JAMAICA FIELD COURSE
ERS 375 (Winter 2014)

Instructors:
Derek Armitage and Steve Alexander

Course Overview

The Jamaica field course offers a unique opportunity to examine the linkages among ecology, conservation and development and environmental policy issues in a rapidly changing coastal-marine context. Current threats to Jamaica’s coastal-marine environment include overfishing, invasive species, poverty, and tourism development, along with the impacts of climate change (e.g., sea level rise, coral bleaching). Innovative strategies are required to protect Jamaica’s ecosystems, maintain the livelihoods and wellbeing of coastal people, and help individuals and communities adapt to change.

The course has an in-class component in addition to the field component (see schedule). We will meet several times in advance of our departure to Jamaica to: 1) discuss course logistics, expectations and responsibilities; 2) engage with major themes in the course, including the human and biophysical dimensions of coastal-marine change, management and governance, and social and ecological sustainability; and 3) lay the groundwork for individual research projects and course assignments.

The field course component will involve visits to selected sites on both the north and south coast of Jamaica, and includes opportunities to interact with fisherman and coastal tourism operators, decision makers, and marine managers and researchers engaged in coastal-marine initiatives. We will also have an opportunity to snorkel among the sea grass beds and observe first-hand the state of coral reefs and fisheries.

We will be based at the Discovery Bay Marine Lab and then subsequently at Belmont Cabins in Bluefields Bay. Accommodation will be comfortable but modest, and meals will be based on locally available products. Active participation is essential for a successful course, and you will be engaged in multiple ways: developing an individual research project, maintaining a field journal, designing and producing a short podcast, and contributing a post to a course blog. Stringent guidelines about course expectations and codes of conduct while in the field are non-negotiable. We will work hard, learn a great deal and do so in a collegial and professional manner.

Course Objectives

At the end of this course, you should be able to:

- Understand the major challenges and drivers of coastal-marine change and the implications for management and governance;
- Consider and assess various applications (e.g., ecosystem-based management, marine protected areas, development of living shorelines, community conservation schemes) applied at local to national scales to deal with coastal-marine change;
- Critically assess the assumptions underlying these applications, their limitations and the opportunities they provide for a transition to more social and ecologically sustainable coastal-marine contexts; and
- Apply an understanding of course material to a research project of interest.
Required readings

There is no required course text. However, required readings are listed in the course schedule (below), and they are accessible via TRELLIS. Readings will focus on selected themes, concepts and strategies that are particularly conducive to transdisciplinary coastal-marine research and practice. Course materials and lectures will be augmented as appropriate (e.g., videos, guest speakers).

Course requirements and evaluation

This is a 1.0 credit weight course. Evaluation in this course is based on: (i) class engagement; (ii) maintaining a field/learning journal; (iii) designing and producing a short podcast; and (iv) completion of an individual major research paper and accompanying presentation. A summary of each expectation is provided below:

i) Class engagement (10%)

Assigning marks for class participation and engagement is intended to encourage you to approach the course in a professional and committed manner. The overall mark for engagement is based on your attendance and participation in discussions and course activities (both in the field and in-class). The mark is also linked to the code of conduct for behaviour to which all course participants are expected to adhere.

ii) Individual field / learning journal (20%) and blog (10%)

You will be responsible for maintaining an individual learning journal / log. The purpose of the journal is to help you highlight and critically reflect on what you think are the key ideas and concepts addressed in the class, and following each of the field study visits/activities. Approximately 8-10 journal entries are required, and additional guidelines on the field/learning journal will be provided. Part of this course requirement will be transitioning one (or synthesizing one or more) of the field/learning journal entries into a blog entry that will be posted on a course webpage/blog. This entry can be linked to your research paper topic.

iii) Designing and producing a short podcast (15%)

You will produce and record a 4-5 minute podcast. The purpose of the podcast is two fold: i) to develop your science communication skills and ii) to serve as a building block for your research paper. We would encourage you to use this as an opportunity to clarify your thinking and clearly communicate the essence of your research paper to a broader audience. Further details will be provided.

iv) Major research paper (30%) and presentation (15%)

