RECORD OF ACADEMIC ACHIEVEMENT

The Evergreen State College - Olympia, Washington 98505

OFFICIAL TRANSCRIPT DOCUMENT

Ortega, Athena Fidelia — A00058295

Last, First Middle — Student ID

Former Name(s): Ortega, Athena F;

DEGREES CONFERRED:

Bachelor of Arts — Awarded 16 Jun 2017

TRANSFER CREDIT:

Start	End	Credits	Title
03/1998	12/2013	90	**South Puget Sound Community College**

EVERGREEN UNDERGRADUATE CREDIT:

Start	End	Credits	Title
09/1995	12/1995	3	**The Search for Meaning** *3 - Beginning Drawing*
09/2015	06/2016	36	**Branching Out: An Ethnobotanical Garden in Community** *3 - Botany* *2 - Ethnobiology* *4 - Pacific Northwest Ecology* *4 - Pacific Northwest Ethnobotany* *4 - Community Herbalism: Principles and Practices* *2 - Philosophy of Science* *4 - Plant and Pollinator Research* *2 - Indigenous History* *3 - Nature Journaling* *4 - Nature Photography* *2 - Writing* *2 - Community Development and Event Production*
09/2016	06/2017	48	**Food, Health, and Sustainability** *4 - Seminar on Issues of the Food System* *6 - Introduction to Genetics and Molecular Biology of Food with Laboratory* *6 - Introduction to Botany and Ecology of Food Crops with Laboratory* *4 - Seminar on the History and Culture of Food* *6 - Introduction to Nutritional Biochemistry and Physiology with Laboratory* *3 - Introduction to the Science of Food and Cooking with Laboratory* *3 - Introduction to Nutrition* *3 - Seminar on Food Fermentation* *4 - Introduction to Microbiology and Immunology with Laboratory* *5 - Introduction to Microbial Ecology and Fermentation of Food with Laboratory* *4 - Spring Independent Project: Vegan Cheeses*
04/2017	06/2017	4	**Senior Seminar** *4 - Writing: Critical Reflective Inquiry*

Cumulative

181 Total Undergraduate Credits Earned

Ortega, Athena Fidelia — A00058295

Last, First Middle — Student ID

I have been an active participant in the healthcare field for many years, which gave me a strong spiritual and social connection to people; leading me to seek depth in my relationship to the environment. This desire took me on a journey to Evergreen to explore an Ethnobotany program that fulfilled a link between people, plants, and place. I then furthered my education through a program called Food, Health, and Sustainability. I studied food from numerous perspectives, primarily from the natural sciences but also through sociological, historical, policy, and economic perspectives. My work in Indigenous Studies taught me that by honoring the connection between plants and people there is hope for a more sustainable food system within Western society by incorporating Indigenous knowledge and values.

When I studied the ecosystems of the Pacific Northwest along with Indigenous science and history, the connection to Ethnobotany fell into place. I became focused on understanding the wisdom of the earth and all of the gifts she has birthed, not for us to take as we please, but to live amongst and care for her as if she is our mother and all things are her children. I honored this idea while I tended to the Sayuyay Medicinal Sister Garden at the Longhouse on campus where I weeded, watered, procured and loved the plants needed to fulfill the replication of the Medicinal Garden at the Skokomish Indian Reservation. During this time, I gained knowledge of plant medicine; how to harvest the appropriate plant parts, how to make them into salves, tinctures, teas, etc. and how to heal myself and my local community.

My interest in the interrelation between people, plants, and health fostered the direction I wanted to take my studies. Food, Health, and Sustainability is the program that pulled my education together and gave me the opportunity to look at our food system through a scientific lens. I was introduced to conventional and sustainable agricultural practices, botany of plant foods, humane butchery of animals for food, food preservation techniques and cooking methods. I learned that the evolution of humans and the food we eat are tied at points where survival relied on each other, but today, Western society is trying to understand why there are so many unhealthy people, why the environment is so depleted, and what needs to change.

It’s time for humanity to face the consequences of a food system that is heavily masked by capitalism. Western society’s sustainability depends on those of us who find passion in a new standard of a future food system where the natural harmony of the ecosystem works so well with each other that no matter what part is observed; the soil, the plants, the animals, the air, the humans- all is nutrient rich and healthy from the other. My education has motivated me to be a part of the paradigm shift where humans become fully aware of the need to heal the land, which will provide us with delicious, nutrient-rich food, and in return, will heal the people.

