This multi-disciplinary course will introduce the students to both the biodiversity and ecology of Belize and Guatemala, as well as the history and anthropology of the Mayan culture. Students will be introduced to several unique and vulnerable ecosystems within Belize, including tropical rainforest, estuary, and coral reef (the second largest in the world). Students will have an opportunity to work with researchers at South Water Caye Marine Research Station (this coral reef is a World Heritage Site), and with Park Rangers on service projects at Tikal National Park (another World Heritage Site). Students will engage in lectures and discussions on the ecological health of these ecosystems, observe them in a hands-on manner (including hiking and snorkeling) and learn the survival strategies of several terrestrial and marine species. The course encompasses several days in the rainforest, as well as time at a research station within the coral reef. Our students will be participating in research projects at this site.

Students will also learn about the culture, history, and anthropology of the Mayan civilization. This will include visits to several World Heritage Sites as well as an active archeological dig site.

The region is rich with early pre-Columbian settlements, such the archaeological sites of Xunantunich, Lamanai, and Caracol. Students will be exploring these sites and participating in discussions and lectures that will shed light on the ancient Maya civilization that once flourished. This part of the course will take our students into Guatemala for a more diverse learning experience that will encompass the Mayan history, art, and culture.
The program will be rounded out with rich cultural exchange with students in the area, as well as service projects for the communities we will be in.

**Expected Learning Outcomes:**

The learning outcomes of this course include:

- Study of the rainforest, estuary, and marine ecosystems in Belize and Guatemala
- Knowledge of the history, culture, society, and anthropology of the ancient Mayan Civilization
- Learning of archeological techniques at an active Mayan dig site
- Cultural exchange with the community service projects and student exchanges
- Knowledge in rainforest, estuary, and coral reef conservation, and the impact of agriculture and human interference
- Visits to several world heritage sites in study archeological sites such as Yaxta, Cahal Pech, and Actun Tunichil Muknal Cave (active site with 1,400 artifacts being catalogued).
- Working with Park rangers at Tikal National Park
- Visits and behind-the-scenes work with researchers at the Belize Zoo and the Blue Morpho Butterfly Farm
- Competence in research methods and research design
- Participation in a collaborative research project

**Course Schedule:**

**Several Pre-trip lectures to be determined:**

- Anthropology of the Mayan civilization
- The culture and history of the Mayan people
- Introduction to Archeology
- The Biodiversity of the Central lowlands / rainforests
- Rainforest Ecology
- The coral reef – Bio-diversity and Ecology

**Monday 05/01/2017  San Ignacio**

- Arrive in Belize City
- Visit the famous Belize Zoo – help with rescue animals, lecture about animal poaching
- Introductory lectures

**Tuesday 05/02/2017  San Ignacio**

- Visit the Cahal Pech Maya Ruins – settled around 1000 B.C. and abandoned by 800 A.D.
- Carmelita farm – lecture on eco-farming
- Canoeing the Belize River – wildlife viewing
- Visit several small villages and a school

**Wednesday 05/03/2017  San Ignacio**

- Explore Actun Tunichil Muknal cave – archeological dig with more than 1400 artifacts found to date
- Hike through the Roaring River Valley
- Blue Morpho Butterfly Farm – lectures and labs on these animals

**Thursday 05/04/2017  Tikal**
- Depart to Guatemala
- Visit Yaxha, a Mesoamerican archaeological site and former ceremonial center and city of the pre-Columbian Maya civilization. You will be exploring the ruins here.
- Tikal National Park – Rainforest hike and lecture.

**Friday 05/05/2017  San Ignacio**
- Early morning hike, sunrise over the ruins.
- Guided hike at Tikal National Park. The site covers over 25 square miles and contains 3,000 separate structures, some currently under excavation.

**Saturday 05/06/2017  South Water Caye Marine Reserve**
- Board boats and cross 12 miles of turquoise lagoon.
- Belize Barrier Reef around Tobacco Caye
- Lecture on the coral reef ecology and biodiversity
- First snorkeling experience on the reef
- Classroom session on natural resource management in Belize and the South Water Caye Marine Reserve marine protected area.

