy, and culture of math and math education in a way that took note of overlap between these areas, with a special focus on the nature and construction of mathematical proofs. Evaluation of student work was based on: weekly homework in all areas; midterm and final examinations each quarter in Real Analysis, Geometry, Topology, Abstract Algebra, Complex Analysis, and Linear Algebra; seminar and workshop participation; writing assignments; and final projects and presentations. In-class activities included lectures, student presentations of proofs and homework solutions, student-led critique of solutions, seminar discussions, and collaborative problem-solving.

The Real Analysis segment was based on the text *Understanding Analysis* by Abbott (Chapters 1-3 in fall, Chapters 4-7 in winter). In the fall quarter, we covered elementary set theory and logic, proof techniques, completeness, sequences, and basic topology of the real numbers. In the winter quarter, we covered sequences and series, limits, derivatives, power series, and integration. Students took 2 exams each quarter, and 4 quizzes in winter, as well as submitting weekly homework each quarter.

In Geometry we worked from Greenberg's *Euclidean and Non-Euclidean Geometries: Development and History.* We covered Chapters 1-7 in fall quarter, including incidence geometries, Hilbert's axioms, and neutral geometry, before working through the development of non-Euclidean geometry with a historical approach. We then covered the independence of the parallel postulate, focusing on the Poincaré disk model of hyperbolic geometry. Students submitted weekly homework, choosing a special topic for the final assignment and sharing their results in class.

In Abstract Algebra we worked from Gallian's *Contemporary Abstract Algebra* (9e). We covered Chapters 0-10 in winter and Chapters 11-19 in spring, including groups, subgroups, cyclic and permutation groups, cosets, Lagrange's Theorem, isomorphism, external direct products, homomorphism, rings, integral domains, ring homomorphisms, polynomial rings, factorization, and an introduction to fields. Students submitted weekly homework, took 5 quizzes and 3 exams. At the end of spring quarter they selected an extension topic for independent learning and presentation to the class.

The Linear Algebra portion of the class covered vectors in 2- and 3-dimensions, axioms of abstract linear spaces, span, linear independence, bases, dimension, Gaussian Elimination, and inner product space axioms. This portion of the program was conducted using an inquiry-based learning methodology (described below). Students submitted weekly turn-in problems, gave 4 in-class presentations, and took 2 exams.

The Topology portion of the class covered sets, functions, topologies, basis of a topology, continuity and homeomorphisms, and subspace, product, quotient topologies, metric spaces, compact and connected sets, separability, and the fundamental group. The point-set topology work (15 weeks) was conducted using an inquiry-based learning methodology (described below); in algebraic topology (5 weeks) we worked from Munkres' *Topology*. Students submitted weekly turn-in problems, gave 8 in-class presentations, and took 4 exams.

In Complex Analysis, we worked from Beck et al.'s *A First Course in Complex Analysis*, covering Chapters 1-4 as a class, and some later material through independent projects at the end of the quarter.



🖾 The Evergreen State College - Olympia, Washington 98505

Hom, Jacob Tyler

Last, First Middle

Student ID

A00412104

Topics included complex arithmetic, derivatives, and integrals; exponential, log, and Mobius functions; and a look at Cauchy's Theorem. Students submitted weekly homework and took two tests. In the last two weeks of the quarter they selected extension topics to cover in final project work, and gave 10-minute presentations of their learning.

The areas covered by Inquiry-Based Learning methodologies involved a student-driven classroom experience. Instead of working from a traditional textbook, students were provided with a packet of materials consisting of the statements of definitions, problems, and theorems, supplemented at times with brief explanations. Students were then tasked with solving the problems and proving the theorems. Class time was spent on student presentations of solutions to problems and proofs of theorems; peers were responsible for providing feedback and critique. Each student was required to present (either individually or in pairs) four (in fall) or six (in winter) solutions in class during the quarter. Additionally, students submitted a carefully written solution to one of the homework problems each week. The faculty role was limited to giving feedback on written work, consultation outside of class time, and assistance with facilitation of the process (not content) of in-class work. Students were therefore required to take an unusually active role in constructing for themselves the content of this work and upholding standards of clarity that were acceptable to the group.

