ENVIRONMENTAL ECONOMICS AND SUSTAINABILITY IN DENMARK

Fall Semester 2020 (with travel over Fall Break)

INSTRUCTOR INFORMATION

Instructor Name: Dr. Sarah E. Culver, Associate Professor of Economics
Office Location: CSB 270
Office Hours: [TBA days and times] CST and by appointment
How to Contact: Canvas Inbox or UAB email: sculver@uab.edu

COURSE DESCRIPTION

This service learning course will use economic theory – and more broadly economic thinking—to understand why environmental problems arise and how and why to address them. Economics sheds light on individuals’ consumption choices in the face of scarce resources, the interaction between firms and consumers in a market, the extent to which individuals are likely to contribute toward the common good or ignore it in the pursuit of their own self-interest, and the ways government policies and other institutions shape incentives for action (or lack thereof).

The motivation of this course, though, goes beyond the study of environmental economics. The starting context is Copenhagen, Denmark – the first capital city to declare their intention to be carbon-neutral by 2025. The course provides an overview of the culture, history, business climate, and environmental policy of Copenhagen, Denmark, and the surrounding region. The study of Copenhagen invites students to inquire deeply into why things are the way they are and challenges them to imagine ways that things might be different in their own community.

Students will gain further understanding of these topics by working with UAB’s Sustainability program. Developed in 2013 to serve the university, hospital, and surrounding community, this program aims to holistically incorporate sustainability principles and standards in UAB’s operations, teaching and learning, research and innovation, and community outreach and education. With the goal of becoming a sustainable institution by 2025, students will work on specific projects prioritized in UAB’s Sustainability Strategic Plan 2019-2025.

Three semester credit hours
Prerequisites: EC 210 or equivalent; Open to undergraduate and graduate students
LEARNING OBJECTIVES

Upon the completion of this course, students will be able to:

- Utilize economic principles and models to address private and public policy issues related to allocating natural resources and environmental amenities
- Demonstrate an active understanding of the following elements of economic theory as it relates to natural resources and environmental economics:
  - Welfare economics and concepts of efficiency and equity
  - The role of property, property rights, and the bundle of rights concept
  - The role of externalities, common property resources, and public goods
  - Concepts and measures of economic value including non-market valuation
- Demonstrate a basic knowledge of the role of market and market failure with regards to the allocation of natural resources and environmental amenities.
- Gain a basic understanding of the effects and relative merits of public environmental policy efforts, including cap-and-trade schemes, Pigovian taxes, regulation, and public ownership and/or management.
- Recognize the diversity of human cultures and how their relationships to local and global ecosystems effects practices, policies, and outcomes
- Recognize the value of being a contributing member of your community and society

COURSE FORMAT

This is a 3-credit hour UAB course that includes two main components:

1) Class Sessions and Course Assignments (before and after the study tour) [CSB XXX, day and time TBA]
2) Study Tour of Copenhagen, Denmark (7-day cultural and business study tour)

The combination of class sessions and time spent on the study tour fulfills the UAB contact hours requirement for a 3-credit hour course. While there will be much enjoyment and many deeply personal experiences on the study tour, this is a for-credit learning experience. It is therefore very important for students to recognize that the course is more than a trip and tour.

Students will read assigned material, complete online and/or in-class assignments, take an exam, participate in a service learning project, make presentations to the class, post to the travel blog and complete a reflection workbook. The study tour itinerary includes travel to Copenhagen, Denmark.

REQUIRED TEXTS AND MATERIALS

There is no required textbook for this course. All reading materials will be posted in Canvas, available through the UAB library, or accessed from internet websites. Other source materials will be collected by students during their service learning projects.
### Assessment and Grading

A variety of teaching formats and activities will be employed to learn about this topic in a substantive and meaningful way. Presentations, videos, class discussions, readings, and written assignments will be used as part of this course. This course also features guest speakers both here and during the study tour.

Students will be evaluated based on the assignments and weights in the tables below. Assignments vary depending on student status (undergraduate or graduate).