A key course outcome is the preparation of a major research paper (approximately 4000 words) on a topic you explore before, during and after the field course component. The paper must address in some manner the course themes, although you are free to incorporate other material and topics provided you have discussed this with the course instructors ahead of time. Similarly, you are expected to incorporate class readings in your research paper, although you are encouraged to integrate other readings and sources of information as appropriate. Additional details on the research paper will be provided. In regards to your paper, keep in mind the following:

• A reasonably well-developed paper proposal must be submitted for comments/feedback prior to our departure for Jamaica, and should include a clear thesis or problem statement, an indication of general organization of the paper, and a working bibliography (see class schedule).
• You will present your paper in a class towards the end of the term (details to follow). You must be available for this class.
• Your final research paper is due on Friday March 28th, 2014 (4:00pm).
All assignments must be completed to receive a mark for the course. Requests for extensions of any assignment must be done so in writing in advance of the assignment due date. In the event of an illness, a supporting medical certificate completed by a physician must be provided. Extensions may be granted for significant emergencies at the discretion of the Instructor. Please consult the University's policy on plagiarism and academic misconduct. Please ensure you are aware of what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for your actions. If you are unsure whether an action constitutes an offense, or you need help in learning how to avoid offenses (e.g., plagiarism, cheating) or about “rules” for group work/collaboration, please see me. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline: http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm

Within ENV, those committing academic offences (e.g. cheating, plagiarism) will be placed on disciplinary probation and will be subject to penalties which may include a grade of 0 on affected course elements, 0 on the course, suspension, and expulsion. Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to Policy #70, Student Grievance: http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm

**Estimated course costs**

Significant effort has been made to keep course costs and fees to a minimum. The overall costs for students (not including course registration at UW) is approximately $2000 Canadian. This includes the costs of airfare, all accommodations, meals, in-country travel and tours, etc. Incidentals (e.g., snacks, gifts) are not covered. You will be responsible for drop-off and pick-up at Pearson International Airport (Toronto). You must also have a valid passport.

Note that some variation in the overall cost for the course may occur depending on the final price for the flight, local circumstances, differences in exchange rates, etc.

**Participation in the course requires full payment (full fees are due December 1, 2013). A deposit of $500 is required November 1, 2013 to confirm a space in the course.**

**Personal Conduct and Safety**

Safety is our first concern on an international field course. We conceive of safety broadly, including its physical, emotional, and intellectual aspects. We rely on you (i.e. the students) to help contribute to a safe atmosphere for the courses. Behavior that threatens any aspect of your safety, or that of other students or instructors, will not be tolerated. Physical safety is, of course, our first concern. We expect students to abide by the following rules and standards of personal conduct.

- Students will travel with the group unless otherwise directed by instructors.
- Climbing that requires the use of hands is not allowed (e.g. cliffs, rocks, trees, etc.)
- Abide by the laws of the host country and all applicable policies, procedures and requirements of the University of Waterloo and other institutions involved in the program
- Be aware of local conditions and customs that may present health or safety risks. Promptly express any health or safety concerns to the instructors.
- Use of illegal drugs and/or irresponsible consumption of alcohol is prohibited.
- Students and instructors must respect norms of conduct and help maintain the University of Waterloo’s good reputation in the places we visit, whether this is a community, a government office, or a hotel. We build relationships in these communities and our local contacts are vital to future courses.
All students and instructors shall treat oneself and others with respect at all times. Group dynamics and friendships require honest and open communication. Please communicate your feelings or requests early, before a minor issue becomes a distraction. If you are sensitive, mindful and self-aware throughout our time in the field, we are bound to have a successful course.

### 2014 Course Schedule Overview

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<tr>
<th>Week of</th>
<th>Theme</th>
<th>Readings / Assignments</th>
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<tbody>
<tr>
<td>Jan 6th</td>
<td>Course introduction; logistics / overview; expectations and requirements</td>
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<td>Jan 21st</td>
<td>Developing your research project</td>
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<td>Jan 27th</td>
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<td>Feb 3rd</td>
<td>Proposal meeting</td>
<td>Research paper proposal due by end of week</td>
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<td>Feb 10th</td>
<td>Pre-departure meeting</td>
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<td>Feb 17th</td>
<td><strong>Field Course Component – See Detailed Schedule</strong></td>
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<td>Feb 24th</td>
<td>Post-trip meeting</td>
<td>Submit field/learning journals &amp; Blog Post by end of week</td>
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<tr>
<td>Mar 3rd</td>
<td></td>
<td>Submit Podcast by end of wk.</td>
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<td>Mar 10th</td>
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<tr>
<td>Mar 17th</td>
<td>Class presentations and social event</td>
<td>Research presentations</td>
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<tr>
<td>Mar 24th</td>
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<td>Final research paper due March 28th (4pm)</td>
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### Detailed Field Schedule

