**D R A F T**

Graduate Program on the Environment

Master of Environmental Studies Degree

The Evergreen State College

Program Description, Student Outcomes, and

Recruitment and Retention Objectives:

A Self Study

**For Internal Use Only**

Spring 2012

Martha L. Henderson, PhD, Director

Gail Wootan, MEd, Assistant Director

Judy Cushing, PhD; Gerardo Chin-Leo, PhD; and

Ralph Murphy, PhD Members of the Faculty

**Summary**

This document outlines the current curriculum, content and thematic areas, student outcomes, faculty and staffing needs, student progression to graduation, thesis requirements, and recruitment and retention including financial aid awards criteria of the Graduate Program on the Environment. Historical patterns of student enrollment, curricula focus, and capacity to recruit and retain students are identified. Shifting areas of study, faculty, and administrative leadership needs are reviewed. The current status of student, faculty, curriculum and administration is outlined.

Response from students, full time, part time and adjunct faculty, alumni, and staff of the Graduate

Program on the Environment recommend the following way to improve the program:

* Three full time faculty lines assigned to the program at its inception are permanently dedicated to the program.
* The college commits three additional dedicated lines to program to be filled as soon as possible.
* The Director receives a summer salary and double points towards sabbatical.
* The college consistently supports the program in academic and support systems work including supporting the work of the Assistant Director with admissions and retention. Graduate Admissions may require additional staffing.
* Student recruitment for a more diverse and academically stronger student body is enhanced to create a student body that reflects the goals of the program.
* The program budgets are adjusted to current faculty, student and program needs.
* The college funds a planning institute every year for regular and adjunct faculty to coordinate teaching.
* Regular faculty will support no more than four new thesis projects per year with additional thesis readers to be paid for by the college.
* The college recognizes the additional program support by faculty as meeting faculty obligations for college service and administrative work.

 **Historical Overview**

The Master of Environmental Studies Program (MES) was the second graduate program initiated at The Evergreen State College (TESC) in 1984 following the Masters of Public Administration which opened in 1982. Originally proposed as a 60 credit Masters Program, the Washington State Higher Education Coordination Board (HEC Board), in response to input from the other Public Universities in Washington State, increased the degree requirements from 60 to 72 graduate credits. The original design of the MES program required students to earn four graduate coordinated studies core programs (8 credits each), six elective courses (4 credits each) and 16 credits for the Masters Thesis. The MES program modified the curriculum to allow an 8 credit Masters Thesis track with an additional 2 elective courses required to achieve the 72 credits for the degree. This change was implemented to improve time to the degree and to increase completion rates. Issues surrounding the MES Thesis are discussed at length later in the self study.

The MES program was initially and remains a professional degree in environmental studies. This designation infers that a student will earn a Masters Degree in environmental studies leading to professional level employment and work on environmental issues from a natural science, ecology, biology, geology, social science and public policy perspective. TESC embarked into graduate education for two primary reasons. The first was to increase the college’s service to students in southwest Washington State. Offering graduate education in public administration and environmental studies allowed the College to serve a high demand for graduate educational opportunities for public sector workers in state and local governments. The second motivation in starting graduate programs was to facilitate meeting enrollment goals established for the College. At different times throughout the College’s history, Evergreen has struggled to attract and retain its targeted FTE student population as funded by the State of Washington. Offering graduate programs opened a new source of student demand for the College.

In its original design, the MES program opened with two specialization tracks; energy studies and natural resources management. The energy specialization track was dropped during the first year because of a lack of student interest as the *energy crisis* of the mid to late 1970s was replaced by new emerging environmental issues in the 1980s and beyond. Additionally, each entering class to the program tends to have distinct issue interests that the program serves through its required core course sequence, choice of electives, and flexibility for students to develop subject matter expertise with individual learning contracts, transfer credits, internships and choice of thesis topic. The original design of the program anticipated an entering class of 35 graduate students as either full time or part participants in the program. Each entering class works as a cohort through the core sequence of the curriculum. In the early 1990s the entering class size was raised to 40 by the director with agreement from the faculty at that time. This decision was made to account for a long term trend that almost every year 5 students drop in the first year and to accommodate the increasing demand for access to the MES program. The change made the 35 student class cohort firm and resulted in a steady state of approximately 100 graduate students in residency in the program on an annual basis (first year entering class, second year class, third year for part time students finishing their degree and students returning from leaves of absence).

 Staffing for the program was based on 6 full time Evergreen faculty (5.5 teaching faculty and a .5 graduate director). Additional adjunct faculty lines supported specific elective courses. To support the opening of the MES Program, the Washington State Legislature funded three new faculty lines dedicated to MES. These initial hires were in geography, geology and environmental economics and policy. Additional hires were added to the program in environmental health/toxicology/epidemiology and a split appointment to MES and Tribal Studies. Throughout much of the history of the MES program a strong group of full time Evergreen faculty stakeholders supported the program with regular rotation into MES and by sponsoring thesis students, internships and individual learning contracts. In recent years the level of faculty resources available to MES has been severely diminished by retirements; 18 faculty stakeholders have retired and those resources for MES have not been replaced. Most importantly, the original MES geology hire has retired and not been replaced, the MES environmental health position has left the college and not been replaced, the geography line is staffed (currently serving as Program Director, and the environmental economics and policy position is staffed and serving the program. The geography and environmental economics current faculty are both approaching retirement age.

Electives offered by the program are split between the natural sciences and social sciences. Examples of electives offered throughout the program’s history include: environmental economics; environmental management; environmental policy; environmental philosophy and ethics; environmental education; growth management; wetlands ecology, ecological principles and methods; salmonid ecology; hydrology; forest ecology; Geographic Information Systems; environmental history; political ecology; climate and energy; plant ecology; invasive species; harmful algal blooms. Electives are offered by full time evergreen faculty and part time adjunct faculty. Continuity in elective offerings has been developed by adjunct faculty since full time Evergreen faculty rotate in and out of the program, usually on a 2 to 3 year cycle in MES and a 2 to 3 year (or longer) cycle in undergraduate teaching. A 3 year cycle in MES is preferred as it allows faculty to provide continuity throughout a student’s MES education.

The MES program has historically attracted a national pool of applicants as well as in state applicants. In the early years of the program there were more part time students (working 20 hours per week or more) than full time students. Over time, the mix between part time and full time students has been dynamic; one year would be primarily full time, the following year would have a healthy contingent of part time students. It is not uncommon for students to drop from full time to part time as they progress to the MES Degree. Successful recruitment of out of state graduate students is impacted because of the limited sources of financial awards in general and the lack of merit based awards. Throughout the history of the MES program, employees in the Washington State Department of Natural Resources, Department of Ecology, Department of Fish and Wildlife, Department of Transportation, and State Parks have been served. Additionally, some of our students and alumni work at the Washington State Legislature. Federal employees of the U.S. Fish and Wildlife Service, National Oceanographic and Atmospheric Administration, National Parks Service, and other agencies have entered the MES Program. Since the majority of students were employed in state and federal agencies, classes were and continue to be taught in the evenings at TESC. The MES program focused on the professional needs of this primarily government based student population.

            Following Evergreen’s renowned interdisciplinary, experiential education curriculum model, the MES curriculum integrated natural and social sciences in team-taught core programs. The required core programs are developed around content areas of ecology and other natural sciences, political science, economics, earth sciences, marine sciences, geography, and quantitative methods. Each core program is designed to address interdisciplinary relationships between the sciences.  Faculty teams created interdisciplinary classes around specific themes that were repeated on a yearly basis. Timely topics such as changing forest management, the Threatened and Endangered Species Act, toxics and nuclear waste, wilderness issues, watershed management, cultural landscapes, tribal resources, energy and climate change and environmental leadership and decision-making were common core program topics. When staffing levels provide the opportunity, full time Evergreen faculty offer electives in their areas of expertise and when combined with adjunct faculty electives, the elective curriculum offers rich opportunities for students to study a variety of topics. Students also work with professionals in agencies as interns or contract with a faculty member to work on specific knowledge sets.