In our fall study of the History of Mathematics, we read Chapters 1, 5, 6, 8 in *Euclidean and Non-Euclidean Geometries: Development and History* by Greenberg; and 7 chapters of Joseph's *The Crest of the Peacock: Non-European Roots of Mathematics*, covering material on Egyptian, Mesopotamian, Indian, Chinese, and Islamic mathematics. Each student wrote weekly seminar notes, and in one of the weeks wrote a 3-page research paper. Using their research as a starting place, they also served as a co-facilitator of one seminar meeting. Class time was spent in small-group and large-group discussions of the reading. Students also wrote a final 6-page paper in which they investigated the significance of an important historical figure and/or key mathematical result encountered in our reading. For both papers, students participated in peer-review activities in class or on-line.

In our winter study of the Philosophy and culture of mathematics, our weekly readings covered a range of topics including an introduction to the traditional schools of thought within the philosophy of math, including intuitionism, Platonism, and formalism. Students also had the opportunity to propose readings and facilitate seminars on a range of topics, including math education and ethics as well as philosophical issues. Students wrote a final paper of 7-8 pages on a topic of their choosing within the philosophy and culture of math.

Our spring quarter seminar included 5 weeks of Math Education (with readings from Robert Moses' *Radical Equations*, Boaler's *Mathematical Mindsets*, and other excerpts and articles) and 5 weeks of Mathematical Fiction (by Hofstadter, Borges, Egan, Abbott, Oulipo, and others). Students annotated our texts online to share notes and questions and start off our discussion, and then followed up with in-class discussion. Students also wrote a 4-page research paper on math education and a 4-page mathematical fiction essay.

EVALUATION:

Written by: Rachel Hastings, Ph.D. and Cleveland Waddell, Ph.D.

In Mathematical Systems, Jacob exhibited some good interest and perfect attendance, and contributed to the class with a friendly and open approach to collaboration. He often struggled to grasp the material, but showed strong tenacity, and by spring quarter he was able to demonstrate improved levels of success. His good humor and consistent presence made him an asset to the learning community. He submitted homework regularly in fall and winter, and struggled more with this during the remote learning context in spring quarter (due to a global pandemic). His homework showed a need for additional work in understanding the nature of a mathematical proof; computational problems tended to lead to more



Last, First Middle

A00412104 Student ID

success. He has shown growth in his ability to work with mathematical logic, and this is an area for him to continue to work on. Similarly with his writing, he showed improvement in his editing and organization as the year progressed and is encouraged to continue to work more on his writing skills in order to be able to communicate his ideas effectively in the context of essays and in mathematical proof. Overall, despite the extra challenge of the pandemic, Jacob showed a lot of perseverance this year and a pattern of improvement as a result.

Spring quarter Complex Analysis went pretty well for Jacob. In the remote learning context, he didn't submit homework regularly but at the end of the quarter he made a significant effort to fill in the gaps. His homework could use more detail to show his reasoning process. He also passed both tests, showing a satisfactory level of understanding of the material.

Jacob's fall work in linear algebra showed some effort, and limited success with the material. Jacob submitted four of the eight turn-in problems. He did all four in-class presentations, and in these he was successful at generating useful conversation and participation from the class, through his open and frank approach to the work. This was very helpful to the group. Jacob's solutions to problems and his work on exams showed that he struggled with the logic of proofs and the definitions that formed the backbone of the subject area.

Jacob didn't really seem to grasp much of the fall Real Analysis material. Though his work showed some improvement over the quarter, he was not successful on any of the exams. He did turn in all homework on time and was willing to participate in class discussions.

Jacob had limited success in Geometry. He submitted homework in most weeks, attempting the majority of the problems on each assignment. His work tended to be very brief and offered a sketch of his ideas; more work was needed to develop these ideas into proofs. Jacob's exam performance was weak in this area.

Jacob's work in Abstract Algebra was mixed, but improved from winter to spring. He showed a good facility for computational problems, and he demonstrated a reasonable understanding of some of our key concepts. He needs more work on proofs, both in terms of mathematical concepts and sentence structure. Jacob submitted homework regularly in winter. In spring he submitted a couple of assignments on time but most were submitted several weeks late, at the end of the quarter. He took all five of the quizzes and results were mixed but overall weak, and his midterm exams were weak. His winter final exam had a low passing score but his spring final was satisfactory. Jacob can at times work well with the ideas in this subject area, and is encouraged to work on the logic and writing skills needed for successful proofs.

