Applied Tropical Ecology
BIOL 334
(Friday May 1 - 15, 2020)
Why take a field course?

• Real problems in real environments (contrasts with lack of labs or limitations of labs in other courses)
• Hands-on learning is different
• Closer contact with professors and other students
• Most students rate their field courses as the ‘best course I took at McGill’
Why study applied ecology?

• **Important problems for society**
  - Agriculture; Agro/ecological systems
  - Fisheries
  - Conservation management
  - Health $\supset$ disease transmission
  - Pollution and remediation

• **Potential jobs for students in ecology**
Why study the tropics?

• Different organisms and ecosystems
• High diversity
• Site of many practical problems
Where is Barbados?
Facilities at Bellairs
Shore at Bellairs
West block dorms
The board room
Conference room and library
Molecular lab
Instructors

• **Professor Laura Nilson**
  - Molecular Biology

• **Professor Neil Price**
  - Biological oceanography

• **Professor Frederic Guichard**
  - Theoretical and marine ecology

• **Professor Henri Valles** *(University of West Indies)*
  - Coral reef ecology
Organization of the course

• Montreal
  - Readings
  - Take-home exam during the winter term

• Barbados
  - Arrival (Friday 1st) and orientation (1 day)
  - Rotation among 3 modules (1 day each; total 3 days)
  - Collaborative research project (7 days; each student in one project only)
  - Travel to other areas of ecological interest on Barbados (2 days)
  - Packing and departure (Friday 15th)
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<thead>
<tr>
<th>Day</th>
<th>AM</th>
<th>PM</th>
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<tbody>
<tr>
<td>Friday</td>
<td>May 3 2019</td>
<td>Arrival</td>
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<tr>
<td>Saturday</td>
<td>May 4 2019</td>
<td>Orientation</td>
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<tr>
<td>Sunday</td>
<td>May 5 2019</td>
<td>Module 1</td>
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<tr>
<td>Monday</td>
<td>May 6 2019</td>
<td>Module 2</td>
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<tr>
<td>Tuesday</td>
<td>May 7 2019</td>
<td>Module 3</td>
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<tr>
<td>Wednesday</td>
<td>May 8 2019</td>
<td>North Point</td>
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<td>Thursday</td>
<td>May 9 2019</td>
<td>St. Nicholas Abbey (lunch)</td>
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<td>Friday</td>
<td>May 10 2019</td>
<td>Projects (dinner at fish market)</td>
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<td>Saturday</td>
<td>May 11 2019</td>
<td>Projects</td>
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<td>Sunday</td>
<td>May 12 2019</td>
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<td>Monday</td>
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<td>Tuesday</td>
<td>May 14 2019</td>
<td>Projects</td>
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<tr>
<td>Wednesday</td>
<td>May 15 2019</td>
<td>Projects</td>
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<tr>
<td>Thursday</td>
<td>May 16 2019</td>
<td>Symposium - BBQ</td>
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<td>Friday</td>
<td>May 17 2019</td>
<td>Clean up</td>
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Biological Oceanography
Molecular ecology
Coral Reef ecosystem
Travel Around Barbados
Collaborative Projects

• Intensive focus on one group project with professor(s)

• Related to modules but:
  • Can be conducted in different ecosystems (e.g. seagrass, different coral reefs around the island, agricultural)
  • Can integrate methods learned across modules (molecular, nutrient concentration, sampling design)
  • Can be applied (human impacts, conservation strategies, socio-economic components)
Collaborative Project Organization

- Organizing (often in collaboration with local experts or organization)
- Field and library research
- Analysis and interpretation of data
- Written and oral final report
Course Evaluation

• Take-home exam (30%)

• Participation in the modules (20%)

• Collaborative project (50%)
  • Participation
  • Report
  • Oral presentation
Costs

• **Normal course costs**
  - Tuition
  - Supplementary Fee ($1,695.49)
  - Two payments ($500 deposit in December and balance charged to your student account in the spring)
  - Covers room and board in Barbados, additional course expenses such as vehicle rental and boat use, but not tuition

• **Additional personal costs**
  - Airfare and meals in transit
  - Cancellation insurance, airport taxes, & taxi to and from Bellairs
  - Supplementary health insurance
  - Personal expenses
Getting more for your money

- Cheap holiday in Barbados before or after course
- NSERC summer research awards
- Gathering data for independent studies or honours projects
- Volunteer or paid research assistance
Warnings

• Pre-requisites: ecology and lab course and permission
• Timing of graduation
• Health
• Diet
• Swimming ability but not SCUBA diving
• Attitude
Key dates

- Dec 18, 2019 Application forms submitted to Prof Guichard
- Dec. 21, 2020 List of participants posted
- Jan 14, 2020 Initial deposit due (balance billed on student accounts).
- *Feb. 2020 Take-home exam available
- *March, 2020 Planning meeting for all participants. Compulsory. N7/1, 17:30
Questions?