

Syllabus: <http://www.ci.uri.edu/ciip>

Environmental Science (EVS) 618

**Internship in Coastal Management
Spring 2008**

9-12 credits

Briefing Reviews Every Other Week

Location: Coastal Institute Rm. 117 Kingston Campus

INSTRUCTORS

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COURSE OVERVIEW AND RATIONALE

EVS 618 places IGERT trainees with agencies, non-governmental organizations and other partners to provide students with real world experience working in offices, labs and in the field. This internship provides trainees with an intensive work experience with policy makers and other stakeholders. IGERT interns (second-year trainees) will meet

regularly on a formal basis with IGERT faculty and first-year IGERT trainees. The objectives of the meetings are (1) to ensure the internship opportunity is utilized most effectively; (2) to provide a forum for IGERT interns to share their learning experiences; (3) to provide an opportunity for faculty and peer trainees to offer insights, points of inquiry or informed practices to enhance the value of the trainee's contribution to the host site; and (4) to provide insights to first-year IGERT trainees which better prepares them for their own internship the following year.

Non-academic partners will be matched to CIIP trainees based on trainee knowledge and interest in specific issues in coastal ecosystem management (e.g., pollution, sustainable fisheries management, protection of biodiversity, water quality, climate change, etc.). CIIP faculty work regularly with our non-academic partners on research and outreach projects and will assist in pairing our trainees with colleagues who will be good mentors.

Each CIIP trainee will be paired with a non-academic partner. The partner will define the scope and theme of the Internship and will provide mentoring to the trainee during the course of the Internship experience. CIIP trainees are expected to spend considerable time in residence with the host institution. The purpose of this is to provide trainees a full immersion into the work and culture of the host agency. Trainees are expected to provide approximately 20 hours per week commitment to the host's project. The Internship should run from the start of the Spring semester (mid- to late-January) to mid-summer (mid-July).

CIIP faculty recognize that there will be significant variation in Internship arrangements among trainees. Some projects will require in-residence (or in the field) obligations in the early part of the Internship with writing or analysis in the latter part. Other projects may require travel. Some projects may involve data collection and data analysis while others might focus on policy development or outreach. CIIP faculty will be flexible in reviewing Internship trainee proposals.

The CIIP will pay trainee's stipend (up to 20 hours per week) and a small amount of money is available to support travel. Hosts are expected to provide a work venue and standard workplace amenities such as desk, telephone, computer and access to specialized equipment. Hosts should plan on covering any significant travel, equipment, or supply costs that might be incurred. Hosts should clearly instruct trainees concerning hours of operation, safety, behavior or dress codes, and other matters germane to the Internship workplace.

CIIP trainees and their prospective hosts will submit a brief Internship proposal (described later in this overview) to the CIIP Council. The CIIP Council will review the proposal, make suggestions that will maximize benefit to trainees and hosts, review budget requirements, discuss any essential modifications with the trainee and/or host as needed, and move to approve the proposal. Furthermore, hosts and trainees are required to complete a mid-point assessment and a post-Internship assessment questionnaire.

OUTCOMES

The purpose of this independent study course is to create an opportunity for CIIP trainees to work with our non-academic partners on a contemporary issue of coastal ecosystem management.

After the Spring semester course the trainees should have a demonstrable ability to:

- Frame an issue in coastal ecosystem management in the context of the multiple dimensions of the problem including but not limited to the scientific, economic, ethical, aesthetic, and cultural aspects.
- Develop and implement a research strategy that includes mining knowledge resources on the Internet, primary published literature, interviews with disciplinary experts, and peer learning.
- Write a clear and concise statement that is scientifically accurate and understandable to readers from a variety of disciplines.
- Establish and meet deadlines in preparing written and oral summaries of research.
- Work in a multidisciplinary environment.
- Communicate effectively with a range of audiences within and outside the trainee's discipline.
- Bring expertise to a problem in identifying barriers to change, stakeholders and action steps as well as the essential core principals of natural or social science that pertain.
- Demonstrate leadership and/or teamwork as required and the judgment to discern the behavior that is warranted.