Jacob studied proof methods with a focus on mathematical analysis. He used Abbott's *Understanding Analysis* and Chapters 1-7 of Solow's *How to Read and Do Proofs* for this purpose. He submitted homework assignments throughout the quarter, and made significant progress in his use of mathematical notation and his ability to identify an appropriate proof technique. He is encouraged to continue to work on this area, and in particular the needed writing skills to develop clear sentence structures within a proof.

In fall quarter, Jacob participated occasionally in our large group seminar conversations, and appeared to be more active in small group discussions. He submitted brief notes on the readings in most of the weeks, and did not participate in our online peer review Jacob's first paper focused on the mathematical achievements of ancient Egyptians. The paper had strong content and was quite organized. It could use citations and more fine-tuning of sentence structure. He also submitted a rough draft towards a final paper.



🖾 The Evergreen State College - Olympia, Washington 98505

Hom, Jacob Tyler

Last, First Middle

A00412104 Student ID

Jacob submitted seminar notes in each week of winter quarter, and these gained detail as the quarter progressed. He also submitted the paper draft, and participated in our online peer review. Jacob's final paper in winter quarter explored the topic "Is there a possibility that numbers do not exist?" The paper included quite a number of intriguing directions of exploration, and the research covered some great source material. However, its readability was hampered by the need for significantly more editing, especially of sentence structure, overall structure, and clarification of the thesis.

In our spring seminar, Jacob was present for all of our class meetings but his level of engagement with the texts was unclear. He did offer some brief remarks through annotation of some of the texts, and participate occasionally in discussions. In the papers, however, Jacob did very well in spring quarter and showed marked improvement in his writing. His Math Education paper was quite well edited and presented a good argument about the benefits of technology in the classroom. His Mathematical Fiction piece was a clever and humorous detective story following the trail of the "Mathfia" crime family.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 38

- 4 Euclidean and non-Euclidean Geometry
- 4 Introductory Real Analysis
- 4 Linear Algebra
- 3 Seminar: History of Mathematics
- 4 Introduction to Mathematical Proof
- *7 Abstract Algebra
- *4 Complex Analysis
- 4 Seminar: Philosophy of Math
- 4 Seminar: Math in education and literature

* indicates upper-division science credit



Last, First Middle

A00412104

Student ID

April 2019 - June 2019: Calculus and Analytical Geometry III

4 Credits

DESCRIPTION:

Faculty: Vauhn Foster-Grahler, MS, M.Ed.

In Calculus and Analytical Geometry III students studied sequences and series, including tests for convergence, power series, and Taylor and Maclaurin Series. In addition, students learned the concepts and procedures related to R3 including vectors, dot and cross products, lines, planes, surfaces, spherical and cylindrical coordinates, and the gradient and directional derivative. Students were introduced to vector calculus including partial derivatives and multiple integrals. Students worked with these concepts and procedures algebraically, numerically, graphically, and verbally. There was an emphasis on context-based problem solving and collaborative learning. Student's used Mathematics to model surfaces in R3. Text: James Stewart. Calculus: Concepts and Contexts, 4th Ed. Chapters 8-10 and parts of 11 and 12. The students' exams were assessed and self assessed on the following eight outcomes:

- 1. Used correct mathematical notation.
- 2. Used appropriate mathematical procedures.
- 3. Developed and/or correctly interpreted mathematical models.
- 4. Used technology appropriately to investigate and solve problems.
- 5. Linked algebraic, graphic, verbal, and numeric representations and solutions.
- 6. Demonstrated an understanding of functions.
- 7. Used logical and correct critical reasoning.
- 8. Communicated mathematics for the clarity of the receiver.

EVALUATION:

Written by: Vauhn Foster-Grahler, MS, M.Ed.

Jacob had excellent attendance and was always prepared for class. Jacob was an active and positive participant in groups and in the class. By the end of the quarter, Jacob's written assessments demonstrated near-satisfactory to satisfactory performance for each of the outcomes above for the entire course content. With improved consistency, attention to detail and notation, and increased study time, Jacob is marginally prepared to take advanced mathematics. Jacob was a pleasure to have in class.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 4

4 - Calculus and Analytical Geometry III



Last, First Middle

A00412104 Student ID

April 2019 - June 2019: Writing the South

16 Credits

DESCRIPTION:

Faculty: Kristin Coffey, Ph.D. and Bradley Proctor, Ph.D.

Writing the South combined the fields of U.S. history and creative writing to explore the U.S. South. The program was reading and writing intensive. It required a substantial amount of intellectual engagement by students as well as both individual and collaborative work.