            The administration of the program was led by a faculty member who assumed the position of Director. Early in its history, the MPA and MES programs shared an Assistant Director position (AD). The Assistant Director provided direct support to the Program Directors, faculty and students in the programs. More recently, each graduate program at Evergreen has its own Assistant Director. Student assistants were hired to support the AD and Director. The Director is responsible for recruiting faculty to teach in the Program, and this is done in collaboration with the College Deans. Eventually, all graduate programs worked directly with the Provost with support from the Deans as needed.

            Student support in terms of advising, credit completion, financial aid, and preparation for graduation was supervised by the ADs with advice and council from the Director. Over the years, the college has supported students by providing tuition waivers, maintenance of scholarships, processing of records, awarding of degrees and graduation ceremonies. The College does not award assistantships or support a system of graduate students in teaching roles. While some MES students have worked for the college as lab assistants or undergraduate program assistants, the MES Program has had few resources to award students in support of their academic work.

            Student recruitment work was done primarily by the Directors and ADs with state and federal resource management agencies. The first classes were made up primarily of people located in Olympia and in some cases, other areas of western Washington. Over the years, the MES’s distinction as a graduate degree based on interdisciplinary learning attracted students from other states. This expanding geographical draw of students has gradually shifted the student body from primarily employed workers to a student body evenly divided between those already employed in environmental agencies or non-profits and students arriving in Olympia to be enrolled in the MES program. For these students, internships became a common way to gain access to agency work in their chosen fields of interest.

            The Threatened and Endangered Species Act created a large demand for workers in spotted owl habitat and forest restoration, and salmon habitat and watershed restoration. The MES program was able to meet the educational needs of students and emphasize the graduate preparation in ecology and ecological restoration. The MES program also addressed increasing capacity of local tribes to manage their on and off-reservation resources. These topics are significant in Pacific Northwest resource management due to treaty rights, large amount of publically owned land in the region, and the unique ecology of the Pacific forests and prairies.

            Over time, the MES program has maintained a relatively high enrollment with periodic declines that have always risen back to the established student enrollment goals. The core curriculum has remained focused on the interdisciplinary nature of environmental issues and decision-making. Some changes have occurred including the adoption of sustainability has a central topic, the addition of qualitative methods and geographic information systems, and a required thesis prospectus. A student handbook outlines expectations of students and policies on student progression towards graduation. The current MES program remains one of the strongest Master’s programs in environmental studies in the U.S. Students from across the country make up each new class. Several foreign students have also completed the program. On the 25th anniversary of the MES program, its academic rigor and capacity to address changing needs in environmental sciences and studies remains high.

 One of the distinguishing elements of the program is the MES thesis. The MES program was started as a 72 credit Masters Program in 1984. The program was developed as a curriculum designed around graduate level coordinated studies core programs (required), graduate level elective classes offering depth on specific topics and the research requirement of the Masters Thesis. It its original

design, the MES curriculum consisted of:

* 32 credits of Core (4 core programs, 8 credits each)
* 24 credits of Electives (6 classes-4credits each)
* 16 credits of Thesis

The MES thesis was established at 16 credits as a response to the Higher Education Coordinating Board (HEC Board) ruling to increase the graduation requirements for the Program from the originally proposed 60 credits to 72 credits (32 Core, 20 elective and 8 thesis). The MES Planning DTF met the increased credit requirement required by the HEC Board by expanding the scope of the thesis from 8 to 16 credits and by adding an additional elective requirement. To start work on the thesis, students had to have successfully completed the entire core sequence and to have completed 4 of the 6 required elective classes. The original thesis design was for 12 credit thesis work and 4 credits of thesis preparatory work awarded for topic selection, development of prospectus, research design and recruitment of readers, etc. By the fourth and fifth year of the MES Program’s existence the faculty became aware of disturbing trend. Students (part time and full time) progressed through the core and elective parts of the curriculum but completing the MES Thesis was a real stumbling block. Graduation rates were unsatisfactorily low (less than 10 per year) and faculty were carrying a huge inventory of thesis students (typically 15 to 25 thesis students per faculty).

Faced with a workload and graduation rate crisis the faculty revised the curriculum and developed a new 8 credit thesis track, referred to as the *Essay of Distinction.* This track was considered to be the typical thesis the vast majority of MES students would complete and it was a thesis effort comparable with other program’s thesis expectations. A typical 8 credit thesis averaged between 75 and 135 pages. The 8 credit thesis required two additional electives for graduation (32 credits of core, 32 credits of electives, 8 credits of thesis). The 16 credit thesis was retained for special and exceptional interests of what was conceptualized as a very few students. The overall quality of the MES degree was considered to be stronger with an 8 credit thesis combined with additional elective coursework.

Several criteria, protections and penalties were developed as policy for the thesis reform, including: establishing the 8 credit thesis workshop offered every winter and spring quarter to support thesis work; the 8 credit thesis was to be completed by the end of spring quarter of the year started with penalties of no credit or continuous registration required until the thesis was completed. The revised thesis policy was very successful. Graduation rates increased dramatically, most students who had failed to complete the original MES thesis returned and completed the 8 credit thesis and additional elective coursework, and the overwhelming number of students in residence enrolled in the 8 credit thesis option. During the period when severe penalties (no credit or continuous registration) existed, student completed their thesis on time or shortly thereafter.

Thesis Outcomes, Slippage and Current Status

Within the last 10 years or so there has been extensive slippage in the success of the 8 credit thesis policy. There always has been an ambiguity over the differences between the 8 and 16 credit thesis. For students, without clear advising an impression formed that the 16 credit thesis was a *real* *thesis* and an 8 credit thesis is *thesis light* or the thesis for less qualified students. There also was a myth that the 16 credit thesis is a better credential for entry into additional graduate work or Ph.D. programs. Thus more students opted for 16 credit thesis, often for a variety of reasons that did not reflect their best academic interests. As in the early history of the MES Program the selection of 16 credit thesis dramatically slows completion of the degree requirements and graduation rates. Mudding the waters even more, new faculty to the MES Program often conceptualized the differences in the two thesis tracks as:

1) More time for the 16 credit thesis allows for original data collection and analysis;

2) The 8 credit thesis is a literature review which doesn’t allow for data collection, field work and analysis.

Neither of the above statements was an accurate representation of the intent in the thesis options and this simple explanation failed to weigh the value of the additional elective credit taken with the 8 credit thesis option.

Thesis Policy Change in 2011

By 2009, the MES thesis was again in a crisis mode. The combination of declining faculty resources to staff the program, retirements of over 18 Evergreen faculty stakeholders of the MES Program (who typically supported thesis students even if they were not teaching in MES), the adoption of a collective bargaining agreement with its focus on FTE measurements of workload, and the dramatic increase in the number of students selecting the 16 credit thesis track (with the challenges and issues noted above) all combined to create a situation where there were insufficient resources to serve our thesis students.

In 2011, after two years of careful study and consideration the MES thesis policy was changed again. Three principle objectives guided the change in the policy. The first was to unify the MES thesis into one expectation for the program. The second was to achieve greater predictability and timeliness in completing the MES Degree. Completing the Master Thesis is a significant challenge in all programs, and with reduced faculty resources in the MES program, it is essential to have as many students complete their thesis within a predictable time frame as possible. Finally, feedback from students and faculty stakeholders consistently indicated the importance of having a thesis policy that could support original field work and data collection. For most of our students that requires having a spring and/or summer for field work and data collection.

Considering all of the above factors in combination with the difficulties outlined earlier with the MES thesis policy, the following changes were proposed and adopted by the faculty. The MES thesis was unified as one option and was weighted at 16 credits as it was in the original MES Program design. Significant differences from the original thesis model include the following:

1. All thesis work starts at the beginning of winter quarter and ends no later than the conclusion of fall quarter of the following year (original 16 credit thesis projects could start during any quarter)
2. The expectation is that most theses will be completed at the end of spring quarter or early in the summer quarter. Those students needing time for field work and data collection can extend over the summer and into the following fall quarter. With approval of the thesis reader, a student who fails to complete in the spring quarter can continue working on the thesis into the summer and fall quarter if satisfactory progress is being made.
3. As part of the Case Studies Core Program curriculum, students complete their thesis research design/prospectus. Thus a student starting their thesis in the winter quarter is already launched on their project. This facilitates a thesis being completed in a time frame of 6 months up to a maximum of essentially one year (counting summer).