Learning Rubrics

Trainees will be evaluated on the following rubrics that comprise the learning goals for the Internship experience.

Value of Research to Target Audience. The trainee should clearly identify the goals of the Internship and tailor the workplan to meet the goals. If appropriate, research questions should be clearly identified, sources of information thoroughly researched, and results presented in a format that maximizes ease of use by the reader and conveys all the required information in a manner that is accessible for the end user. Appropriate statistics should be used to describe patterns, trends, and to test hypotheses. There should be a complete synthesis of the information for the target audience of the Internship work. The implications and ramifications of the results should be clearly and succinctly articulated. The trainee should demonstrate the ability to view the issues through a wide lens and recognize the myriad factors at play but commensurately be capable of focusing his/her work so as to address priorities as set by the host or the circumstances of the issue.

The following elucidates those discrete elements that comprise each level of achievement.

Exceeds Expectations: The trainee demonstrated careful and thorough assessment of the knowledge needs of the Internship host. The trainee regularly briefed the Internship host of interim results and work accomplished to ensure the study was staying on track. The research succeeded in filling the information void for the target audience and provided useful answers or direction. The research will affect future decisions by the host institution. The questions being asked were clearly articulated and the results or knowledge obtained succinctly presented. The trainee demonstrated solid judgment and an ability to communicate with a variety of stakeholders as required.

Meets Expectations: The trainee demonstrated adequate diligence in the assessment of the knowledge needs of the Internship host institution. The trainee met occasionally with the Internship host to brief them on work accomplished. The research met some of the information needs of the target audience and provided useful answers or direction. The research might affect future decisions by the host institution. The questions being asked were defined and the results or knowledge obtained were clearly presented. The trainee demonstrated good judgment and a substantive attempt to communicate with a variety of stakeholders as required.

Approaches Expectations: The trainee attempted to grasp knowledge needs of host and target audience but was unable to clearly define the expectations of the partner. The trainee should have met more frequently with the Internship host to keep target audience needs in focus. The research met some of the information needs of the target audience but large and important questions remain unanswered. The questions being asked and the results or knowledge obtained were not clearly presented. The trainee demonstrated some judgment and a lesser ability to communicate with a variety of stakeholders as required.

Organizational Skills. The trainee is expected to pace his/her work over the semester; keeping hosts, peers, and CIIP faculty abreast of progress. The trainee should record data or information in a systematic and thorough way that does not result in a loss of information. The trainee should provide comfortable lead time in scheduling meetings and should develop a project timetable early in the exercise, adjusting as required as the project progresses.

Exceeds Expectations: Trainee was well organized in every dimension of the Internship experience. Presentations at bi-weekly meetings were carefully thought out and crisply delivered. Internship hosts, CIIP trainees (both peer and first-year cohort), and CIIP faculty were kept informed as the project developed. Time was allotted to synthesize information gathered and put it in the context of the information needs of the target audience. Meetings were planned well in advance to permit

rational scheduling. Data or knowledge obtained were recorded in a form and format that was efficient, accurate, and flexible. Deadlines were always met.

Meets Expectations: Trainee was well organized in the important dimensions of the study. Presentations at meetings showed evidence of preparation. Internship hosts, CIIP trainees (both peer and first-year cohort), and CIIP faculty were kept reasonably informed as the project developed. More time could have been allotted to information synthesis. Meetings were sometimes planned well in advance. Data or knowledge obtained were recorded in a form and format that was effective. Deadlines were usually met.