In-class program activities included workshops, presentations, and seminars. Workshops introduced students to: existing secondary historical literature on the U.S. South, historical methods and digital repositories of primary sources, methods of drafting critical and creative writing, and strategies to successfully peer-review and revise drafts. Presentations included instruction in literary and craft analysis, discussions of twentieth-century southern short stories, highlights of major literary scholarship of fiction of the U.S. South, and the histories of the antebellum South, the Civil War and Reconstruction, Jim Crow segregation, and the civil rights movement. Students listened to selections by southern musicians, including examples of gospel, blues, jazz, country music, and rap. These selections prompted conversations about major themes related to the program. During all in-class activities, students were encouraged to visually capture the major program themes on our "theme mural."

In-class seminar discussions analyzed the assigned readings. These included the novels: *Absalom! Absalom!* by William Faulkner, *Beloved* by Toni Morrison, and *Salvage the Bones* by Jessmyn Ward, as well as the non-fiction historical works *Proud Shoes* by Pauli Murray, and *Ties that Bind* by Tiya Miles. Students also read numerous short stories by authors Peter Taylor, Flannery O'Connor, Alice Walker, Eudora Welty, Zora Neale Hurston, and various historical chapters or articles by scholars W.E.B. Du Bois, Edmund Morgan, Jacquelyn Hall, and E. Patrick Johnson.

Writing assignments were designed to guide students towards a substantial research project. Students were to compile a research portfolio that included an initial proposal, a comparative book review, an annotated bibliography, and an ecoautobiography—a creative non-fictional place-based exploration of their own relationship to the theme of their final project. Final projects were to be grounded in primary and secondary source research about one aspect of the history of the U.S. South. From this research, students were to balance creative and critical historical writing, choosing a dominant genre but including both in their final draft. Each student thus crafted their own integrated essay of 12-15 pages that showcased fictional and non-fictional writing. Students were also required to write a mid-term essay that synthesize the program texts. After completing final papers, students were to create a visual presentation of an aspect of their projects and display them to classmates in a shared gallery. The program concluded with a potluck and final seminar discussion.

EVALUATION:

Written by: Kristin Coffey, Ph.D. and Bradley Proctor, Ph.D.

Overview

Jacob Hom did fair work this quarter in our program, completing a research-based critical and creative piece about the politics of the secession crisis of 1860. Though he occasionally might have engaged more deeply with the important themes and concepts of the program, his academic work was generally successful. Jacob was a model contributor to our learning community.

Attendance and Participation

INFORMATION FROM THIS RECORD MAY NOT BE RELEASED TO ANY OTHER PARTY WITHOUT OBTAINING CONSENT OF STUDENT



Last, First Middle

A00412104 Student ID

Jacob had excellent attendance in program activities, which included presentations, workshops, and seminars. Jacob was an active participant in discussions, offering constructive contributions to both small group and large class discussions. Jacob attended and participated in some meetings of his peer writing group, and then submitted most of the required summaries of peer group activities.

Written Work

Jacob completed all of the assignments for the research portfolio, though not always within the assigned deadline. His project proposal provided an interesting overview of his project. He then wrote a fair comparative book review that compared two books about the Civil War. Though the review did a good job of summarizing each book, it adopted an overly formal and complicated tone in its writing and included several significant grammatical errors. Jacob's ecoautobiography struggled to meet the requirements of the assignment. Though the essay had a strong description of a physical location, it lacked a clear connection to self/story. Jacob submitted a satisfactory midterm paper on the importance of family in southern literary narratives, but had similar struggles to other written work with regards to grammar, formatting, and sentence structure.

Jacob also completed a promising annotated bibliography of primary and secondary sources. This featured good citations, mostly in appropriate academic formatting, and included thorough annotations that explained sources and related them to his main project. Jacob's first project draft was thorough. The program consistently emphasized that writing is a recursive process that requires revision. Jacob embraced this concept with only some hesitation, and his final paper did not demonstrate enough receptivity to faculty and peer feedback. Jacob's final project explored the politics of sectional division and secession. His final draft included a critical essay about the politics of the sectional split that led to the Civil War, as well as an imaginative creative piece about Jefferson Davis. The piece was grounded in some good secondary historical research, though some shaky sentence mechanics undermined the overall effectiveness of the critical historical piece.

The faculty would recommend Jacob focus on tightening sentence mechanics and academic formatting as he proceeds as a writer and thinker.