4) The MES thesis is completed under supervision of one MES faculty reader (prior policy had two faculty readers and an outside reader). Where appropriate or needed an outside advisor/resource or client for the thesis may be added to the thesis committee.

The MES faculty members are confident the new thesis policy resolved all of the tensions and ambiguities of the previous policy. It allows for a full time student to legitimately complete the MES Degree in two years and it also more appropriately accounts for the amount of work a faculty invests with thesis students.

Progression to the MES Degree with the Revised Thesis Policy

A full time student progresses to the MES degree within 2 years up to 2 years and one additional quarter during the regular academic year (excluding summer term). This assumes the student does not drop to part time status at any time while in the program. A part time student takes a maximum of 8 credits, taking the core curriculum in advance of taking electives. The part time student has a choice to take the last core program, Case Studies either with their cohort during fall quarter of the second year, or during fall quarter of their third year, just prior to starting their thesis project. The table below shows the pathways to completion of the MES Degree.

**Full time student-12 credits**  **Part time student-8 credits**

 First Year

Fall: g-Core plus 1 elective g-Core-no electives

Winter: ESS core plus 1 elective ESS Core-no elective

Spring: Quant. core plus 1 elective Quant. Core-no elective

Summer: elective optional Elective optional

Second Year

Fall: Case Studies plus 1 elective Case Studies or electives

Winter: Elective plus thesis Electives

Spring: Electives plus thesis-Gradation Electives

Summer: thesis or elective optional Electives optional

Third Year

Fall: Finish thesis Case Studies or electives

Winter: Done Thesis, plus electives

Spring: Thesis, plus electives-Graduation Summer Thesis

Fourth Year

Fall Finish Thesis

**The Current Program**

 The MES program is now completing its twenty-seventh year. The curriculum, student body, faculty, administrative staffing, and policies are well within the program’s original goals. The student body, after a brief period of low enrollment, has returned to its capacity of 40-45 new students per year for an averaged total of one hundred students distributed between the two current classes (Year 1 and Year 2 students). The total number of students enrolled in any given year is approximately 90 including students who are completing the thesis requirement in their third or fourth year. Administrative staffing remains the same with the Director at 50% time in administration and 50% in teaching, a full-time Assistant Director is in charge of administrative operations, and recruitment and retention. A student assistant (19 hours per week) provides support for thesis in-take, newsletter editing, contact with students, and answering inquiries about the program.

 Faculty including the Director serve on a number of administrative committees necessary for the success of the program. Standing MES faculty committees include Admissions and Scholarships, Student Grievance, Hiring, Budget Management, and Hooding Ceremony support. All MES faculty members serve as thesis readers in addition to their teaching load, usually reading five theses per year. MES faculty members are expected to attend planning unit meetings and general faculty meetings. These faculty members may choose to engage in campus committees beyond MES but their primary campus service is the graduate program.

 Faculty members are encouraged to continue work in research, publication and service to professional organizations. Proximity to federal and state agencies as well as the state legislature also provides opportunities for professional development and service. MES faculty members may show leadership in identifying and resolving environmental issues. MES faculty members are evaluated consistent with the TESC-UFE (United Faculty of Evergreen) collective bargaining agreement.

 The professional program provides an interdisciplinary, experiential education for students desiring a professional degree in environmental studies. Core curriculum provides an examination of environmental problems across social and natural sciences. Electives support individual interests in three thematic areas, and Internships and individual learning contracts continue to be a popular option with students. A 16 credit thesis project is required. The program, relative to other master’s degrees in environmental studies, has one of the highest credit hour requirements and is academically strong with the thesis requirement. A detailed explanation of curriculum and student outcomes follows in this report**.**

**Curriculum and Student Outcomes**

 The MES curriculum is divided between core requirements and a series of electives including individual learning contracts and internships. A thesis completes a student’s work in the program. The core classes are taught each year. Students begin as a cohort in the first core class, Conceptualizing Our Regional Environment (gCORE), and must progress through each class before taking the next core class. The second core program, Ecological and Social Sustainability (ESS) taught during Winter Quarter includes a Candidacy Paper requirement. Year 1 students must successfully complete this requirement in order to be successfully admitted to the program and advance to the remaining core curriculum. During Spring Quarter, students enroll in Research Design and Quantitative Methods. This program introduces students to statistical and qualitative options for investigating environmental problems. The last core class is Case Studies that reviews significant examples in environmental research and decision-making. Students must also submit a signed thesis prospectus with the support of a potential thesis reader. The last two quarter core classes are dedicated to completing the thesis project. Each core class and its outcomes are listed below (see Figure 1 for graphic summary):

 Core Classes

 ***Year 1***

 **(graduate) Conceptualizing Our Regional Environment (gCORE)** (8 credits) Fall

This program provides a framework for understanding current environmental issues of the Pacific Northwest from an interdisciplinary perspective. Students will begin to develop the skills to become producers of new knowledge, rather than being strictly learners of information already available. Multiple methods of data acquisition and analysis will be introduced through examples drawn from many fields of study. The philosophy of science and the problematic relationship between science and policy are also introduced.

 Student Outcomes:

* Pacific Northwest Environmental History
* Regional Ecology, Regional Political Economy
* Environmental Decision Making
* Philosophy of Science

**Ecological and Social Sustainability** (8 credits) Winter

This class continues the development of interdisciplinary skills and concepts, and applies them to an in-depth analysis of selected current global environmental issues. The emphasis is to understand the root causes of these issues and to identify effective solutions that promote environmental and social sustainability. Areas covered reflect the faculty’s expertise and have included: resource availability and management, global climate change, energy use and alternative energies, environmental modeling, and social and cultural issues of sustainability. In addition, students write and present a research paper to provide evidence of their readiness to advance to candidacy. To support students through the candidacy process three faculty members are required to staff this class.

Student Outcomes:

* Environmental Sustainability
* Resource Management
* Status of Environmental Quality
* Energy Alternatives
* Candidacy Paper

**Research Design & Quantitative Methods** (RDQM) (8 credits) Spring

The third core program explores methods for studying complex environmental phenomena and exposes students to a range of research design and data analysis methods. The primary focus is on the application and interpretation of statistical methods including graphical and tabular summaries, distributions, confidence intervals, t-tests, analysis of variance (ANOVA), Chi-square tests, linear regression, multivariate statistics, and both non-parametric and resampling approaches to these statistical methods. Students also address data management, use software to conduct statistical analyses and hypothesis tests, work in labs to gain hands-on experience, and complete small research design and data analysis projects.

The class has been taught from a variety of curricular models depending on faculty; in particular the specific analyses and software chosen depends on faculty expertise. The more successful models rely on critiques of methods used in resolving environmental problems in professional work or research. This knowledge prepares students for their own research as they begin to consider thesis topics and appropriate methodologies.

Student Outcomes:

* Increase awareness of the methodologies appropriate to the analysis of environmental phenomena, systems, and issues;
* Understand how to design studies and evaluate research designs;
* Gain an introductory understanding of the history of statistical thinking and applications in science;
* Gain an understanding of and ability to use statistical techniques available for data analysis, including knowing when to use each approach and how to interpret the results;
* Demonstrate statistical proficiency in homework and computer lab assignments and on exams;
* Gain proficiency in both reading and writing scientific papers and presenting results graphically;
* Apply the methodological knowledge gained to the critique of published research work.

***Year 2***

 **Case Studies** **and Thesis Prospectus** (8 credits) Fall

The goals of this class are to prepare students to conduct high quality research and to use this preparation to complete a well-defined proposal for their thesis work. The class begins with a discussion on the epistemology of academic disciplines. Then students in teams examine research in both natural and social science by studying the primary literature associated with two case studies, and by analyzing completed MES masters theses. In addition to evaluating the findings and evidence, students discuss the scope and methodology used in the studies. Students apply what their learned from this work and previous MES work to the preparation of a proposal for thesis research (thesis prospectus). Each student identifies a research problem, demonstrates their knowledge of background information, develops an approach and timeline for completion of the study, and identifies a faculty member with the relevant expertise to support the project.