Approaches Expectations: Trainee could have been more attentive to organizing the work done in the Internship. Internship hosts, CIIP trainees (both peer and first-year cohort), and CIIP faculty were sometimes unclear on what was being done for the project. Final aspects of the project (synthesis, interpretation, writing) were rushed and appeared to have been done at the last minute. Meetings were poorly planned and organized, and the trainee's remarks in meetings showed signs of inadequate preparation. Data were haphazardly recorded or information lost. Deadlines were sometimes not met.

Science. The trainee exhibits mastery of the scientific basis of his/her Internship assignment by demonstrating a comprehensive knowledge of the published literature. He/she sought the input of recognized leaders in the field, considered all dimensions of the scientific issues, including natural and social science aspects, and effectively used CIIP trainee and faculty peer review of his/her scientific compilation.

Exceeds Expectations: Trainee mastered the scientific basis of the Internship by referencing all the current peer reviewed published literature on the topic from a variety of sources, has evaluated all relevant gray literature such as conference proceedings and technical reports, interacted with nationally respected leaders in the field, thoroughly evaluated the natural and social science dimensions of the topic, and regularly used CIIP trainee and faculty review of his/her work.

Meets Expectations: Trainee grasped the major elements of the scientific basis of the Internship topic. Major papers were consulted in the peer reviewed literature from multiple sources. The gray literature was referenced. Trainee consulted with some scientists in the field. Trainee evaluated most of the natural and social science dimensions of the topic and used CIIP trainees and faculty to review his/her work.

Approaches Expectations: Trainee addressed many, but not all aspects of the scientific basis of the Internship topic. Papers in the peer reviewed literature were consulted but a thorough literature review was not accomplished. The gray literature was not fully referenced. Trainee did not consult effectively or at all with scientists in the field. Trainee evaluated some, but not all of the natural and social science dimensions of the topic. Trainees did not fully use CIIP trainees and faculty to review of his/her work.

Writing. The writing will be well-organized and mechanically correct. The format and style will be consistent with the format and style chosen for the Internship by the trainee and host.

Exceeds Expectations: Written products from the Internship are extremely well organized and use an appropriate organizational system, make effective use of the published literature, contain clear and intuitive tables and figures, and use appendices as necessary. Style is accessible, yet informative, and can be easily understood by the intended audience. There are no distracting errors in spelling or grammar. The structure of the written materials, including paragraphs and transitions, is well done.

Meets Expectations: Written products from the Internship are well organized, using a transparent organizational system to compartmentalize sections. Style is informative and can be understood by most readers, but uses some excessively technical jargon that is not generally recognized by some members of the intended audience. There are no distracting errors in spelling or grammar. Figures and tables adequately convey the intended information. The structure of the paper, including paragraphs and transitions, is well done.

Approaches Expectations: Written products from the Internship lack organization and clarity. The style of the writing is sometimes obtuse and may not be accessible, understandable, informative, or appropriate for the intended audience. There are distracting spelling and/or grammatical errors that reflect poorly on the trainee and his/her role as a representative of the CIIP. Writing of this quality requires significant revision to be acceptable and a rewrite would be required.

Internship Presentation. The oral presentation at the beginning of the Fall semester following the Internship is an opportunity for the trainees to share and celebrate their work with the CIIP community and other invited guests.

Exceeds Expectations: The presentation is clear and concise. The trainee is well prepared and stays within the allotted time. The trainee uses visuals in an effective and appropriate way, with no spelling or grammatical errors, and good use of color, layout and content. The presentation is fully prepared and not read, eye contact is effective, and visual aids are not wordy. The speaking style makes appropriate use of the trainee's personal strengths of delivery. The trainee is able to listen effectively, answer questions and receive questions/comments in a professional manner. The trainee comports him or herself as a qualified specialist within the norms of a professional meeting. The overall impression is that of a professional with command of his/her subject.