Ortega, Athena Fidelia — A00058295
Last, First Middle — Student ID

April 2017 - June 2017: Senior Seminar

4 Credits

DESCRIPTION:
Faculty: Stephen Beck, Ph.D. (Philosophy)

The goal of this course was to guide students in critical reflection upon their undergraduate educations, so that they could write an academic statement suitable for inclusion in their transcripts. Students read several short selections regarding various features of a liberal arts education. They reviewed carefully the Six Expectations of an Evergreen Graduate and wrote a reflective essay on them in connection with their own education. They reviewed two sample Evergreen transcripts and had a seminar on their strengths and weaknesses. Working from records of their own transcripts, they created a map of their education. Each student gave brief presentations on both a text central to their education as well as an example of their best academic work. They participated in seminars on readings drawn from some students' studies. Students wrote an academic statement, gave peer responses to other students' statements, and made a minimum of three substantial revisions of their statement based on both peer and faculty response. Award of credit and evaluation is based on the level of engagement in both individual and group work as demonstrated through class attendance, participation, and all of the above work.

EVALUATION:
Written by: Stephen Beck (Ph.D., Philosophy)

Athena Ortega completed all course work and is awarded full credit. Ms. Ortega was a fully engaged and highly responsible member of the learning community. Other students commented appreciatively on her dedication to the success of the learning community. Over the course of the term, she reflected carefully on her own education. She wrote multiple drafts of her academic statement, which developed markedly in expressing her voice and stance with concision and clarity. The final version of the statement presents a coherent narrative of her education and is a good sample of her writing. It is ready for inclusion in her transcript.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 4

4 - Writing: Critical Reflective Inquiry

STUDENT'S EVALUATION OF PERSONAL ACHIEVEMENT

The Evergreen State College - Olympia, Washington 98505

OFFICIAL TRANSCRIPT DOCUMENT

Ortega, Athena Fidelia	A00058295
Last, First Middle	Student ID

Student Self Evaluation for Senior Seminar
04/2017 - 06/2017

I decided to take Senior Seminar for my final quarter at Evergreen. I originally wanted to fulfill credits, but found that I needed some guidance around my education and pulling together what I have done during my education, and where I will go with my degree. Working to create my academic statement over the quarter developed an understanding of what my future will look like and what it has meant to earn a degree from a liberal arts school like Evergreen. When I started this quarter, I felt that I needed to defend my education, and at the end of this course, I feel confident how to explain how my tailored degree has empowered me and my future.

Ortega, Athena Fidelia — A00058295
Last, First Middle — Student ID

September 2016 - June 2017: Food, Health, and Sustainability

48 Credits

DESCRIPTION:
Faculty: Donald Morisato, Ph.D. and Martha Rosemeyer, Ph.D.

Food, Health, and Sustainability was a full-time interdisciplinary program that explored different aspects of food, primarily through a scientific approach, but also included sociological, historical, policy, and economic perspectives. The curriculum in fall quarter focused principally on the botany and ecology of food crops, and on the genetic and molecular biological processes underlying classical plant breeding and genetically modified organisms (GMOs). Weekly activities included lecture, workshop, laboratory, field trips, seminar, and program potluck. Textbooks included Freeman et al. (2017), *Biological Science*, *Sixth Edition* and McGee (2004), *On Food and Cooking: The Science and Lore of the Kitchen, Second Edition*. Seminar readings included Pollan (2006), *The Omnivore's Dilemma: A Natural History of Four Meals*; Clapp (2016), *Food, Second Edition*; Schurman and Munro (2010), *Fighting For the Future of Food: Activists Versus Agribusiness In the Struggle Over Biotechnology*; and Nabhan (2004), *Food, Genes, and Culture*. Students were evaluated on the basis of their participation in workshop and seminar discussions, eight 2-3 page writing assignments, performances on a midterm and final exam, study questions and workshop problems based on the weekly lectures, and the organization and content of their portfolio, which included both laboratory and field notebooks. Field trips included visits to the Olympia Farmer's Market, Evergreen's Organic Farm, Squaxin Island Museum, and Munro Farm.

Despite our practice of eating food, we are not experienced as a society to interpret food as part of a plant or animal, or indeed to give much thought to food quality. In the botany and ecology strand fall quarter, students were introduced to conventional and sustainable agricultural practices, basic botany of plant foods, the concept of food quality, and ecological analysis of agriculture. An evolutionary approach to agriculture and crop domestication was emphasized. A field trip to Squaxin Island Tribal Museum and associated sites supported a lecture on Pacific Northwest Native American agriculture as a case study for developing a sustainable local food system. Ecosystem level analysis included the flow of energy from the sun through the food chain, as well as the cycling of nutrients such as nitrogen. Food chain pollution from pesticides and heavy metals was presented. The botany of vegetables, flowers and fruits, seed grains, and legumes that constitute most of the world's food supply was examined. Basic botany included vegetative and reproductive plant anatomy and was supported by three lab exercises where students also became familiar with stereo and compound microscopes for analysis at the organismal and cellular level. The cooking and tasting of vegetables, legumes, and grains was explored through lecture and by using Evergreen's food-grade science lab. For experiential learning, students participated in tomato and apple tasting sessions, as well as a two-day workshop to develop basic cooking skills with grains and beans while experimenting with different geographic flavor profiles.