Student Outcomes:

* Environmental Issues and Decision Making
* Teamwork and Group Projects
* Research Design
* Critical Analysis of Current Published Environmental Research
* Thesis Prospectus

 **Thesis** (16 credits ) Winter and Spring

The last core requirement of the program is a 16 credit thesis. Building on a signed Thesis Prospectus as an outcome of Case Studies, students begin work on their individual thesis projects in consultation with their thesis reader. Thesis readers are regular MES faculty with occasional addition readers from the temporary MES faculty pool. Readers require thesis students to attend a two hour per quarter workshop in both Winter and Spring Quarters led by the Director. The workshop serves as a common meeting space for all students working on thesis projects. Individual students work with their readers to discuss strategies for successfully completing thesis projects. The faculty member provides support in developing writing strategies, bibliographic searches, and addressing problems students encounter as they progress through a major research and writing exercise. Generally, students are expected to complete their thesis project by the end of Spring Quarter. They must make a presentation of their thesis work in the last weeks of the quarter in which they plan to complete their work. The presentations are public events and a service to the larger Evergreen academic community. Off campus guests who have supported student work are welcome. Evaluations are written at the end of the quarter in which the student turns in a signed thesis signature page (by the reader) with a complete thesis to the MES program office (please see Thesis Handbook for details). Students may receive an extension to complete their project during the summer and/or Fall Quarter of the next year. None completion by the end of Fall Quarter requires the student to re-enroll with a reader and attend the thesis workshop in order to begin work in a new thesis cycle.

Student Outcomes:

* Identify research question and methods of research
* Complete archival and field research
* Collaboration with other thesis students and faculty
* Complete writing of research project
* Prepare and make a public presentation of work
* Turn in all materials as detailed in the Thesis Handbook

FIGURE 1: Classes and Student Outcomes

|  |  |  |
| --- | --- | --- |
| **Core Course** | **Description** | **Student Outcomes** |
| **gCORE** | This program provides a framework for understanding current Pacific Northwest environmental issues from an interdisciplinary perspective. Students will begin to develop the skills to become producers of new knowledge, rather than being strictly learners of information already available. Multiple methods of data acquisition and analysis will be introduced through examples drawn from many fields of study. The philosophy of science and the problematic relationship between science and policy are also introduced. | Pacific Northwest Environmental History, Regional Ecology, Regional Political Economy, Environmental Decision Making, Philosophy of Science |
| **ESS** | Addresses central issues in contemporary sustainability studies on theoretical and practical levels. Emphasis is on ways to promote both environmental and social sustainability. Areas covered may include environmental quality at regional, national and global scales; energy use and alternative energies; resource availability and access to resources; social and cultural issues of sustainability; and indicators to guide policy. As part of this program, students write and present a research paper to provide evidence of their readiness to advance to candidacy. | Environmental Sustainability, Status of Environmental Quality, Energy Alternatives, Resource Management, Candidacy Paper |
| **RDQM** | Students learn how to integrate the use of inferential statistics and data analysis to conduct rigorous examinations of the social, biological, and physical aspects of environmental issues. This knowledge will prepare students for their own research and for understanding and critiquing research articles and reports in fields of their choosing. | Develop Research Questions and DesignInterpret Environmental Research MethodsProficiency in Statistical Analysis |
| **Case Studies** | Students will examine in detail a variety of environmental problems, using the skills they gained in their first year of MES core studies to carry out individual or small group projects. Students and faculty will also work together to apply what has been learned throughout the core sequence about interdisciplinary environmental research to design individual thesis research plans that will be ready to carry out by the end of the fall quarter of the student's second year. Complete a thesis prospectus and identify potential thesis reader. | Environmental Issues and Decision Making, Research Strategies and Design, Critical Analysis of Existing Environmental Research, Teamwork and Group Projects, Thesis Prospectus.  |

Thematic Areas

 Three thematic areas of study are available to students as well as the option to select classes across the areas. The three thematic areas are: 1) Energy and Climate Change; 2) Sustainable Communities; and 3) Ecology. These areas do not constitute a designation at graduation but do provide students with specialized areas of knowledge. Electives offered in methodology and research techniques such as Geographic Information Systems and a summer class in qualitative methods are recommended in all of the thematic areas. When coupled with the thesis project, and linked to individual contracts or internships, these learning experiences can support student learning and are clarified in the student’s transcript.

 Regular Evergreen faculty members teaching in MES are encouraged to teach an elective (4 credit) class at least once during their two year commitment to the program. The majority of electives are taught by adjunct faculty members who have distinguished themselves as leaders in their fields of study either through advanced degrees or employment. The MES program is highly dependent upon this adjunct faculty to provide professionally related education goals, internships and in some cases, thesis support.

 Three thematic areas have been developed based on current environmental conditions including tribal, federal, state and local mandates, public resource management, environmental policy, ecology, environmental education, and research methods and techniques. A series of electives, usually three classes, are taught over the three quarter academic year. In some cases a class such as Environmental Education is taught every other year. (See Figure 2)

Electives

**Fall**

**Pacific Northwest Climate Change and Environmental Management – Paul Pickett**

Focus: the science and policy of global and regional climate change. This elective will address questions such as these: How does current climate change differ from past changes?  How do climate change models work?  What are some of the key effects of climate change?  How are policy makers addressing climate change, what should they be doing and what can individuals do?  We will also discuss the roles of technology and the media, as well as a variety of economic, legal, political and social perspectives.

Student Outcomes:

* Recognize climate variation over time
* Understand regional climate change phenomena
* Apply climate change to environmental policy
* Develop research questions

**GIS and Spatial Analysis - Greg Stewart**

This course focuses on creating and analyzing spatially-referenced data using ArcGIS. Instruction will be offered through a combination of lecture and lab. Weekly lab assignments are likely to require the use of computing facilities outside of class. By the end of the term, students able to identify and complete a geo-spatial analysis project which they present to the class. Students become well-versed in Microsoft Windows file management, but the course requires no previous experience with ArcGIS.

Student Outcomes:

* Have a basic, practical understanding of GIS concepts and technical issues,
* Be able to collect spatially referenced data,
* Understand the importance and uses of different coordinate systems,
* Be able to project and display data in different coordinate systems,
* Be competent in using ArcGIS to perform spatial and attribute queries and overlays,
* Be able to develop and apply simple geo-processing models.

**Sustainable Forestry: The Evolution of Natural Resource Management- Richard Bigley**

This course is lecture and field-based introduction to forests of the Pacific Northwest, the science of forests and associated aquatic habitat management and the forces of change on their management. Case studies from forest, wildlife and fisheries management will examine 1) how  society catalyzed, and forest science has fueled, recent developments towards a sustainable forestry; 2) the role of habitat restoration in sustainability of both forests and fisheries; and 3) insights into the future of ecosystem-based management. Weekend field trips will provide an insider’s perspective into the fount line of natural resources management science and policy. The course will provide background, and an introduction to analysis skills to help evaluate policies and strategies for management, restoration and protection of forests and the services they provide.

Student Outcomes:

* Understand Washington forest ecology
* Link forest ecology with wildlife and habitat ecology
* Develop knowledge of forest practices
* Recognize federal, state, local and private forest restoration strategies

**Winter**

**Contemporary Challenges to Building a Clean Energy Future- Alan Hardcastle**

This course examines current trends in the clean energy sector and the intersections with efforts to develop a green and sustainable economy and environment that also enhances social equity. The class integrates research and readings with guest lectures and seminar discussion to explore the current social, technical and political context for the shift to clean energy.  The class includes a special focus on the energy labor market, human resources, education and training, and societal implications for regional alternative energy and energy efficiency initiatives.

Student Outcomes:

* Learn and understand current trends in clean energy
* Understand and interpret economic, social and environmental research related to clean energy
* Develop or enhance primary or secondary energy data collection and analysis skills
* Enhance research report writing and presentation skills
* Define potential career interests and opportunities in clean energy-related sectors
* Be able to extract one or two key arguments from each of the assigned readings, summarize them, and critique them in a short paper.