Summary

Jacob's work this spring quarter was solid. The faculty were pleased to have him as a member of our learning community. We wish Jacob great success and happiness in the future.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 16

- 4 History of the U.S. South
- 4 Topics in Literature: Literature of the U.S. South
- 8 Composition and Critical Writing



Last, First Middle

A00412104

Student ID

January 2019 - March 2019: Calculus and Analytical Geometry II

4 Credits

DESCRIPTION:

Faculty: Vauhn Foster-Grahler, MS, M.Ed.

The course included the concepts and procedures of integral calculus including procedures for finding and applications of anti-derivatives. The students applied techniques of integration to polynomial, trigonometric, exponential, logarithmic, and rational functions and combinations of these. Students worked with a variety of application problems including volumes of solids of revolutions. The class emphasized collaborative learning and approaching problems algebraically, numerically, graphically, and verbally. The text was *Calculus: Concepts and Contexts*, 4th Ed. by James Stewart, chapters 5, 6, and part of 7. In addition to exams, the students were assessed and self-assessed on eight outcomes for each content area:

- 1. Used correct mathematical notation
- 2. Used appropriate mathematical procedures
- 3. Developed and correctly interpreted mathematical models.
- 4. Used technology appropriately to investigate and solve problems
- 5. Linked algebraic, graphic, verbal, and numeric representations and solutions
- 6. Demonstrated an understanding of functions
- 7. Used logical and correct critical reasoning
- 8. Communicated mathematics for the clarity of the receiver

EVALUATION:

Written by: Vauhn Foster-Grahler, MS, M.Ed.

Jacob had perfect attendance and was usually prepared for class. Jacob's written assessments inconsistently demonstrated satisfactory performance for each of the outcomes above for the entire course content. Jacob was able to successfully solve basic integrals and struggled with more complicated integrals and volumes of solids of revolution. Jacob was a positive and active member of groups and of the class. Jacob's final group project estimating the volume of a yam using empirical and analytical methods was well written and demonstrated thoughtful analysis. Jacob has a strong aptitude in mathematics and needs better study habits and attention to detail to be prepared for Calculus and Analytical Geometry III. Credit is awarded as marginal. Jacob was a pleasure to have in class.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 4

4 - Foundations of Calculus and Analytical Geometry II (Integral Calculus)



The Evergreen State College - Olympia, Washington 98505

Hom, Jacob Tyler

Last, First Middle

A00412104 Student ID

January 2019 - March 2019: Dangerous Readings

16 Credits

DESCRIPTION:

Faculty: Stacey R. Davis, Ph.D., History and Leonard Schwartz, Poetics

In the winter guarter of the program students pursued a rigorous regimen of readings in literature, history, and philosophy. The class engaged in a guarter-length reading of Homer's The Iliad, in Robert Fagles translation, and read essays on The Iliad by philosophers Simone Weil and Rachel Bespaloff. Related readings included American poet Alice Notley's The Descent of Alette, with its own epic ambitions. Historical study focused on the construction of identity in post-World War II Europe during the era of decolonization and in 19th and 20th century America. Works read included Mark Smith's How Race is Made: Slavery, Segregation and the Senses and Kristen Ross's Fast Cars, Clean Bodies: Decolonization and the Reordering of French Culture. Important readings in philosophy and the history of ideas included Simone de Beauvoir's The Second Sex, Frantz Fanon's The Wretched of the Earth, Freud's Civilization and its Discontents, and Alexander Kojeve on Hegel's notion of the master/slave dynamic. African-American poet Harryette Mullens' book Sleeping With The Dictionary allowed us to explore contemporary experimental formalism in its relationship to these themes. Towards the end of the guarter students read Alain Robbe-Grillet's novel Jealousy: this examination of the new novel was prefigured by Ross's history and by screenings of Jean Luc Godard's film Pierrot Le Fou. Our study of representations of war from *The Iliad* to Fanon in Algeria was also accompanied by screenings of *The Battle of Algiers*. Hiroshima Mon Amour and John Adam's opera Dr. Atomic. Students wrote two critical essays on this reading.

The main work of the quarter was an independent project. Students were asked to choose a subject they considered Dangerous Reading, and to research or creatively explore that subject on their own time. Each student was required to write a book review of a title related to their subject, and to submit that review, along with a prospectus or proposal, to faculty, as a way of honing the project. The projects themselves ended up varying widely, from closely researched historical studies of particular moments, to arguments about a controversial idea or social policy, to works of poetry or fiction; some projects combined elements of all three. At the end of the quarter each student presented his or her work to the class as a whole.