In a second strand, food was considered from the perspective of genetics and molecular biology, as all foods arose through the process of evolution, either by natural or artificial selection. In the modern era, a striking reduction in the genetic diversity of crops and animal breeds has occurred as a result of industrial food production methods. In the first half of the quarter, the concept of genetic diversity was investigated through an introduction to evolutionary biology and classical genetics—chromosome behavior, Mendel's principles of segregation and independent assortment, and genetic linkage. In the laboratory, a long-term breeding project explored chromosome segregation using *Drosophila melanogaster* as the experimental organism; this exercise, which required significant independent thinking and lab work beyond the two scheduled sessions, involved the analysis of several genetic crosses and completion of a writing assignment. The aim of the second half of the quarter was to provide the background necessary to understand and assess technical aspects of genetically modified crops. Toward that goal, the topics of DNA structure and synthesis, transcription, translation, eukaryotic gene regulation, genetic engineering, and epigenetics were covered. Two laboratory sessions were devoted to gel electrophoresis and the

application of the polymerase chain reaction (PCR) to detect transgenic sequences in glyphosate-resistant soybean. Weekly workshops provided collaborative opportunities for students to apply analytical and quantitative reasoning skills to solve word problems dealing with topics introduced in lecture.

In winter quarter, the program investigated the chemistry of food and cooking, and aspects of nutrition, as well as some of the physiological processes underlying digestion, metabolic regulation, and sensory perception. Weekly activities included lecture, workshop, laboratory, seminar, and program potluck. Textbooks included Freeman et al. (2017), *Biological Science, Sixth Edition*; McGee (2004), *On Food and Cooking: The Science and Lore of the Kitchen, Second Edition*; and Whitney and Rolfes (2016), *Understanding Nutrition, Fourteenth Edition*. Seminar books included Laudan (2013), *Cuisine and Empire: Cooking in World History*; Mintz (1985), *Sweetness and Power: The Place of Sugar in Modern History*; Barber (2014) *The Third Plate: Field Notes on the Future of Food*; and Fisher (1954), *The Gastronomical Me*. Students were evaluated on the basis of their participation in workshop and seminar discussions, seven 2-3 page writing assignments, performances on a midterm and final exam, and the organization and content of their portfolio, which included both laboratory and food notebooks.

One strand of the program addressed the science of food and nutrition. While the previous quarter focused on foods from plants, this quarter included lectures and associated study questions on animals as food: eggs, meat and dairy products, with an emphasis on chemical changes with cooking. The majority of the class participated in a one-day pork butchery workshop which involved hands-on butchery and learning how to cook organ meats. Likewise, lectures on baking were reinforced by a lab on cookies that experimented with both the impact of rising agents and types of chocolate powder on pH. Other labs emphasized how vegetables cook (expansion of starch grains in potato); the use of browning reactions in making vegetable and meat stocks; and both starch-thickened sauces and emulsions through the production of classic sauces and mayonnaise. Students used their basic skill with the compound microscope developed last quarter to examine changes in cell structure with cooking and were required to maintain a food lab notebook. With respect to nutrition, lectures covered the physiological role, deficiency symptoms and food sources of water-soluble and fat-soluble vitamins, major and trace minerals, and antioxidants. Food quality was examined through the impact of plant and animal growing conditions on these nutrients. Two workshop problem sets focused on strengthening the quantitative aspects of nutrition and included the concepts of nutrient and energy density. Practical workshops taught basic cooking skills, experiential components of taste and smell, as well as the flavor chemistry of herbs and spices.

A second strand of the program focused on nutritional biochemistry and physiology. The first half of the quarter was devoted to introducing the chemical nature of the major macronutrients (proteins, carbohydrates, and lipids), and developing an understanding of how these biological molecules are used by the body to generate energy. The second half of the quarter provided an overview of the mechanisms used in cellular communication, with an emphasis on principles of chemical signaling, as exemplified by the regulation of metabolic homeostasis, and on concepts of neuronal signaling, as illustrated by the perception of taste and smell. The following topics were considered: the structure and function of proteins, including enzyme action and the prion hypothesis; the structure of simple and complex carbohydrates, including starch and fiber; the different classes of lipids and their connection to cardiovascular disease; the physiology of digestion; the chemistry of oxidation and reduction reactions; the biochemistry of metabolism, including cellular respiration and fermentation; principles of chemical signaling by steroid and polypeptide hormones; hormonal regulation of glucose homeostasis; principles of neuronal signaling; and the perception of taste and smell. Laboratory sessions were devoted to spectrophotometry and its application in measuring enzyme activity, and thin layer chromatography separation of plant pigments with antioxidant properties. Workshop sessions provided collaborative opportunities for students to apply chemical knowledge and analytical reasoning skills to solve word problems dealing with topics introduced in lecture.