<table>
<thead>
<tr>
<th>Assignment: Undergraduate Students</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Service Learning Structured Reflection</td>
<td>100</td>
</tr>
<tr>
<td>Exam and In-class/on-line Assignments</td>
<td>350</td>
</tr>
<tr>
<td>Presentation about a destination or site</td>
<td>50</td>
</tr>
<tr>
<td>Professionalism and Participation</td>
<td>100</td>
</tr>
<tr>
<td>Travel Blog and Journal/Workbook</td>
<td>150</td>
</tr>
<tr>
<td>Service Learning Presentation</td>
<td>250</td>
</tr>
<tr>
<td><strong>Total Possible Points</strong></td>
<td><strong>1000</strong></td>
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<table>
<thead>
<tr>
<th>Assignment for the Graduate Students</th>
<th>Points</th>
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<tbody>
<tr>
<td>Service Learning Structured Reflection</td>
<td>100</td>
</tr>
<tr>
<td>Exam and In-class/on-line Assignments</td>
<td>350</td>
</tr>
<tr>
<td>Presentation about a destination or site</td>
<td>50</td>
</tr>
<tr>
<td>Professionalism and Participation</td>
<td>100</td>
</tr>
<tr>
<td>Travel Blog and Journal/Workbook</td>
<td>150</td>
</tr>
<tr>
<td>Service Learning or Research Presentation</td>
<td>250</td>
</tr>
<tr>
<td><strong>Total Possible Points</strong></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grading Scale for Undergraduates</th>
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</thead>
<tbody>
<tr>
<td>900-1000</td>
<td>A</td>
</tr>
<tr>
<td>800-899</td>
<td>B</td>
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<tr>
<td>700-799</td>
<td>C</td>
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<tr>
<td>600-699</td>
<td>D</td>
</tr>
<tr>
<td>0-599</td>
<td>F</td>
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</table>

<table>
<thead>
<tr>
<th>Grading Scale for Graduate Students</th>
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</thead>
<tbody>
<tr>
<td>900-1000</td>
<td>A</td>
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<tr>
<td>700-799</td>
<td>C</td>
</tr>
<tr>
<td>600-0</td>
<td>F</td>
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</tbody>
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**Exam and In-Class Activities**

Assignments will involve reading and exercises to build a “traveler’s” level of foreign language skills, understand the history and culture of Denmark and to complete various pre-work for class sessions on specific topics related to economic development and environmental policy. Quizzes will center on selected assigned readings covering environmental economic theory. Quizzes will consist of a combination of multiple choice and essay questions. The quizzes for graduate students will include more extensive application questions.

**Presentation on destination or site visit**

Each student will be assigned a site visit for which to conduct research and provide an informative presentation to the class. You will be the “expert” on your site, and you will also provide additional information during the study tour. Presentations will be made in class at the last session before the study tour.
Professionalism and Participation
Students are expected to come to class and actively participate in class activities and discussions. Those who plan to miss class should inform the instructor and must submit assignments in advance. It is the responsibility of the student to make up any missed assignment due to absence.

Students on the study tour are representing UAB and the Collat School of Business. To provide a favorable impression and to get the most benefit from the study tour, students will be assessed daily during the study tour on professionalism and participation. A detailed rubric will be provided. The criteria include time management (attendance, promptness), respect (social behaviors and etiquette based on both US and Italian norms), preparedness (motivation, contribution) and appearance (well rested, dressed appropriately in business casual as required). Students are expected to be back at the hotel by 12 midnight on each study tour day. Additional guidelines will be provided.

Travel Blog
Students will be required to post to the class travel blog while on the study tour. You will be assigned two days on which you must post original content and two other days when you must comment on other students’ posts. Guidelines and practice posts will be made prior to travel. Students will be responsible for the technology tools (device and internet access) needed to post on the assigned days. Grading will be based on a rubric that includes criteria such as timeliness, content, reflection, voice, text layout, use of graphics/multimedia and quality of writing. Training materials on how to blog and additional guidelines will be provided.

Travel Structured Reflection Journal/Workbook
Students are required to answer questions and complete a set of reflection exercises based on the study tour. Questions focus on specific activities on the study tour and more general questions about the impact of the study tour on the student’s perceptions and beliefs. Detail questions as well as a rubric will be provided. The workbook is due at the last class session after the study tour.
Service Learning Requirements
This is a designated service learning course. As such, a component of the learning in this course occurs outside the formal classroom through working with, and learning from, a community partner. Students will be working with the director of UAB’s Sustainability Program and UAB’s Sustainability Strategic Plan (https://www.uab.edu/sustainability/about/strategic-plan).