**Conserving and Restoring Biodiversity- Tim Quinn**

This course focuses on the biology that underlies conservation and restoration issues around the world. Scientific elements of these disciplines are provided through text reading and seminar discussion. Students also become familiar with practitioners’ perspectives about the relationship of biology and policy from work done in Washington State. The literature, controversies, and promising methodologies for a variety of conservation/restoration biology applications are highlighted. Assignments include written and oral exercises, and peer evaluations of academic work. Powers of analysis and ability to communicate effectively are emphasized.

Student Outcomes:

* Understanding of what biodiversity is, how it measured, and what is happening to it worldwide (general) and in Washington (specific)
* Ability to contrast the roles of science versus policy in conservation settings
* Understanding of the most applied approaches to setting conservation/restoration objectives and scientific methodologies to achieve those outcomes
* Understanding the role of adaptive management and application of best available science in conservation settings
* Understanding of how ignorance and uncertainty translate into risk (probability of something bad happening) in conservation settings.

**Spring**

**Environmental Economics- Ralph Murphy**

This MES elective is designed with both theoretical and practical applied components to develop a strong understanding for how economics (and related topics) can improve and enhance environmental problem solving. A major goal of the class is to make students familiar and comfortable with the language, concepts, models and methodologies used in environmental economic analysis. The class explores the uses and applications of key concepts from micro, environmental, and ecological economics to develop a deeper understanding of public policy initiatives for the environment, sustainability, regulatory reform, and the challenges of the current fiscal crisis in the United States

Student Outcomes:

* Recognize language, methods and models of environmental economics
* Develop knowledge of key concepts
* Apply knowledge to regulatory reform for environmental management and sustainability
* Address fiscal crisis

**Environmental Policy Making- Craig Partridge**

The goal of this course is to introduce students to the important concepts and to both theoretical and practical problems in the making and carrying out of environmental and natural resource policy in the U. S. Students will learn several approaches to understanding how, why, and by whom environmental policy decisions are made, and will gain experience with policy analysis and evaluation techniques, negotiation, and with the particular problems of policy implementation. This course takes a process approach to the topic, rather than a descriptive or prescriptive approach, and is aimed primarily at students who see themselves as future practitioners or researchers in this field. Some prior familiarity with the main categories of environmental and natural resource legislation and with the fundamental topics of political science will help students gain the most from this course.

Student Outcomes:

* Approaches to understanding how, why, and by whom environmental policy decisions are made
* Gain experience with policy analysis and evaluation techniques, negotiation, and policy implementation issues
* Apply knowledge to professional work in environmental policy and further academic emphasis in this area.

**Ecology of Harmful Algal Blooms - Gerardo Chin-Leo**

Coastal waters worldwide have experienced an increase in the occurrence of large concentrations (blooms) of harmful algal species. These events are now commonly referred to as harmful algal blooms (HAB). HAB species that contain toxins can cause direct mortality of marine life. Humans can be indirectly affected through the consumption of contaminated seafood. Large blooms of non-toxic species can also have negative impacts on aquatic habitats by shading benthic plants or by interfering with the activities of other organisms. Furthermore, if these algal blooms are not grazed or diluted, their decomposition by bacteria can deplete the dissolved oxygen in the water causing the mortality of aquatic organisms and forming “dead zones”. This program will study the environmental factors controlling the abundance and productivity of aquatic algae, the ecology of harmful algal species and the possible role of human activities in causing the increase of HAB. In addition, we will examine the efforts of scientists and government agencies to monitor HAB, and to control their impact on fisheries and public health.

 Student Outcomes:

* Understanding of ecological principles relevant to HAB phenomena
* Understanding of technical aspects of conducting scientific research
* Understanding of interactions of science and policy in aquatic pollution issues
* Ability to critically analyze technical publications and to clearly communicate the conclusions
* Exposure to field and lab methods relevant to biological oceanographic research
* Exposure to possible research topics that could be addressed in a thesis project

**Environmental Education – Jean MacGregor** (taught every other year)

It is widely agreed that an environmentally literate and concerned citizenry is crucial to environmental quality and long-term sustainability --but how and where is environmental and sustainability literacy fostered? And where “environmental education” occurs, is it effective? This class explores the history, philosophical underpinnings, and current trends in environmental education for both youth and adults, in both formal sectors (schools and colleges) and non-formal ones. This class provides a theoretical and practical introduction to the field of environmental education and interpretation. It will be useful to students interested in environmental teaching or communications as a career, or to those whose environmental work might involve education or outreach components.

Student Outcomes:

* A theoretical grounding in environmental education (EE): its precursors and history, its various rationales, and the working principles to which EE professionals aspire
* An introductory understanding of learning theory and of educational settings which foster meaningful, lasting learning.
* A working knowledge of several arenas in which environmental education is practiced, with attention to both the opportunities and challenges for volunteer and professional environmental educators.
* A framework for evaluation of environmental education programs.
* An understanding of the increasingly politically charged nature of environmental education and implications for professional practice.
* The student’s own construction of the promise of environmental education as well as some of its shortcomings and tensions----and a more complex "concept map" of the field.
* An introductory understanding of social marketing approaches to fostering environmentally responsible behaviors.
* A heightened awareness of the importance of fostering environmental literacy.

**Summer**

**Political Ecology- Martha Henderson**

Humans have occupied and transformed Earth for millions of years. Human choices and decision-making in all areas of the human experience have contributed to environmental changes and consequences. This class investigates the theoretical ideas of political ecology in light of pragmatic ways in which differing cultural groups have made decisions about significant historical environments. The class then turns to the contemporary social processes for making environmental choices. Two papers are assigned, one on a philosophical or theoretical analysis of an environmental decision and one on a specific environmental decision and its outcomes. Seminar and class discussion will be the primary mode of investigation.

Student Outcomes:

* Ability to identify and critique significant social approaches to environmental management
* Ability to analyze concepts and methods of leadership
* Ability to investigate historical and contemporary modes of environmental decision-making
* Ability to research and write an analysis of environmental decision-making and leadership

**Qualitative Research Design – Martha Henderson**

Research at the graduate level in environmental studies is an important step for students working towards undergraduate and masters degrees. The sum total of the research work requires thoughtful definition of a problem, identification of theoretical and appropriate methods for data collection, use of standard tools of data analysis, and a desired logical conclusion. This class will help students articulate good research questions, determine methods of analysis with special emphasis on qualitative methods, and assist students in developing a reasonable research agenda. Students engaged in individual research projects or beginning work on their masters’ theses are welcome. We will collaborate and develop research strategies that will be effective in the pursuit of major individual research projects.

Student Outcomes:

* Gain knowledge of a variety of qualitative research methods
* Ability to design qualitative research projects at the graduate level
* Ability to identify appropriate methods of qualitative data analysis methods
* Ability to summarize data and analysis

FIGURE 2:

|  |  |  |
| --- | --- | --- |
| **Course Title** | **Description** | **Student Outcomes** |
| **PNW Climate Change** | The science and policy of global and regional climate change. This elective will address questions such as these: How does current climate change differ from past changes?  How do climate change models work?  What are some of the key effects of climate change?  How are policy makers addressing climate change, what should they be doing and what can individuals do?  We will also discuss the roles of technology and the media, as well as a variety of economic, legal, political and social perspectives. | Patterns of Climate ChangeRegional VariationImplications for Environmental Management  |
|  |  |  |
| **Contemporary Challenges to Building a Clean Energy Future** | This course will examine current trends in the clean energy sector and the intersections with efforts to develop a green and sustainable economy and environment that also enhances social equity.  The class will integrate research and readings with guest lectures and seminar discussion to explore the current social, technical and political context for the shift to clean energy.  The class will include a special focus on the energy labor market, human resources, education and training, and societal implications for regional alternative energy and energy efficiency initiatives. |  Learn and understand current trends in clean energy; Understand and interpret economic, social and environmental research related to clean energy; Develop or enhance primary or secondary energy data collection and analysis skills; Enhance research report writing and presentation skills; Define potential career interests and opportunities in clean energy-related sectors |
| **Conserving and Restoring Biodiversity** | This course focuses on the biology that underlies conservation and restoration issues around the world. I will mostly emphasize the scientific elements of these disciplines. I also will provide you with a practitioner's perspective of the relationship of biology and policy from work done in Washington State. This course will introduce you to the literature, controversies, and promising methodologies for a variety of conservation/restoration biology applications. In addition, I will invite a number of local experts to come and provide perspectives on their work in applied fields of conservation. Your assignments include written and oral exercises, and peer evaluations aimed at helping you develop your ideas and increase your ability to communicate those ideas. I want to introduce you to the principal concepts and methodologies of conservation and restoration biology, enrich your understanding of the scientific contributions necessary for solving conservation problems, foster your understanding of the scientific process in general and as applied in conservation settings, and further your powers of analysis and ability to communicate effectively | Understanding of what biodiversity is, how it measured, and what is happening to it worldwide (general) and in Washington (specific); Ability to contrast the roles of science versus policy in conservation settings; Understanding of the most applied approaches to setting conservation/restoration objectives and scientific methodologies to achieve those outcomes; Understanding the role of adaptive management and application of best available science in conservation settings; Understanding of how ignorance and uncertainty translate into risk (probability of something bad happening) in conservation settings. |
| **Sustainable Forestry** | Sustainable Forestry: a study in Natural Resource Management is lecture and field-based introduction to forests of the Pacific Northwest, the science of forests and associated aquatic habitat management and the forces of change on their management. Case studies from forest, wildlife and fisheries management will examine 1) how  society catalyzed, and forest science has fueled, recent developments towards a sustainable forestry; 2) the role of habitat restoration in sustainability of both forests and fisheries; and 3) insights into the future of ecosystem-based management. Weekend field trips will provide an insider's perspective into the fount line of natural resources management science and policy. The course will provide background, and an introduction to analysis skills to help evaluate policies and strategies for management, restoration and protection of forests and the services they provide. | Be knowledgeable of Washington forest ecologyBe knowledgeable of wildlife habitats and ecology management strategiesBe aware of theories of risk management   |
| **Ecology of Harmful Algal Blooms** | Coastal waters worldwide have experienced an increase in the occurrence of large concentrations (blooms) of harmful algal species. These events are now commonly referred to as harmful algal blooms (HAB). HAB species that contain toxins can cause direct mortality of marine life. Humans can be indirectly affected through the consumption of contaminated seafood. Large blooms of non-toxic species can also have negative impacts on aquatic habitats by shading benthic plants or by interfering with the activities of other organisms. Furthermore, if these algal blooms are not grazed or diluted, their decomposition by bacteria can deplete the dissolved oxygen in the water causing the mortality of aquatic organisms and forming “dead zones”. This program will study the environmental factors controlling the abundance and productivity of aquatic algae, the ecology of harmful algal species and the possible role of human activities in causing the increase of HAB. In addition, we will examine the efforts of scientists and government agencies to monitor HAB, and to control their impact on fisheries and public health. | Understanding of ecological principles relevant to HAB phenomena, Understanding of technical aspects of conducting scientific research, Understanding of interactions of science and policy in aquatic pollution issues, Ability to analyze technical publications and to clearly communicate the conclusions, exposure to field and lab methods relevant to biological oceanographic research, exposure to possible research topics that could be addressed in a thesis project |
| **GIS and Spatial Analysis** | In this course, we will focus on creating and analyzing spatially-referenced data using ArcGIS. Instruction will be offered through a combination of lecture and lab. Weekly lab assignments are likely to require to use of computing facilities outside of class. By the end of the term, students will have identified and completed a geo-spatial analysis project, which they will present to the class. Students should be well-versed in Microsoft Windows file management, but the course requires no previous experience with ArcGIS. | Have a basic, practical understanding of GIS concepts and technical issues,be able to collect spatially referenced data, understand the importance and uses of different coordinate systems,be able to project and display data in different coordinate systems, be competent in using ArcGIS to perform spatial and attribute queries and overlays ,be able to develop and apply simple geo-processing models.  |
| **Political Ecology** | Humans have occupied and transformed Earth for millions of years. Human choices and decision-making in all areas of the human experience have contributed to environmental changes and consequences. This class will investigate the philosophical and pragmatic ways in which differing cultural groups have made decisions about significant historical environments. The class will then turn to the contemporary social processes for making environmental choices. Finally, the current political processes in Washington and the Pacific Northwest will be examines. Students will observe first hand the political process by observing decision-making in the Washington Legislature. Two papers are assigned, one on a philosophical or theoretical analysis of an environmental decision and one on a specific environmental decision and its outcomes. Seminar and class discussion will be the primary mode of investigation. | Ability to identify and critique significant social approaches to environmental management, Ability to analyze legislative processes that create specific environmental outcomes, Ability to analyze concepts and methods of leadership, Ability to investigate historical and contemporary modes of environmental decision-making, Ability to research and write an analysis of environmental decision-making and leadership.  |
| **Environmental Economics** | This MES elective is designed with both theoretical and practical applied components to develop a strong understanding for how economics (and related topics) can improve and enhance environmental problem solving. A major goal of the class is to make students familiar and comfortable with the language, concepts, models and methodologies used in environmental economic analysis. The class explores the uses and applications of key concepts from micro, environmental, and ecological economics to develop a deeper understanding of public policy initiatives for the environment, sustainability, regulatory reform, and the challenges of the current fiscal crisis in the United States | Ability to understand and useenvironmental economics. Recognize environmental management through economic incentives or costs. Understand public policy from an economics perspective.Design research with an environmental economics strategy. |
| **Environmental Policy Making** | The goal of this course is to introduce students to the important concepts and to both theoretical and practical problems in the making and carrying out of environmental and natural resource policy in the U. S. Students will learn several approaches to understanding how, why, and by whom environmental policy decisions are made, and will gain experience with policy analysis and evaluation techniques, negotiation, and with the particular problems of policy implementation. This course takes a process approach to the topic, rather than a descriptive or prescriptive approach, and is aimed primarily at students who see themselves as future practitioners or researchers in this field. Some prior familiarity with the main categories of environmental and natural resource legislation and with the fundamental topics of political science will help students gain the most from this course. | Ability to understand and interpret public policy as it is affected by environmental decision-making and vice versa. Knowledge of historical and contemporary environmental policy in Washington. Learn to solve environmental problems with policy directives.  |
| **Environmental Education** | It is widely agreed that an environmentally literate and concerned citizenry is crucial to environmental quality and long-term sustainability --but how and where is environmental and sustainability literacy fostered? And where “environmental education” occurs, is it effective? This class explores the history, philosophical underpinnings, and current trends in environmental education for both youth and adults, in both formal sectors (schools and colleges) and non-formal ones. This class provides a theoretical and practical introduction to the field of environmental education and interpretation. It will be useful to students interested in environmental teaching or communications as a career, or to those whose environmental work might involve education or outreach components. | Ability to think critically about education and the implementation of environmental education. Investigate various forms of environmental education. Develop communication skills for environmental awareness and decision-making. This class supports environmental education for all ages and in all settings.  |

Individual Learning Contracts

 MES students may create research or learning experiences by using TESC’s individual learning contracts. A student must work with a faculty member on a topic related to the student and faculty’s expertise. The contract is for 4 credits and must be worthy of graduate credit. The contract sponsor must write an evaluation of the student’s work and submit it as a regular Evergreen evaluation for inclusion in the student’s transcript. The Director approves every MES student contract.

 Internships

 Similarly, an MES student may create an individual learning internship. An internship is different from a contract in that the student is actually working with an agency or organization engaged in environmental work. The student earns 4 credits for working approximately 20 hours per week. The internship field sponsor must write an evaluation of the student’s work. and submit it to the faculty sponsor of the internship. The faculty member submits a regular Evergreen evaluation of the student’s work based on the field sponsor’s evaluation.

 Additional Curricular Policies

 MES credits are generally accumulated at 4 credits per class. Students are not encouraged to enroll in or expect graduate credit for curriculum that does not reach 4 credits of work. The only exception to this rule may be for internship work over more than one quarter. MES students may enroll in MES Director approved 4 credit MPA classes if the class supports their individual choice of study.

 Students may also transfer up to 12 approved graduate course credits from other institutions upon admittance to the program or during the student’s course of study in MES.