Ortega, Athena Fidelia — A00058295
Last, First Middle — Student ID

In spring quarter, Food, Health, and Sustainability explored various aspects of the microbial world. The primary focus of the program was understanding fermentation, including the microbial organisms and biochemical pathways involved, as well as the cultural and historical context of traditional fermented foods. Another area of investigation was the interaction between microbes and humans, ranging from food safety and human disease, to the mutualistic relationship between the gut microbiota and human host. Weekly program activities in the 12-credit portion included lecture, microbiology or cooking lab, and a field trip or hands-on session; half of the weeks included seminar and a program potluck. Students could choose to undertake a 4-credit independent project or internship. The application of principles introduced in lecture was observed on field trips to an artisanal bakery, brewery, coffee roaster, sheep creamery, sauerkraut business, flour mill, maltster, and bread and cider labs of the Washington State University-Mt. Vernon, as well as the Thurston County Food Bank. Textbooks included Freeman et al. (2017), *Biological Science, Sixth Edition*; McGee (2004), *On Food and Cooking: The Science and Lore of the Kitchen*; and Katz (2012), *The Art of Fermentation*. Seminar books included Pollan (2013), *Cooked: A Natural History of Transformation*; Kurlansky (2002), *Salt: A World History*; and selected chapters from Yong (2016), *I Contain Multitudes: The Microbes Within Us and a Grander View of Life.* Tastings on our field trips included sauerkrauts, cheeses, and experiential learning about the “cupping” of coffee. Students were evaluated on the basis of their participation in seminar discussions, midterm and final exam, and the organization and content of their portfolio, which included laboratory and food notebooks and a field trip journal.

In one component, the interaction between microbes and food was examined from three angles: fermentation, food preservation, and food safety (particularly foodborne illness and how our food system contributes to it). Ecological principles were applied to the microbial interactions between organisms and the environment in competition, mutualism, and succession. Following an introduction to microbiology and microbial communities, lectures covered specific fermented foods and the processes that were involved in their production. Lab experiments provided an opportunity to test different fermentation conditions on kimchi by measuring pH and to practice streaking out single colonies from kimchi and dairy ferments for colony morphology. Lectures and demonstrations examined microbial populations involved in the specific ferments: dairy (yogurt, cheese, and cream cultures), grain and beans (bread, beer, tempeh, amazake), vegetable and beverages (beer, wine, ginger beer, kombucha, and saké) as well as tea and coffee. The history and theory of food preservation moved into practice in cooking labs where students learned to can and pickle, make ginger ale, kimchi, and amazake among other techniques.

In a second component, the involvement of microbes in fermentation and human health was studied through the principles of microbiology and immunology. Fermentation and microbial physiology were examined in lectures on bacterial and yeast metabolism, and bacterial genetics, including horizontal gene transfer. The relationship between bacteria and human health was addressed in lectures on the human microbiome, innate immunity, adaptive immunity, and host-microbiota interactions in the gastrointestinal tract. The initial lab introduced basic methods in microbiology, including the practice of sterile technique and observation of growth curves, while a subsequent lab involved measurement of carbon dioxide production during yeast fermentation under different conditions. Building upon molecular biology procedures introduced in fall quarter, students then carried out an extended experiment to identify individual bacterial colonies isolated from fermented foods, by PCR amplifying part of the 16S rRNA gene and analyzing the DNA sequence.

As part of the program, students were encouraged to carry out an independent research project or internship investigating a topic of significant personal interest related to food. In addition to regularly scheduled meetings with the faculty, students were required to maintain a laboratory notebook or library journal; summarize findings in a final paper of 5-10 pages and complete a brief reflective essay; and give a final ten-minute presentation to the program community. Details about the student’s project appear in individual evaluations.

Ortega, Athena Fidelia — A00058295
Last, First Middle — Student ID

EVALUATION:
Written by: Martha Rosemeyer, Ph.D. and Donald Morisato, Ph.D.

Fall Quarter

Written by: Martha Rosemeyer, Ph.D.

Hailing from Olympia, Athena is a senior in her second year at Evergreen, following a quarter of ethnobotany. She is interested in a career in holistic nutrition. Overall, Athena's work this quarter has been good.

Athena's portfolio of work this quarter was well organized, complete, and potentially useful as a resource in the future. She grasped well the important points in our seminar readings and was able to further seminar discussion at certain points with her thoughtful interventions when the discussion went off track. She articulates herself very well and all eight assigned papers answered questions on the seminar texts with accuracy and clarity. In the future, supporting her ideas more thoroughly and specifically using the text might be a goal.