What isn’t service learning?
- volunteering
- community service
- internship
- a waste of time

Why do service learning?
- safe place to try new skills
- building skills for your resume
- increase content retention
- “real world” assignments and projects
- opportunity to connect to local community efforts

Assessments of Service Learning

1. As this course is designated, students are expected to spend about 20 hours of service learning. Projects will be assigned on the first day of class.

2. Service Learning Structured Reflection
To evaluate service learning, students are required to write a short paper that should include insights that you have gained related to the course learning objectives, how your expectations may have been challenged, and thoughts about the project you undertook. This assignment is worth 10% of the course grade and will be evaluated for quality of reflective thought, relatedness to course objectives, and impact on personal values.

3. Service Learning Presentation
Presentations about your team service learning projects will be given at the end of the semester in lieu of a final. Presentations should include a summary of activities, application of the materials covered in class, and links to learning during the study tour. Presentations will vary according to the service learning project undertaken and the community within UAB impacted. Each presentation should include two parts. One is a focus on the service learning topic as it impacts UAB and the local community. The second is a comparative analysis of that topic as it relates to Copenhagen and Denmark. Both should use concepts from the readings and data gathered from a wide range of sources. Students will be provided with a detailed outline and a grading rubric.
COURSE SCHEDULE

The course schedule includes 9 sessions (7 before and 2 after fall break) and a 7-day study tour over fall break. Note that assignments may be due during weeks when there is no class session. All class sessions are on Tuesdays in CSB 301 on the dates noted. The course ends on Dec 2nd (which does not include exam week).

PRE-TRAVEL CLASS SESSIONS

<table>
<thead>
<tr>
<th>Session Date</th>
<th>Topics and Activities</th>
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| 1. 9/XX/2020 | • Introduction and Welcome / Overview of Course  
• Copenhagen, Denmark Culture and Business Climate – Part I  
• What is Sustainability and Environmental Policy?  
• UAB Culture and Business Climate – Part I  
• UAB Steam Plant Visit  
• Service Learning Overview and Project Assignments |
| 2. 9/XX/2020 | • Economic Efficiency and Environmental Quality  
• Market Failures in the Environmental Realm  
• Service Learning Discussion |
| 3. 9/XX/2020 | • Measuring the Benefits and Costs of Environmental Protection  
• Internalizing Externalities: Incentivizing Cap & Trade and Carbon Tax Policies  
• Effective Green Innovation Policies |
| 4. 10/XX/2020 | • Service Learning Project Updates  
• Copenhagen, Denmark Culture and Business Climate – Part II |
| 5. 10/XX/2020 | • Denmark Demographics, Culture, Business Environment and Pressing Issues – Part III  
• Pre-Travel information and preparations  
• Environmental Policy in the United States vs. European Union |
| 6. 10/XX/2020 | • Exam  
• Service Learning Project Updates |
| 7. 11/XX/2020 | • Service Learning Project Updates  
• Exam feedback  
• Pre-Travel information and preparations/ site presentations |

TRAVEL ITINERARY (tentative and subject to change)
Refer to the UAB Education Abroad website for information about the program fees and requirements.

Day 1 Thursday, November 19
• Flight to Copenhagen, Denmark (not included in the package price)

Day 2 Friday, November 20 Copenhagen
• Arrival at Copenhagen Kastrup Airport  
• Transportation to your hotel in Copenhagen on your own  
• 6 nights in twin rooms with private bathrooms incl. breakfast at the 3-star Hotel Bethel in Copenhagen  
• Public transportation pass for the duration of the entire stay in Copenhagen
Welcome session and orientation walking tour with your on-site coordinator
Welcome dinner at a restaurant in Copenhagen to kick off the program (today or on day 3 - depending on your preference)

Day 3 Saturday, November 21 Copenhagen
• Breakfast at the hotel
• Public transportation during the day
• Guided walking tour of Copenhagen to learn more about the city’s history while walking down the small cobble-stoned streets of medieval Copenhagen (tour to include admission to 2-3 churches of historic significance, the Little Mermaid does not necessarily need to be part of the tour).
• Guided tour of Christiansborg Palace, which is the seat of the Danish parliament, the Danish Prime Minister’s Office, and the Supreme Court of Denmark. Several parts of the palace are also used by the Danish monarchy. Afterwards, free time at Christiansborg to visit e.g. the Palace Chapel and the Royal Stables at your own pace (combination ticket for all participants, which includes admission to the Royal Reception Room, the Royal Kitchen, the Ruins, and the Royal Stables; during opening hours the Chapel can be visited free of charge).