EVALUATION:

Written by: Stacey R. Davis, Ph.D., History

Jacob demonstrated good learning about the literature, European history and poetics he studied this quarter, and proved herself to be a dedicated student in all aspects of the program.

Jacob's attendance was excellence, and he contributed to seminar and all-program discussions with enthusiasm. Jacob's comments in such discussions were thoughtful reflections on the texts and theories at hand. In particular, he demonstrated a real interest in history, and the desire to compare historical events across time and place. Furthermore, his comments about specific passages in the literature he read and films he viewed were always nicely contextualized in light of historical considerations.

Jacob worked to refine his writing style this quarter. His essays always demonstrated his serious attention to the main ideas and arguments in the texts, but often grammar glitches made his analysis difficult to follow. By the end of the quarter, however, Jacob had clearly strengthened his ability to analyze specific metaphors and other details in the works of fiction he had read in light of themes pulled from more theoretical works like Simone de Beauvoir's *The Second Sex*. In particular, Jacob's analysis of Alice Notley's *The Descent of Alette* and Alain Robbe-Grillet's *Jealousy* contained some good insight into



A00412104

Last, First Middle

Student ID

character dynamics in both works. Jacob should continue to focus on strengthening his grammatical style so that in the future his ideas will shine even more clearly in his essays.

Jacob completed a successful first-year independent project this quarter on the American Civil War. After reading several key monographs on the history of the war, including James M. McPherson's *Battle Cry of Freedom*, as well as Confederate President Jefferson Davis' own account in *The Rise and Fall of The Confederate Government*, Jacob challenged himself to move beyond a standard history essay and to craft a creative piece in response to his research. The resulting work of counterfactual fiction imagined a triumphant South that moved quickly from victory to dictatorship. Here Jacob's piece nicely reflected his new historical knowledge in an original manner that highlighted his interest in the relationship between fiction and history. It was a solid foray into interdisciplinary studies.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 16

- 4 20th Century Intellectual and Social History in Europe
- 4 Literature: Homer's Iliad and Contemporary American Poetry
- 8 Individual Project in History: Crafting a Counterfactual Civil War Narrative



OFFICIAL TRANSCRIPT DOCUMENT

Hom, Jacob Tyler

Last, First Middle

A00412104

Student ID

September 2018 - December 2018: Calculus I

4 Credits

DESCRIPTION:

Faculty: Vauhn Foster-Grahler, M.Sci., M.Ed.

The course included the concepts and procedures of differential calculus including procedures for finding and applications of instantaneous rates of change and limits. The students applied techniques of differentiation to polynomial, trigonometric, exponential, logarithmic, and rational functions and combinations of these. In addition the students worked with a variety of application problems including describing functions, optimization, and related rates. The course emphasized collaborative learning and approaching problems algebraically, numerically, graphically, and verbally. The text used was *Calculus: Concepts and Contexts, 4th Ed.* James Steward, chapters 1-4. The students were assessed and self-assessed on eight outcomes for each content area:

- 1. Used correct mathematical notation
- 2. Used appropriate mathematical procedures
- 3. Developed and correctly interpreted mathematical models
- 4. Used technology appropriately to investigate and solve problems
- 5. Linked algebraic, graphic, verbal, and numeric representations and solutions
- 6. Demonstrated an understanding of functions
- 7. Used logical and correct critical reasoning
- 8. Communicated mathematics for the clarity of the receiver

EVALUATION:

Written by: Vauhn Foster-Grahler, M.Sci., M.Ed.