In the genetics and molecular biology component of the program, my colleague Donald Morisato, Ph.D. writes: “Athena made some progress in her learning, showing a stronger grasp of the material covered in the first half of the quarter. Her portfolio contained very good lecture notes and conscientiously completed workshop problems. She was a serious participant in workshop discussions, who might have benefited from regularly attending the peer tutoring sessions. In the midterm exam, Athena demonstrated a strong understanding of Mendel's principle of segregation and Mendel's principle of independent assortment. Her grasp of human pedigree analysis and Darwin's theory of evolution by natural selection could have been strengthened. In the final exam, Athena showed some familiarity with transcription. She exhibited a weak understanding of DNA structure and replication, the genetic code, eukaryotic gene expression, and genetically modified crops. Athena was an engaged and careful worker in the laboratory. Her lab notebook showed good organization and contained relevant observations and results, although it would have benefited from including more scientific background and context. In the *Drosophila* project, Athena and her lab partner set up most of the genetic crosses successfully. She provided generally good explanations of the outcomes in her writing assignment.”

In the botany and ecology of food crops section of the course, overall Athena has demonstrated engagement and a good understanding of the concepts that might be refined as she deepens her knowledge of college level science. Her study questions were completed with an appropriate level of detail. Her midterm exam showed good knowledge of plant anatomy and taxonomy of crop plants, and partial understanding of crop domestication with other material in need of review. Her final demonstrated she understands the basic ecological concept of energy flow, the basic steps of evolution of pesticide resistance, but might review the changes in texture and color of plant material and plant starch with various techniques of cooking. She might benefit from greater attention to detail and attending tutoring sessions to not only increase her understanding but also her fluency in this new language! In the botany and food laboratory, Athena was a conscientious worker who came to class prepared and made connections with what she had learned in lecture. Her botanical drawings were good and well labeled. She reflected on seeing plant cells under the microscope for the first time, "So beautiful! Chaotic and organized at the same time!" Her taxonomic chart of vegetables and fruits with edible parts by family was good as far as it went, but would be more of a useful resource if complete.

Athena has made much progress this quarter in her learning about food systems and the associated science. Keep up the good work!

Winter and Spring Quarters

Ortega, Athena Fidelia — A00058295
Last, First Middle — Student ID

Written by: Donald Morisato, Ph.D.

Athena was a dedicated and serious student who made good progress in her learning during winter and spring quarters. While Athena was generally reserved in seminar, she was an active participant in small group conversations. Her seminar assignments consistently revealed a strong grasp of the main points that were supported by textual citations.

In the winter quarter nutritional biochemistry and physiology component of the program, Athena made fair to good progress toward understanding the topics introduced. Her portfolio contained very good lecture notes and responses to the workshop problems that matched the posted answers. For the midterm exam, Athena conscientiously prepared a detailed, color-coded reference sheet that contained chemical structures, definitions of terms, and key concepts. In the exam, she demonstrated a strong grasp of peptide bond formation and the prion hypothesis, as well as lipid digestion. Her knowledge of chemical principles, protein structure, lipid structure, and carbohydrate structure and digestion could have been strengthened. In the final exam, Athena exhibited a good grasp of some biochemical and physiological aspects of carbohydrate metabolism, including cellular respiration. Her understanding of lipid metabolism and the role of endocrine signaling in maintaining glucose homeostasis would benefit from further review. Athena was a serious worker in the laboratory. The quality of her lab notebook varied between experiments; the entries for the plant pigment lab, including the analysis and interpretation of results, were very good.

In the winter quarter science of food and nutrition portion of the program, my colleague Martha Rosemeyer, Ph.D. writes: “Athena was engaged and the quality of her work was fair. Her answers to weekly study question sets based on the lectures were fairly complete and detailed. Her work in the midterm exam demonstrated a good understanding of the impact of heat and acid on egg and milk proteins, and the nature of plant sugars, grain and potato starches, and chocolate with cooking. She might review how the US Farm Bill impacts the consumer diet. She participated in the pork butchery workshop, and on the final exam she demonstrated good knowledge of types of meat and how to cook them. With respect to human nutrition, her understanding of minerals, vitamins and antioxidants is somewhat general, and she might benefit from reviewing the quantitative application of the concepts of nutrient and energy density, though she had completed the class workshop correctly. One of the better parts of her exam articulated well how to grow crops for flavor and nutrition. An engaged worker, Athena’s cooking lab notebook showed pre-lab preparation. It was completed with answers to questions posed by the lab handout and reflective conclusions on the lab exercises.”