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<thead>
<tr>
<th>Day</th>
<th>Location</th>
<th>Activities/ Topics</th>
<th>Course Themes and Example Readings</th>
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| 1 (Feb.14) | • Meet at Pearson Int. Airport  
• Group Flight to Montego Bay  
• Transfer to Discovery Bay Marine Lab | • Orientation, Overview  
• Intro to Coastal-Marine Ecology (Dr. Dayne Buddo) | Coastal Ecology: Hughes 1994; CFRAMP 2000; Hardt 2009; Cote et al 2013 |
| 2 (Feb.15) | Discovery Bay | AM  
• Snorkeling @ Pear Tree Bottom  
• Coastal-Marine Ecology Observations  
PM  
• Invasive Species (Dr. Dayne Buddo)  
| 3 (Feb.16) | Discovery Bay | • Meet w/ Fisherman from Alloa Fisherman’s Cooperative Society | Coastal livelihoods; Carney 1998; Bene 2003; Aiken & Ennis (In Press) |
| 4 (Feb.17) | Oracabessa/ Boscobel (Day Trip) | • Visit coral restoration project  
• Snorkeling  
• Managing coastal resources through private/public partnerships  
Tentative Guest Speakers:  
• Andrew Ross- Seascape Caribbean | Governance and policy: Agardy 2005; Lemos and Agrawal 2006; Berkes 2010 |
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<tr>
<th>Date</th>
<th>Location</th>
<th>Activities</th>
<th>Notes</th>
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| 5 (Feb.18) | Travel to Bluefields Bay | AM  
  • Travel  
  PM  
  • Independent work and reflection | Reflection and synthesis |
| 6 (Feb.19) | Bluefields Bay | Bluefields Community hiking tour; fishing docks and subsistence farming | Livelihoods and small-scale fishers: Kong 2005; Burke and Kushner 2011 |
| 7 (Feb.20) | Bluefields Bay | Boat Tour of Bluefields Bay SFCA  
  • Meet w/ Bluefields Bay Fisherman’s Friendly Society (Lion Fish – Fish Fry)  
| 8 (Feb.21) | Bluefields Bay/ Whitehouse | Small-Scale Fisheries and Local Economies (Whitehouse Fish Market, Fish Processing Plant)  
  Tentative Guest Speakers  
  • Mr. Honeygun (Gillings Gully Fisherman Cooperative-Chairman)  
  • Jaquilin Chin-Cole/ Richard Cole (Cole’s Seafood & Poultry) | Reflection and synthesis |
| 9 (Feb.22) | Negril (Day Trip) | Boat Tour of Negril Coast/ Snorkel Excursion  
  Tentative Guest Speakers  
  • Ms. Allison Pearce (NEPA)  
  • Dr. Donovan Campbell (CARIBSAVE) | Coastal adaptation: Pulwarty et al 2010; Cinner et al 2013; Bernhardt & Leslie 2013 |
| 10 (Feb.23) |  
  • Transfer from Bluefields Bay to Montego Bay  
  • Return from: Montego Bay to Toronto  
  • Pick up at Pearson Int. Airport |  |  |
READINGS (ALL AVAILABLE ON TRELIS OR WWW; ADDITIONAL READINGS AND/OR CHANGES TO READINGS TO REFLECT COURSE PARTICIPANT INTERESTS IS EXPECTED)


Kong, G. A. 2005. The consideration of socio-economic and demographic concerns in fisheries and coastal area management and planning: Jamaica Case Study. FAO.


UNEP. 2006. Marine and coastal ecosystems and human well-being: A synthesis report based on the findings of the Millennium Ecosystem Assessment. UNEP.