Jacob had excellent attendance and was almost always prepared for class. Jacob's written assessments were very inconsistent. At times, Jacob's work was very strong (Exam 2); at other times (Exams 1 and 3) Jacob's work did not demonstrate satisfactory performance for the outcomes above for that content. Jacob's in-class final exam demonstrated near satisfactory to satisfactory performance for each of the outcomes above for the course content. With improved study and consistency, Jacob is prepared to take Calculus and Analytical Geometry II. Jacob has a good aptitude in math, and I look forward to seeing the increase in focus that will help Jacob reach their potential. Jacob was a pleasure to have in class.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 4

4 - Calculus and Analytical Geometry I



Last, First Middle

A00412104

Student ID

September 2018 - December 2018: Teaching Through Performance

16 Credits

DESCRIPTION:

Faculty: Arun Chandra

In this one quarter program, students practiced linking the intellectual study of a subject to its realization as a musical/theatrical project. Through seminars and lectures, students learned about U.S. history, focusing on the period in between the two world wars, with an emphasis on popular history and social movements. In addition to scholarly articles covering key events and figures, students also read a number of fictional and theatrical works from the time period. At the beginning of the quarter, each student wrote a research paper in order to deepen their understanding of a topic of their choosing. After completing these papers, they collaborated in small groups to create a 10-minute performance, drawing on and forging connections between their individual research papers. The goal of this performance was to teach the audience something about this volatile and important period in U.S. history. Students prepared for this performance not just by writing their research papers, but also by developing two low stakes individual performances on their own.

The reading list included: excerpts from Zinn's *People's History of the United States* and *Voices of a People's History of the United States*; Addams, Balch, and Hamilton, *Women at the Hague*; Upton Sinclair, *Flivver King*; Hughes, *Scottsboro, Ltd.*; Bernard Shaw, *Arms and the Man*; Bertolt Brecht, *Fear and Misery of the Third Reich*; Sinclair Lewis, *It Can't Happen Here*; contemporary essays by Orwell, Eisler and Brecht, and recent scholarly articles on feminism, fascism, civil rights, and labor rights.

The class attended two performances in Seattle: *Arms and the Man* by Bernard Shaw, and *A People's History of the United States* by Mike Daisey. At the Daisey performance, the class was able to speak with the author and performer after his performance.

EVALUATION:

Written by: Arun Chandra

Jacob has been a reliable and conscientious student this past quarter. He completed all the assignments, and was a strong participant in the final group performance project who grew a great deal over the course of their rehearsals.

His research paper took up the issue of U.S. involvement in Central America. He did a good job at reading and quoting a number of sources. He took on the *very* challenging project of trying to address 150 years of history in a 5-page paper, and as a result, made many broad statements that were rather light-weight. In addition, some of the facts he stated were only vaguely related to his central point. He needs to learn how to edit his own work, and how to use his language to strengthen his arguments rather than weaken them. To his credit, Jacob took advantage of some extra work on writing over the course of the quarter, and asked for models of writers who would politically support his points.

Jacob participated in a group performance project focused on the 1921 Blair Mountain uprising, a clash between labor organizers and coal company supporters. The group included several members with significant performance backgrounds, two of whom had a strong vision for their final script. This collaboration initially produced a somewhat unwieldy piece that was well over time, but in response to faculty feedback the group made a significant number of cuts, resulting in a much tighter script. Their final script was bookended by two scenes set in a company-owned church, which established a clear sense of place. In the middle of the performance the actors showed the miners marching into battle, set to the rhythm of an original rap written by one of the members of the group. This high-intensity sequence was then suddenly cut off by the sound of gunshots as some actors fell to the floor while the rest froze.



🖾 The Evergreen State College - Olympia, Washington 98505

Hom, Jacob Tyler

Last, First Middle

A00412104 Student ID

This sequence effectively allowed the performers to evoke the violence with which the miners' revolt was suppressed in an imagistic way. I was impressed by the way the group negotiated an initial set of conflicts around the focus of the script, and gave all members, including less experienced performers, significant speaking roles. I also appreciated the way this group recruited extras from another performance group for the final two scenes, and reciprocated by serving as extras in theirs. Although it was difficult to include all the elements of the uprising in such a short piece, this piece successfully conveyed the tragic impact of anti-union violence on one West Virginia community. All members of this group were off book by the final week of rehearsal and gave two strong public performances. This was Jacob's first attempt at participating in a theater project, and he performed very well. At the beginning, he was hesitant and nervous, but by the end, he had all his lines memorized, was able to convey them with a rural accent, and was able to convey his character well. Of all the students in the class, Jacob improved the most in his acting and performing — bravo!

It's been good having Jacob in the class. He is a diligent and regular student, is opinionated and not afraid to speak up, and he works very well in group projects. He needs to improve his language usage and writing, but he's doing very well as a first quarter freshman.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 16

- 6 Readings in U.S. History 1910-1945
- 4 Script writing
- 6 Musical and Theatrical performance

EVER GREEN

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 guarter credit hou

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.

rs

- 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.