In the spring quarter microbiology and immunology component of the program, Athena made some progress in her learning. She missed two lectures and one workshop. Her well-organized portfolio included very good lecture notes and workshop problems that resembled the posted answers. In the midterm exam, Athena could have strengthened her knowledge of cell wall structure of Gram-positive and Gram-negative bacteria, as well as the chemical reactions underlying fermentation carried out by yeast and lactic acid bacteria. She would have benefited from further practice carrying out calculations involving serial dilutions and pH. In the final exam, Athena showed a good understanding of the concept of horizontal gene transfer in bacteria and some of the underlying mechanisms. She showed familiarity with innate immunity, including the role of pattern recognition receptors in generating an inflammatory response. Her knowledge of adaptive immunity could have been strengthened. She exhibited familiarity with the human microbiome, including how resident bacteria contribute to host metabolism. Athena always came to lab prepared. Her lab notebook contained good descriptions of the procedures and good analysis of the results.

In the spring quarter microbial ecology and fermentation part of the program, Martha Rosemeyer writes: “Athena’s work was fair but improved somewhat over the quarter. Her answers to study question sets based on the weekly lectures were completed with an appropriate amount of detail. On both the midterm

and final exams, she showed a good understanding of the principles and processes of ecology. On the midterm, she demonstrated a good grasp of ecological succession and mutualism applied to microbes, but might review competition. On the final exam, some of her best work was applying the concept of ecological succession to vegetable ferments identifying the organisms. She understands the role of the environment in directing succession. Her understanding of food system aspects of foodborne illness was excellent, but Koch's postulates and various methods of food preservation to prevent unfavorable microbial spoilage would benefit from review. She was able to integrate some of the seminar readings with lecture material, e.g., the role of salt in human history. She participated in the two food lab exercises; her kimchi-pH lab showed attentiveness in taking data over a 10-day period but would benefit from answering the questions in the lab handout and reflection on both the exercises. Her field trip notebook contained brief notes on our field trip venues."

For her spring quarter independent project, Athena learned how to make different styles of vegan cheese and created recipes that incorporated culinary medicinal plants for flavor and health benefits. Athena tried six recipes from different sources. For each trial, she carefully documented her observations about the appearance, texture, and flavor of the cheese. She found three styles of cheese that worked well with the addition of herbs—a fermented cashew cheese that resembled chevre in flavor and texture, a fermented cashew cream cheese, and a coconut milk-based cheese using agar to solidify and make sliceable. Athena gave an outstanding presentation of her experiments to the class. Speaking with great poise, she provided interesting information on each recipe, health benefits of the medicinal compounds, and tasting samples of each style of cheese that received very positive reactions from the class. Athena completed a thoughtful reflection of the project as well.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 48

4 - Seminar on Issues of the Food System
6 - Introduction to Genetics and Molecular Biology of Food with Laboratory
6 - Introduction to Botany and Ecology of Food Crops with Laboratory
4 - Seminar on the History and Culture of Food
6 - Introduction to Nutritional Biochemistry and Physiology with Laboratory
3 - Introduction to the Science of Food and Cooking with Laboratory
3 - Introduction to Nutrition
3 - Seminar on Food Fermentation
4 - Introduction to Microbiology and Immunology with Laboratory
5 - Introduction to Microbial Ecology and Fermentation of Food with Laboratory
4 - Spring Independent Project: Vegan Cheeses

Ortega, Athena Fidelia — A00058295
Last, First Middle — Student ID

Student Self Evaluation for Food, Health, and Sustainability
09/2016 - 06/2017

This quarter I have been engulfed by a science based program called food, Health, and Sustainability. I usually involve myself in more psychology based experiences because I'm a deep thinker who enjoys analyzing the holistic human experience. This program has so far been challenging for me because it is based on biology. I feel like my love of creative writing is stifled by assignments that I'm trying to prove as right or wrong. I keep hoping for a reflection at the end of seminar assignments. I knew that this program would be like this but I didn't know how I would feel about it! I'm learning to appreciate the challenge of being out of my comfort zone and learning most of the content of this program from the ground up. I realized that I tend to put myself in experiences where I will have some knowledge about the topic, but this is creating an insecurity because I have to say," I don't understand", "I don't know about that"," I need help". I recently learned about "lifeworlds" in a book we have been reading and understand that where we come from culturally and socially forms our opinion and beliefs so deeply that we might not even recognize that what we think as right or wrong is just our opinion shaped by our lifeworld. I think in my lifeworld that having to admit that I need help or don't understand something makes me feel weak, but does it really make me weak or does it just make me vulnerable? And what's wrong with being vulnerable? I have to trust that I can learn the content of this class which is learning about our food system from the roots up. I am appreciating the look into other lifeworlds not only because it strengthens my own beliefs, but it also opens my mind to be respectful of other views of the world. I really like labs, especially food labs. My favorite book so far is *On food and Cooking* by Harold McGee. I'm half way through the quarter and have just realized how much more I could be prepared for class especially lab. If I take the time to really read and take notes before I get to class I feel much more prepared on the topic, common sense, it's nice to have some! I'm thankful that I have been able to keep up on my assignments so I don't feel too overwhelmed by what I have to get done. I felt that I did pretty good on my mid-term exam, although I put a bit of time into studying certain things that weren't a big deal on the exam, and skimmed over some things that were major parts. I realized that for next time I will stick to the information that was previously assigned because that seemed to be what was on the exam. Looking forward to the rest of the quarter and the wisdom I will take on about the world around me!