Full Time and Part Time Students

 The 72 credit MES program is designed so that, with careful planning, a student can complete the program over two years. Completing the program in two years requires a student to take a core and one elective each quarter for four quarters, and thesis credits plus two electives for the remaining two quarters (see Figure 3). Often, a student is admitted to the program as a conditional student meaning that the student must complete at least one of the three class pre-requisites. These conditions tend to make a student new to Evergreen with some time spent earning credits out of the program prior to January of Year 1 unable to take electives during their first quarter. These credits can be made up during the summer with internships, contracts or summer school credits. However, approximately two thirds of the student body usually completes the degree in three years. Their general trajectory through the program is to complete all core classes and pre-requisites in Year 1 and take a small number of electives. During the next year, the students often take electives and contracts. In a third year, the students complete the core and thesis requirements along with electives and an internship (see Figure 4).

While students have had the option to complete the program in three years, faculty rotate into the program for two years, thus faculty have served as readers of thesis projects for the part time student after they have rotated back to the undergraduate curriculum. The value of a thesis credit can be identified and faculty could be given ‘credit’ for this work against their workload in the undergraduate curriculum, currently thesis work is valued at 1.5 FTE per credit enrollment. This practice can affect approximately 2-3 faculty members per year depending on rotation commitments in MES and the rate of student completion of the thesis project. This type of workload accounting could run into a number of problems over time. Students could just not finish yet the faculty member could ask for workload adjustments until the student either graduated or was withdrawn from the MES program. A better way to resolve this issue is to institutionalize as many steps as necessary to assist students in completing a thesis in a timely fashion, ask faculty to make longer commitments to the MES program, and hire dedicated faculty.

FIGURE 3:

**MES SCHEDULE PLANNER**

Full-Time Student: 2 Year Program

32 core credits, 24 elective credits, 16 thesis credits = 72 credits total

**YEAR 1**

**Fall**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Core: graduate Conceptualizing Our Regional Environment (gCORE) | 8 |
| Elective, Individual Learning Contract, or Internship | 4 |
| *Fall Total Credits* | *12* |
| **MES Total Credits** | **12** |

**Winter**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Core: Ecological & Social Sustainability | 8 |
| Elective, Individual Learning Contract, or Internship | 4 |
| *Winter Total Credits* | *12* |
| **MES Total Credits** | **24** |

**Spring ~ Must advance to candidacy (through candidacy paper) to continue this quarter**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Core: Research Design and Quantitative Methods | 8 |
| Elective, Individual Learning Contract, or Internship | 4 |
| *Spring Total Credits* | *12* |
| **MES Total Credits** | **36** |

**Summer**

* Summer is a good time for internships
* Student may take summer graduate level electives
* Both of these options will count toward elective credit total and will reduce the number of electives required in Year 2

**YEAR 2**

**Fall ~ Thesis prospectus due at end of quarter**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Core: Case Studies & Thesis Research Design | 8 |
| Elective, Individual Learning Contract, or Internship | 4 |
| *Fall Total Credits* | *12* |
| **MES Total Credits** | **48** |

**Winter ~ Thesis work begins this quarter**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Thesis (with workshop) | 8 |
| Elective, Individual Learning Contract, or Internship | 4 |
| *Winter Total Credits* | *12* |
| **MES Total Credits** | **60** |

**Spring ~ Thesis presented and submitted this quarter**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Thesis (with workshop) | 8 |
| Elective, Individual Learning Contract, or Internship | 4 |
| *Spring Total Credits* | *12* |
| **MES Total Credits** | **72** |

**GRADUATION ~ June**

* Student may walk in the MES Hooding Ceremony provided the student will have no more than the thesis and 8 elective credits to finish by December 31.

FIGURE 4: **MES SCHEDULE PLANNER**

Part-Time Student: 3 Year Program

32 core credits, 24 elective credits, 16 thesis credits = 72 credits total

**YEAR 1**

**Fall**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Core: graduate Conceptualizing Our Regional Environment (gCORE) | 8 |
| *Fall Total Credits* | *8* |
| **MES Total Credits** | **8** |

**Winter**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Core: Ecological & Social Sustainability | 8 |
| *Winter Total Credits* | *8* |
| **MES Total Credits** | **16** |

**Spring ~ Must advance to candidacy (through candidacy paper) to continue this quarter**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Core: Research Design and Quantitative Methods | 8 |
| *Spring Total Credits* | *8* |
| **MES Total Credits** | **24** |

**Summer**

* Student may develop a credit-generating internship or take summer grad level electives
* Both of these options will count toward elective credit total and will reduce the number of electives required in future

**YEAR 2**

**Fall ~ Thesis Prospectus due this quarter**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Case Studies & Thesis Prospectus | 8 |
| *Fall Total Credits* | *8* |
| **MES Total Credits** | **32** |

**Winter**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Electives, Individual Learning Contract, or Internship | 8 |
| *Winter Total Credits* | *8* |
| **MES Total Credits** | **40** |

**Spring**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Electives, Individual Learning Contract, or Internship | 8 |
| *Spring Total Credits* | *8* |
| **MES Total Credits** | **48** |

**Summer**

* Student may develop a credit-generating internship\* or take summer grad level electives
* Both of these options will count toward elective credit total and will reduce the number of electives required in future

**YEAR 3**

**Fall**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Electives, Individual Learning Contract, or Internship | 8 |
| *Fall Total Credits* | *8* |
| **MES Total Credits** | **56** |

**Winter ~ Thesis work begins this quarter**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Thesis (with workshop) | 8 |
| *Winter Total Credits* | *8* |
| **MES Total Credits** | **64** |

**Spring ~ Thesis presented and submitted this quarter**

|  |  |
| --- | --- |
| COURSE NAME | CREDITS |
| Thesis (with workshop) | 4 |
| *Spring Total Credits* | *8* |
| **MES Total Credits** | **72** |

**GRADUATION ~ June**

* Student may walk in the MES Hooding Ceremony provided the student will have no more than the thesis and 8 elective credits to finish by December 31.

.

**Faculty**

The faculty lines are usually filled by natural and social scientists in the college’s Environmental Studies Planning Unit although other faculty from across the campus have occasionally joined the MES faculty. Faculty members joining the MES program are asked to make a two year commitment to the program and its students. Theoretically, faculty and a new group of students join the program on a regular basis, thus students meet graduate faculty over their two year progress through the program. These faculty members are available to serve the students as thesis readers.

 In the past, a consistent group of faculty in the Environmental Studies (ES) Planning Unit rotated into the graduate program for the first twenty years of the program. Recently, faculty recruitment has become problematic. With the retirement of the original founding faculty, younger ES faculty are more inclined to be involved with research with undergraduate students, decline to work in the evenings, and are obligated by conditions identified in the Collective Bargaining Agreement (CBA).

 New faculty hiring in the college has also developed a strong cohort of ecology faculty while earth sciences have not been replaced as retirement and administrative duties have leached geology faculty away for the MES program. Adjusting to these changes in the faculty available to teach in MES has created a continual need to search for faculty outside of ES, use adjunct faculty, and hire visitors. This temporary faculty, while exceptional in teaching and service to the program, require assistance in teaching in the Evergreen curriculum model and are not available to thesis support beyond the length of employment. Inconsistent and temporary faculty members do not make a commitment to specific curriculum in each program, and limit student recruitment and retention.

 Regular Evergreen faculty members are required by the CBA to serve the college on administrative and hiring committees. Within the MES program are a number of administrative activities that require faculty support including hiring, admissions, recruitment and retention, budget work, planning and assisting students with the Rachel Carson Forum held each spring, other public presentation, and the graduate student hooding ceremony at graduation. MES faculty must attend three MES faculty meetings per quarter and assist the Director and AD with policy and student needs. All of this service work must be done within the context of the MES night teaching and other college duties and general faculty meetings held on days when core faculty are not often on campus. The duel MES and college serve requirements as identified in the CBA are exhaustive and double the work of most College faculty. Policies affecting faculty support for students in curricular needs are outlined in the *MES Faculty Handbook*.