Meets Expectations: The presentation is clear and concise. The trainee is well prepared and stays reasonably within the allotted time. The trainee uses visuals in an

appropriate way, with no spelling or grammatical errors, and good use of color, layout and content. The presentation is adequately prepared and only occasionally read, eye contact is effective, and visual aids are not wordy. Eye contact may be erratic and visual aids may contain too much text. The trainee's speaking style demonstrates an emerging ability to make use of personal strengths. The trainee is able to listen, answer questions and receive questions/comments in a professional manner. The overall impression is that of a professional working towards command of his/her subject.

Approaches Expectations: The presentation is not effectively organized. The trainee is not well prepared or exceeds the allotted time. The trainee's use of visuals may be ineffective due to poor color choices, ineffective layout, too much information, too much text, or too many slides. The visuals may contain spelling or grammatical errors. The trainee's speaking style may be difficult to understand or distracting to watch. Eye contact with the audience could be increased. The trainee does not answer questions clearly or accurately. The trainee appears resistant to questions or comments. The overall impression is not that of a professional with command of his/her subject.

CALENDAR OF ACTIVITIES

CIIP trainees will submit a proposal (3 pages maximum length) to the CIIP Council by January 20 that describes the work to be done during the Internship.* The proposal will include a letter of support from the host. The 3-page proposal and letter from the host shall address the following questions:

- What is the goal of the Internship project?
- What are the final products of the Internship?
- How does this project bear on integrating social and scientific dimensions of coastal ecosystem management?
- Where will the CIIP trainee work and what is the time window for the Internship?
- Are there expenses involved and are CIIP funds are requested? If so, for how much?
- Will there be dissemination constraints on knowledge or products developed by the trainee?
- What elements of leadership and communication will be expected of the trainee?
- What mentoring of the CIIP trainee is expected from the Internship host?
- What published materials and presentations do you expect to produce as a result of the Internship and where do you anticipate publishing these results?
- How does the Internship fit with the overall goals of the CIIP?

*N.B.: To avoid any confusion between and among the CIIP Council, the host and the trainee, it is incumbent upon the trainee to discuss the basic focus of his/her Internship with one of more CIIP faculty prior to presenting the proposal to the CIIP Council.

The purpose of the proposal is to ensure that the design of the Internship experience meets the goals of the CIIP and that the work of the trainee provides useful information to the host institution.

In the first bi-weekly meeting IGERT interns will discuss their goals for the Internship. Their sponsors from non-academic host institutions will attend this meeting and participate in this first session.

During each bi-weekly meeting, IGERT trainee interns will report on their experiences, which will involve discussion including, but not limited to, what they have learned, the extent to which they are accomplishing their learning goals and whether/how to revise their internship goals in view of their ongoing experience. In turn, interns will be asked to analyze the effectiveness of the strategy employed by their respective intern sites and propose alternative strategies. (Note: attendance at some of the bi-weekly meetings might be impossible due to travel requirements of the Internship; however, this does not eliminate the obligation of the trainee to communicate with faculty and peers by email or similar methods.) Following the first month in residence, the trainee and host will be asked to provide a brief report on any anticipated shifts in the proposed scope of work. This report will constitute the midterm report of February 21st.

WRITTEN ASSIGNMENTS

Students will be required to prepare the following written products:

- Internship proposal (described above). This may be submitted electronically and is due 20 January.
- A brief report one month into the Internship describing the work underway, revisions to the original Internship plan, and obstacles encountered. This may be submitted electronically and is due 21 February.
- A brief written description of work accomplished on Internship project. This will be posted on the CIIP web site. This should be submitted electronically and is due 29 April.
- A published article relevant to the Internship assignment written for a technical or a non-technical audience. Possible publication outlets include scientific journals and popular publications (e.g., Narragansett Bay Journal, 41°N, RINHS Newsletter, Naturalist New England, American Scholar, Providence Business News, Bulletin of the Ecological Society of America, Estuarine Research Federation Newsletter, in-flight magazine for airlines, Chronicle of Higher-Education, Choices, etc. This list is by no means exclusive but is intended to provide a sense of the flexibility of potential venues.). Digital products or juried performances may also be acceptable. The elements of a solid publication for EVS618 include:

- Broad distribution
- Peer reviewed or reviewed by someone other than the author
- Credible venue
- Printed or electronic format
- Stable, will be around for a while
- Must be retrievable by a knowledgeable librarian
- Must have a focused audience
- Must be citable in a scholarly work.