Continuing this Winter quarter with the Food, Health, and Sustainability program I have deepened my knowledge of the food system, nutrition, cooking, nutritional biochemistry and physiology, through lectures, workshops, science labs, food labs, and seminar. I have read *The Third Plate* by Dan Barber, *The Omnivores Dilemma* by Michael Pollan, and *The Gastronomical Me* by MFK Fisher. These pieces of literature have helped to shape an understanding of our current food system, how the future of the food system can be changed or further destructed, and how the love of food ties together life and its events. The cooking labs really helped me to understand the way that molecules combine and separate for a desired effect on a final product like meats, sauces, broths, baking, and nutrient content. Although biochemistry remains to be a challenge for me, this quarter has brought some of the concepts into the light! I enjoy this program for its humbling content and mind altering topics. I wanted to work on going with the flow and in doing so, I have been able to construct my time better and feel more completed each week. I will continue with this program Spring quarter and work on time management even further because I learned this quarter that some of the assignments that I had not fully completed made my final exam a bit more challenging.

My final quarter in food, Health, and Sustainability is a bitter sweet. I'm graduating, which is really exciting, but I'm not ready to be finished with everything this program has offered me. I could spend another year going in depth with the content. The food preservation portion of this quarter has rounded out my education from the last year of program content to take me in many directions career wise, and has allowed me to gain the knowledge to become fully self-sustainable if wanted or needed. I have seen myself grow into more a scientific thinker. I accomplished a food project on making vegan cheese and

Ortega, Athena Fidelia — A00058295

Last, First Middle — Student ID

incorporating medicinal culinary plants for added health benefits; that in itself could be my career direction. I have watched me bachelor's degree be pulled together and interconnected between Ethnobotany and plant medicine from last year, and food systems and sustainability with this program. Overall, my growth in knowledge about food, health, and sustainability and the connection with my peers and professors is the embedded beginning to a life long journey full of learning, teaching, connecting, and a part of the future food system that will change the land and the health of the people for the better.

Ortega, Athena Fidelia — A00058295
Last, First Middle — Student ID

September 2015 - June 2016: Branching Out: An Ethnobotanical Garden in Community

36 Credits

DESCRIPTION:
Faculty: Marja Eloheimo, Ph.D.

Working as a project team, this yearlong legacy program had a mission. Students worked to understand and enhance the ethnobotanical garden at the Evergreen "House of Welcome" Longhouse by learning about and refining theme areas in fall (pollinator, medicinal garden, and food forest); habitat areas in winter (forest, wetlands, mountain, and South Puget Prairie); and one selected area in spring. In order to achieve these goals, students learned the history and cultural context of the Longhouse and the garden, developed plant identification skills, explored relevant theme and habitat information, engaged in seasonal garden care and development, and maintained a reflective nature journal. At the end of spring quarter, students organized a Longhouse Ethnobotanical Garden Open house, learning what is involved in presenting a major community event.

In the spirit of branching out into community, students also emphasized telling the garden's story through communication projects. Students selected and worked on either website development, sign making, photography or master plant list enhancement.

While this unique program was grounded in community-service learning, topics in several subject areas were woven into the fabric of student learning when most appropriate to the seasons and their work. Major areas of study included botany, environmental studies, community herbalism, horticulture, garden interpretation, the history and scope of ethnobiology, Indigenous studies, sustainability, communications, and writing. These subject areas were introduced, explored, and assessed through readings, writing, lectures, workshops, seminars, quizzes, and projects. Fall texts included *Native Science* by Gregory Cajete and *The Herbalist's Way* by Phillips and Phillips. Winter texts included *The Earth's Blanket* by Nancy J. Turner, *The Natural History of Puget Sound Country* by Arthur Kruckeberg, and *Braiding Sweetgrass* by Robin Wall Kimmerer. Spring texts included *An Indigenous People's History of the United States* by Roxanne Dunbar-Ortiz, *Sex in Your Garden* by Angela Overy, and *Homegrown Herbs* by Tammi Hartung.

Finally, the program required commitment to a meaningful real-world project, cultivated community by nurturing each member's contributions and growth, and acknowledged the broader context of sustainability. Through this work, students collaborated on creating a valuable educational resources.

EVALUATION:
Written by Marja Eloheimo, Ph.D.