**Sunday 05/07/2017  Southwater Caye Marine Reserve**
- Explore the ecosystems of South Water Caye Marine Reserve - Belize's largest protected marine area
- Whale Shoal patch reef, South Water Caye patch reef, Tobacco Range Mangroves,
- Work with researchers from Smithsonian Institution's CCRE Facility at Carrie Bow Caye
- Visit and work with researchers at the Man 'O War Caye Bird Sanctuary.
- Manatee watching
- Classroom session will focus on marine ecology and how mangroves, seagrass beds, and coral reefs interact with the terrestrial environment and each other to create the marine world.

**Monday 05/08/2017  Southwater Caye Marine Reserve**
- Full day of snorkeling in nearby cayes and reefs
- Experience an exciting night snorkel in the lagoon. Step off the dock into a nocturnal world of cephalopods, moray eels, arthropods, and echinoderms.
- Observe bioluminescence with the phosphorescent dinoflagellates.

**Tuesday 05/09/2017  Belize City**
- Return to Dangriga by boat and then transfer to the airport for the flight home.

**Requirements:**

<table>
<thead>
<tr>
<th>Mark Distribution</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-trip work</td>
<td>20%</td>
</tr>
<tr>
<td>Field Work</td>
<td>30%</td>
</tr>
<tr>
<td>Research Project and presentation</td>
<td>10%</td>
</tr>
<tr>
<td>Research and term papers</td>
<td>40%</td>
</tr>
</tbody>
</table>
After completing their field work, students meet their Costa Rican peers when they visit a University attended by local program participants. Students spend time together giving joint presentations, sharing research data, engaging in the powerful exchange of ideas, and realizing their collaborative strength.

The course requirements include:
- 45+ hours of on-site research time, workshops, and lectures provided by researchers from researchers at the Smithsonian Institute's Marine reserve in South Water Caye (coral reef) and Man O War Caye Bird Sanctuary
- 15+ hours of pre-trip work, covering research methods, ecology, conservation, and Biology (zoology and biodiversity).

**Attendance:**

Attendance at pre-trip lectures and meetings is mandatory. All activities on the trip must be attended.

**Grade Summary:**

The available letters for course grades are as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent</th>
<th>Grade Point Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>96-100</td>
<td>4.00</td>
<td>Outstanding</td>
</tr>
<tr>
<td>A</td>
<td>92-95</td>
<td>4.00</td>
<td>Excellent - superior performance, showing comprehensive understanding of subject matter.</td>
</tr>
<tr>
<td>A-</td>
<td>88-91</td>
<td>3.70</td>
<td>Good - clearly above average performance with knowledge of subject matter generally complete.</td>
</tr>
<tr>
<td>B+</td>
<td>83-87</td>
<td>3.30</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>78-82</td>
<td>3.00</td>
<td>Good - clearly above average performance with knowledge of subject matter generally complete.</td>
</tr>
<tr>
<td>B-</td>
<td>73-77</td>
<td>2.70</td>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>68-72</td>
<td>2.30</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>64-67</td>
<td>2.00</td>
<td>Satisfactory – basic understanding of the subject matter. Grade point average below 2.00 is not sufficient for promotion.</td>
</tr>
<tr>
<td>C-</td>
<td>60-63</td>
<td>1.70</td>
<td>Minimum grade required if needed as a prerequisite course</td>
</tr>
<tr>
<td>D+</td>
<td>55-59</td>
<td>1.30</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>51-54</td>
<td>1.00</td>
<td>Minimal pass – marginal performance; generally insufficient preparation for subsequent courses in the same subject.</td>
</tr>
<tr>
<td>F</td>
<td>&lt;50</td>
<td>0</td>
<td>Fail – unsatisfactory performance or failure to meet course requirements.</td>
</tr>
</tbody>
</table>

Please note that final grades will be available on student registration system. Printed grade sheets are not mailed out.

**Other**

We will be partnering with several Biology, Ecology, and Archeological Groups:

**Smithsonian Institute: Carrie Bow Cay Field Station**
The Carrie Bow Cay Field Station is located on a small island on the Meso-American Barrier Reef. Located
fifteen miles offshore on a small island, Smithsonian scientists and their collaborators travel there to conduct research on the biology, ecology, and geology of coral reef ecosystems.