It is impossible to make any definitive general statements on what is and isn't a legit publication. The Bulletin of the Ecological Society of America is their newsletter. It is VERY credible. The RI Naturalist is the newsletter for the RI Natural History Survey. It is less prestigious than the ESA but is peer reviewed and has a broad dissemination. The CELS Newsletter is not critically reviewed and would probably not count. Self published blogs probably would not count. Self hosted web sites would probably not count. Conference Proceedings, although peer review can be non-existent, are probably OK. 41N and Narragansett Bay Journal are moderately reviewed and have a great distribution. They would be fine. Self-published, non-reviewed materials such as a CD/DVD, written report, or a self-hosted Web site would not be acceptable publications. Eligibility for CIIP grants-in-aid of research requires that the scholarly product of the Internship be accepted for publication. The CIIP Council will be the final point of decision for the validity of a publication venue.

CAPSTONE PRESENTATION

The Fall semester 2008 will begin with public presentations on the Internship experience by each of the CIIP trainees. This will be a celebratory event where trainees will share the scholarly work accomplished in the Internship. It will also include a reflective component on their perceptions of the overall CIIP program.

The presentations will:

- Describe the work accomplished in the Internship and the results obtained.
- Synthesize the social, scientific, and human dimensions of the problem addressed during the Internship.
- Reflect on the overall CIIP experience and how it has changed (or not) the trainee's view of coastal resource science and management.

Details on the length of the presentations, venue, and other logistical matters will be provided later.

GROUND RULES FOR THIS CLASS

CIIP trainees not only represent the University of Rhode Island but also serve as ambassadors for the highest ideals of the CIIP and are expected to comport themselves as mature professionals. All blog and TrueOutcomes postings must be made in a timely manner. Trainees are expected to offer peers constructive advice and review in the in the bi-weekly class meetings.

GRADING

Grading will be S/U. Trainees will be graded on the work presented both in class and as written products. At all times, trainees will be evaluated for the quality of their analytical thinking and the skill of their verbal and written communication. For information on grading for graduate students, see the **Graduate Student Manual**.

The breakdown is as follows:

In-class participation.....	30%
Blog/TrueOutcomes postings.....	30%
Written Project Overview	40%

COMMUNICATION

We expect everyone to use e-mail in order that we can communicate efficiently with each other. We will use the listserv at CIIP@pete.uri.edu for class notices and questions. We will use the CIIP blog that is linked from the class web site for electronic discussion of issues and ideas that the students bring forward. We will use the TrueOutcomes learning e-portfolio on the URI web site. For any individual or personal issues, contact August at pete@edc.uri.edu, Opaluch at JimO@uri.edu. CIIP postdoc Q Kellogg is also available throughout the class to provide overall support and advice as needed at qkellogg@uri.edu. Swift at jswift@uri.edu will provide support on preparation of final presentations for the Capstone Event.

HONOR CODE:

We expect each trainee to perform his or her own work in the development of written products. However, assisting each other is a major part of this learning experience. The only caveat is to acknowledge that assistance. As is generally known, trainees must always include citations of any research. Faculty are required to inform all graduate students that the University of Rhode Island has very clear rules pertaining to plagiarism. See **The University Manual**, 8.27.10-8.27.19 and **The Graduate Student Manual**, 4.95. We expect the highest levels of integrity from CIIP trainees in all aspects of this internship including respect for private aspects of the host site.