Athena's attendance and participation in the program were excellent. She attended nearly all class sessions and submitted nearly all of her assignments, which were thoughtfully and thoroughly done. For the botanical component of the program, Athena was exposed to basic concepts related to flower, leaf, stem, and root morphology (including microscopy labs), along with plant taxonomy. This information was new to her. For the botanical medicine component, Athena attended a two-day, community herbalism event called the Dandelion Seed Conference. Through this and in-program lectures and workshops, Athena gained exposure to terms, concepts, and practices related to using plants as medicine with an emphasis on the respiratory, nervous, and gastrointestinal systems. She also gained exposure to medicinal tea blending, tincture and salve making, and Classical Chinese perspectives on health. Athena carried out plant studies on calendula (*Calendula officinalis*), mountain huckleberry (*Vaccinium ovalifolium*), evergreen huckleberry (*V. ovatum*), hawthorn (*Crataegus* spp.), and common juniper (*Juniperis communis*), demonstrating the developing ability to research and organize information on plants with medicinal and edible attributes as well as cultural significance. Athena wrote insightful,

thorough, and interesting summaries and responses to the program readings, demonstrating the ability to read and think carefully about issues related to Indigenous People's history and Traditional Ecological Knowledge, and to write well. Athena also maintained an extremely well-done nature journal that contained beautiful color drawings, along with ecological studies of the four habitat types to which she was introduced in the ecological component of the program: forests, wetlands, mountains, and South Puget Prairies. For her communication project throughout the year, Athena chose to support development of a garden website through photographing the garden during fall, winter, and spring seasons. As a result, Athena created a number of very nice plant and landscape photographs. For her final synthesis presentation in fall, Athena prepared a PowerPoint presentation titled "Coming to Know." This accompanied a well-done final essay that successfully tackled the complex task of interweaving many elements of ethnobotany in a cohesive and authentic way. For her final synthesis in winter, Athena worked with a group of students to create an introduction to mountain habitats for the Longhouse Ethnobotanical Garden website, with an accompanying presentation to the class. For her garden stewardship in spring, Athena and two partners focused on the *sayuyay* Medicinal Plant Garden. Often working independently, Athena identified plants present, mapped the area, prepared a list of desired plants, planted, and provided significant garden care. For her final synthesis work in spring, Athena wrote a "thank you" letter to her garden area describing the various types of learning the area had helped her achieve. Athena's letter was creative, substantial, and exceptionally well done. She also made strong contributions to the yearend Ethnobotanical Garden Open House, including preparation of an informational poster board and a display of very beautiful plant photographs. Overall, Athena made strong contributions to the learning community, along with significant strides in strengthening her knowledge, understanding, and skill in several areas including plant identification and morphology, Indigenous history, educational garden care and development, community event production, community herbalism, and nature journaling. She also gained substantial self-awareness, stating, "I say I will do something and it gets done. I make sure I'm making as much effort as I can give to things I have committed to…I don't have a choice about whether or not I want to care for myself, my environment, and all people as one. It is necessary to keep those relationships healthy for my wellbeing as a human and all of the humans that will come after me. I plan on finishing my BA here at Evergreen next year and finding a career that works with nutrition, our food systems, our health, and our environment." It was a great pleasure to have Athena as part of our learning community.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 36

3 - Botany
2 - Ethnobiology
4 - Pacific Northwest Ecology
4 - Pacific Northwest Ethnobotany
4 - Community Herbalism: Principles and Practices
2 - Philosophy of Science
4 - Plant and Pollinator Research
2 - Indigenous History
3 - Nature Journaling
4 - Nature Photography
2 - Writing
2 - Community Development and Event Production

The Evergreen State College - Olympia, Washington 98505

FACULTY EVALUATION OF STUDENT ACHIEVEMENT

ORTEGA	Athena	F.	
Student's Last Name	First	Middle	ID Number

5125P	THE SEARCH FOR MEANING		
Program or Contract No.	Title		
	10/95	12/95	3
	Date began	Date ended	Qtr. Credit Hrs.

Athena participated in the drawing workshop within the Search for Meaning program during the fall quarter 1995. She earned 3 credits.

Description

The purpose of the drawing workshop was to increase students' visual awareness, to explore the basic elements of drawing and composition such as line, form, value, space and texture, and to improve students' ability to analyze and improve their own drawings. We worked in charcoal and pencil. Subjects included the figure, still life and interiors. The workshop met 8 hours per week for five weeks. Students had homework assignments.

Evaluation

Athena regularly attended the drawing workshop and enthusiastically participated in the classroom exercises. She completed her homework assignments. As a result, Athena's visual awareness increased substantially. She demonstrated a very good understanding of drawing concepts at the beginning level. Particularly strong was her strong understanding of value contrast in composition.

SUGGESTED COURSE EQUIVALENCIES (in quarter hours) TOTAL: 3

3- Beginning Drawing

Lucia Harrison

Faculty Signature(s)

Lucia Harrison

Faculty Name

February 21, 1996

Date

EVERGREEN

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.