The location of Carrie Bow Cay allows immediate access to reef environments, seagrass habitats, and mangrove islands. Visitors have access to vessels, diving facilities, seawater tables, and laboratory space along with housing and meals.

**South Water Caye Marine Reserve**
South Water Caye Marine Reserve (SWCMR) is the largest Marine Reserve in Belize covering an area of 117,878 acres. It is located approximately 15 miles southeast of Dangriga town. The Government of Belize included South Water Caye Marine Reserve as an important part of the Belize Barrier Reef Reserve System World Heritage Site, established in 1996 for its "outstanding universal value", and is obligated under this international convention to conserve and protect the area. **Man-Of-War – Caye** – is a crown reserve and nesting site for the brown bobbie (*Sula leucogaster*) and magnificent frigate bird (*Fregata magnifiscens*), one of only 10 nesting sites in the Caribbean.

**Tikal National Park**
This park encompasses rainforest and jungle and contains a large diversity of biological flora and fauna. It is also a World UNESCO Heritage Site because of the Mayan ruins found within it. The Mayan civilization, inhabited the region from the 6th century B.C. to the 10th century A.D. The ceremonial centre contains superb temples and palaces, and public squares accessed by means of ramps. Remains of dwellings are scattered throughout the surrounding countryside.

**Holbrook Travel**
We will be traveling with Holbrook Travel – a company that specializes in Education travel and Eco-tourism. Holbrook leads the way in fostering best practices of ethical and ecological travel. Holbrook understands that to visit a place involves interaction with the host country, its people and its environment. Holbrook believes in offering travel programs that help to conserve the environment and improve the well being of local people. Tours are underpinned with the principles of respect and sustainability to help protect natural resources and benefit local culture. Holbrook identifies in-country partners that adhere to the best practices in sustainable travel. Holbrook also partners with Rainforest Alliance, which has established a certification system to encourage and influence consumers to purchase certified travel products. Rainforest Alliance verifies the certifications of end providers and in-country tour operators in eight countries. It also provides training in energy saving and workshops and information on best practices in sustainable tourism.

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**Policies:**

*Communication*

All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email
system will be the professor’s instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions. If students do not wish to use their Ambrose accounts, they will need to forward all messages from the Ambrose account to another personal account.

Registration

During the Registration Revision Period students may enter a course without permission, change the designation of any class from credit to audit and /or voluntary withdraw from a course without financial or academic penalty or record. Courses should be added or dropped on the student portal by the deadline date; please consult the List of Important Dates. After that date, the original status remains and the student is responsible for related fees.

Students intending to withdraw from a course after the Registration Revision Period must apply to the Office of the Registrar by submitting a “Request to Withdraw from a Course” form or by sending an email to the Registrar’s Office by the Withdrawal Deadline; please consult the List of Important Dates. Students will not receive a tuition refund for courses from which they withdraw after the Registration Revision period. A grade of “W” will appear on their transcript.

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

Exam Scheduling (if applicable)

Students, who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar’s Office by the deadline date; please consult the List of Important Dates. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

Electronic Etiquette

Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to use electronics for purposes unrelated to the course during a class session. Turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Do not use iPods, MP3 players, or headphones. Do not text, read, or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. Some professors will not allow the use of any electronic devises in class. The professor has the right to disallow the student to use a laptop in future lectures and/or to ask a student to withdraw from the session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean. If you are expecting communication due to an emergency, please speak with the professor before the class begins.

Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. Personal information (information about an individual that may be used to identify that individual) may be required as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Extensions

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a course Extension from the Registrar’s Office. Requests for course extensions or alternative examination time must be submitted to the Registrar’s Office by the deadline date; please consult the List of Important Dates. Course extensions are only granted for serious issues that arise “due to circumstances beyond the student’s control.”

Appeal of Grade

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Registrar’s Office in writing and providing the basis for appeal within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of $50.00 must
accompany the appeal. If the appeal is sustained, the fee will be refunded.

**Academic Integrity**

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else’s ideas, words, or work as one’s own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to acknowledge to another person’s ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university college. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student’s permanent record.

**Note:** Students are strongly advised to retain this syllabus for their records.