PHILOSOPHY OF TEACHING/LEARNING

We are hoping for lively commentary, difference of opinion, and engaged learning. Collectively, the CIIP trainees, non-academic partners, and faculty have considerable knowledge of issues in coastal ecosystem management. The Internship experience is designed to tap that knowledge and organize it in a clear and meaningful way. We expect that we will all engage in lively debate while demonstrating respect for differing opinions. We will also provide ongoing critiques of your work and will offer them in the spirit of constructive criticism. We strongly urge trainees to evaluate any critique they receive as objectively as possible. Do not hesitate to contact CIIP faculty or the Internship host if a bit of commentary is confusing. On the other hand, recognize that we will not always agree with each other and part of a trainee's job is to sort through qualitative and quantitative data to determine their value and applicability.

EXPECTATIONS OF INTERNSHIP HOSTS

- The NSF IGERT grant will cover the trainee's stipend for the semester. We expect her/him to work an average of 20 hours per week on the Internship assignment. The trainee is also receiving 9-12 course credits for this effort.
- We expect the trainee to meet with the host often and s/he shall be resident at the host's institution for an extended period of time. The IGERT grant has a modest amount of money available to cover travel expenses, small amounts of supplies, and photocopying costs.
- The topic of the Internship should be of practical value to the host and of intellectual interest to the trainee. We have encouraged all the IGERT trainees to use the Internship as a means to expand their knowledge on the subject chosen in tandem with their host organization. It should be on a topic of importance to the host and host's organization and require that the trainee conduct independent research and synthesis. Most importantly, it should assist the trainee in developing his/her skill in synthesizing science within the context of complex social/cultural/policy issues and writing about it succinctly for a broader audience as well as their scientific peers.
- The final product of the Internship will be a published document. Peer reviewed journals are always an excellent venue, but we encourage the trainees to consider other outlets as well such as technical bulletins, trade magazines, and popular print media. Co-authorship of the publication by the Internship host is not only acceptable, but encouraged. The CIIP Council requires that trainees receive final approval on any popular print media venues or alternative publication sites, e.g., the Web, other electronic media or venues.
- We will post end-of-the-semester Internship reports on the IGERT program web site. If you anticipate that issues of confidentiality, national security, or release of proprietary business information will limit distribution of the Internship report, please notify us as soon as possible.
- The host and the trainee must be in close communication; the trainee is responsible for creating a meeting schedule that is convenient for both. The

trainee needs to keep the host informed of her/his research progress so they can, in turn, keep her/him focused and on track. All of the trainees will meet with their fellow trainees and IGERT faculty every other week over the semester to report what they are learning and to use their URI peer group to consider questions and ideas. Of course, they will respect any sensitive information and any boundaries on information that the host feels are essential.

- The trainees will make public presentations on their Internship work at the beginning of the Fall semester in September 2008. Internship presentations will kick-off the new CIIP year and be an opportunity to share and celebrate the work of the CIIP trainee. We hope all hosts can join us for this celebratory event.
- Hosts will help develop the Internship proposal that the students are required to submit in January. Hosts will be contacted by the CIIP one month into the Internship to determine how the Internship process is working from the host's perspective.
- We will ask that the host complete a review of the trainee's performance at the end of the Internship experience. The purpose of this assessment is to learn what we might do to make the Internship as meaningful as possible for the trainees and their hosts.

End of Semester Questionnaire for Internship Hosts

Please comment on the CIIP trainee's Internship performance under your mentoring this past semester. Your comments should be delivered directly to Peter August. They will be considered a confidential assessment and NOT shared with the trainee.

How would you characterize the trainee's organizational, communication, research, and writing skills?

Did the trainee grasp the problem rapidly and demonstrate creativity and imagination in addressing the Internship problem?

Did the trainee conduct him/herself in a mature, responsible, and professional manner?

Did the trainee grasp your organizational culture and adapt to its norms?

Was the final written product a useful document for you and your organization?

Would you host another IGERT trainee if the opportunity presented itself?