MES faculty members serve the administrative needs of the MES program. MES administrative needs include faculty leadership in the following areas:

* Student Grievance Committee
* Admissions and Scholarship Committee
* MES Budget Analysis
* Alum Relations
* Internship Coordination
* Hooding Ceremony

**Administrative Staffing**

 The MES administration staffing includes a Director at 50% time, an Assistant Director (AD) at 100% time, and a student assistant at less than 50% time. The Director is a regular faculty member usually hired on three year contract to serve as a faculty member and Director for the program. The Director’s role is to secure the academic excellence of the program. This work includes securing faculty and curriculum, addressing student academic needs, representing the program in larger college administrative work, and representing the program at academic professional meetings. The Director assists the AD in clarifying needs and finding solutions for students within the College structures.

 The AD (full time position), usually hired with a minimum of a master’s degree in higher education or environmental studies work, works to meet student and administrative needs of the program. The work of the AD is varied and requires the capacity to use TESC student tracking systems, internal administration issues, and representing the program in the larger college administration. The AD is also responsible for student recruitment and retention. This work requires working on campus and away from campus for recruitment. Student recruitment is essential to maintaining the academic quality of the program, the value of the MES degree from TESC, and the ability to engage faculty committed to graduate students.

 Creative student recruitment beyond attendance at graduate fairs and visitation to local resource agencies is essential. The recent student cohorts have found the MES program on the Internet. Larger groups of new students are new to Washington, direct from Bachelors’ programs, and interested in areas of studies in sustainability and earth sciences such as climate change and energy, eco-agriculture, urban problems such as transportation, and regional planning issues. Ecology and ecological restoration remains a constant in student interests. The AD should make use a multi-layered approach to student recruitment both in and out of the Pacific Northwest to attract scholastically rich and motivated students.

 The student assistant position is funded through program funding and is not a permanent position. An MES student has usually been hired to fill this position sometimes for only a short period of time depending upon the student’s interest and capacity to work for the college. This position has become increasingly important to the maintenance of the program. Essential work such as processing theses in conjunction with the Evergreen Library, maintaining student files, updating the MES website, communicating with students, adjuncts and faculty by email, and interpreting the Student Handbook for students is required. Consistency and knowledge of the program and College administration and policies is critical. Often, new students, existing students, faculty and college administration contact the student assistant prior to meeting the Assistant or Director, the student assistant is the first stop once inside the program administrative space in Lab I.

**Student Support**

 Students are supported throughout their tenure in the program with a number of services, individualized curriculum options as defined earlier in this report, thesis faculty readers, and financial aid.

Orientation

 Each entering cohort of students begins their studies with an Orientation. This event is held on a Saturday prior to the first week of Fall Quarter classes. This event is usually planned by the AD in conjunction with the Director and faculty. The Orientation provides an opportunity for new students to meet faculty, work with campus offices such as Registration and Financial Aid, meet the 2nd year student body and socialize. A speaker usually provides new students with a clear idea about the value of the MES degree. Questions about Evergreen’s unique curriculum model are also answered. This event is very important to for student retention and success.

Advising

Students are not formally assigned an advisor. The AD and Director are always available to support students and offer advice in class planning and graduation goals. Faculty members also serve as advisors and mentors, usually based on student seminar assignments in the student’s first year of the program. In the second year, students work closely with their thesis reader and may continue to seek support from the AD and Director. The AD has developed a checklist to help students keep track of their progress in the program. The checklist will be implemented this fall with the incoming class.

Financial Aid

Not surprisingly, financial aid is a very important component of any MES students’ decision to attend Evergreen. The AD, in collaboration with the Director, Financial Aid, and Admissions, has put together a draft policy regarding MES Financial Aid awards. Because MES does not provide assistantships or fellowships, like more research-based universities provide, the program must be creative when helping its students financially. The program receives a certain dollar amount every year in scholarships and tuition waivers, and this amount must be dispersed in such a way that it is appealing to admitted students—for the 10-11 academic year, MES attempted to award at least 20% of yearly tuition and fees to students who demonstrated need (according to their FAFSA). It is too early to determine the outcome of this plan, especially for non-resident students. For 2011-2012, it may be beneficial to turn the large dollar amount into specific awards to use for recruitment purposes. The AD compiles and distributes a list of outside scholarships and fellowships for which students can apply. The AD and director are also working on creating partnerships with area organizations to increase the number of paid internships/jobs that are open to MES students. (See attached Financial Aid Plan)

Thesis Workshop

 Students are supported in their thesis work in the two quarter Thesis Workshop (already described in this document). The Thesis Handbook is an excellent source of information for students and should be consulted on a regular basis. The student assistant also answers many questions about the final steps in having the thesis bound and submitted to the program and library.

Masters of Environmental Studies Student Association (MESA)

 Students are encouraged to join and participate in the MES student association now known as The Master of Environmental Studies Association (MESA). The organization serves to support student needs and initiatives. Each year the group secures funds from the Evergreen Student Association that are distributed to support students for academic needs; to support students in attending field trips and academic conferences; and to host events including the annual Rachel Carson Forum (RCF). For the academic year 2009-2010, MESA planned the RCF in conjunction with the MES 25th Anniversary celebration. The event included a presentation by acclaimed local mycologist and environmentalist Paul Stamets, which drew in over 400 attendants.

 An important factor of MESA is its capacity to connect the MES program and students with the greater Evergreen and Olympia communities. Events such as the RCF, documentary viewings, and several outreach and volunteer projects with local organizations achieve this goal. Additionally, MESA serves as an avenue to increase communication between the MES student body and MES faculty and staff. This academic year MESA student organizers have been working to establish a formal Student Representative position among the student body. The Student Representative will attend a portion of faculty meetings as a means to incorporate student perspective and feedback in the functioning of the MES program. MESA has been an integral part of the MES program since its establishment and will continue to be an important part of a fulfilling graduate experience for our students.

**Recruitment**

The nature of the MES program has changed from serving state employees to serving students from around the state, the Pacific Northwest, and other areas of the country. The program also attracts attention from potential students from around the world. The broader potential student body provides greater opportunities for student recruitment. The AD is meeting these opportunities with a variety of new strategies. Most importantly, the program’s web presence must be cutting edge and up-to-date in order to compete in the Internet environment.

 As the MES program has begun to carve out a niche of specialization around Pacific Northwest environmental history and current issues, the geographical area the AD will focus on includes Washington, Oregon, Idaho, Montana, Alaska, British Columbia and a very small portion of Northwest California. Traditional grad fairs will be attended, but because MES is a very specific field, the AD will seek out events, conferences, and fairs that appeal to people interested in environmental issues. For example, the AD has already attended and sponsored two non-recruiting events in Elma, WA—one was for “green” businesses and the other was regarding sustainability. These events not only serve to directly recruit students, but they create the visibility and networking that will introduce more people to MES and increase the program’s marketing through word-of-mouth efforts.

Other various recruitment methods will be as follows:

* Increase presence on Internet
* Directly recruit students from undergraduate environmental programs in the Northwest (including Evergreen)
* Research other competing institutions- Ask admitted students who end up not coming to MES which universities they are attending and why (Money? Location? Curriculum?)
* Sponsor various events in the area that have to do with the environment
* Attempt a small trial recruitment effort in the Southeast—we have a notable amount of applicants from the area, perhaps due to recent environmental issues?
* Connect with AmeriCorps, Peace Corps and other volunteer programs in the Northwest so that alumni of these programs are aware of MES as a post-volunteer opportunity
* Information sessions/open houses
	+ At relevant state agencies (ie: Dept of Ecology)
	+ On campus (fall & spring)
* Quarterly MES Presents event
	+ Show a film, host a lecture
	+ Open to the public, Evergreen students, and anyone interested in MES
	+ Can be partnered with info sessions, Rachel Carson Forum

The goal for Fall 2012 is to have a full cohort (35-40 students) chosen by the first application deadline, February 15, 2012. Heavy recruitment using the above methods will occur throughout the summer, fall & winter. This will include travel around the NW and various web recruitment methods. The AD’s travel and recruitment work will support the MES’s commitment to the college’s carbon neutral plan.

For more information, Please see additional documents on:

* Recruitment and Retention Plan
* MES Budget
* Thesis Handbook
* Financial Aid Plan
* Faculty Handbook
* Enrollment Data
* Faculty, Student and Alumni Surveys
* Staff Job Descriptions