Day 4 Sunday, November 22 Lund
• Breakfast at the hotel
• Free morning in Copenhagen to explore the city by bike (bike rental to be arranged by CEPA)
• Approx. 12:00 pm Public transportation to the train station in Copenhagen
• Round-trip train tickets from Copenhagen to Lund, Sweden (travel time: approx. 1 hour one way)
• 2:30 - 3:30 pm Visit to and guided tour of Lund Cathedral to see Sweden’s most visited church that was consecrated in 1145. During the tour, you will also see its astronomical clock that shows the signs of the zodiac, the phases of the moon, as well as biblical figures that can only be seen twice a day.
• Free afternoon in Lund for your own explorations. If time allows, visit the Historical Museum of Lund University or the contemporary art gallery, both located next to the Cathedral, at your own expense. Alternatively, take a walk around the city and find a nice place to eat before returning to Copenhagen.

Day 5 Monday, November 23 Copenhagen
• Breakfast at the hotel
• Public transportation during the day
• Visit to Middelgrunden, an offshore wind farm outside of Copenhagen, to learn more about the background of this project. It was initiated by the Copenhagen Environment and Energy Office after Middelgrunden had been listed as a potential site in the Danish Action Plan for Offshore Wind.
• Visit to the Copenhagenize Design Company for a presentation on their vision and services, including background information on bicycle urbanism. The company offers a range of services that are all related to the bicycle as means of transportation.
Day 6 Tuesday, November 24 Copenhagen
• Breakfast at the hotel
• Public transportation during the day
• Visit to and guided tour of the Amager Ressource Center (ARC) to learn about how it actively participates in the green transformation of Denmark. Among others, it takes the city’s waste and in return provides electricity, district heating, and recyclable materials to Copenhagen’s residents (visit in the morning preferred).
• Visit to the Department of Municipal Development of the City of Copenhagen for a presentation on “Copenhagen: Carbon-neutral capital by 2025”. Hear about their vision called “Co-Create Copenhagen” and the work that is done at the Technical and Environmental Administration, including their 2025 Climate Plan.

Day 7 Wednesday, November 25 Copenhagen
• Breakfast at the hotel
• Public transportation during the day
• Visit to the Copenhagen Center on Energy Efficiency, which was established in September 2013 as a joint activity of the Danish Government, the UN Environment, and the Technical University of Denmark. Learn more about the activities of the institution and take part in a tour of the premises.
• Use your last afternoon in Copenhagen for final discussions and reflection
• Farewell dinner at a restaurant in Copenhagen to wrap up the program (traditional smørrebrød dinner at Restaurant Kronborg preferred)

Day 8 Thursday, November 26 Copenhagen
• Breakfast at the hotel
• Transportation on your own and at your own expense from the hotel to the airport
• Departure from Copenhagen Kastrup Airport (CPH) to the USA (airfare not included)

Post-Travel Class Sessions

<table>
<thead>
<tr>
<th>Session Date</th>
<th>Topics and Activities</th>
</tr>
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<tbody>
<tr>
<td>12/XX/2020 8.</td>
<td>8:30 – 11:00 Fall Research and Service Learning Expo (optional)</td>
</tr>
<tr>
<td>12/XX/2020 9.</td>
<td>Lessons Learned on Study Tour</td>
</tr>
<tr>
<td>12/XX/2020 Final Exam week</td>
<td>Service Learning Presentations at CSB 109 Innovation Center</td>
</tr>
<tr>
<td></td>
<td>• A summary of Activities</td>
</tr>
<tr>
<td></td>
<td>• Application of the Materials covered in class and Travel Tour experiences</td>
</tr>
<tr>
<td></td>
<td>• Includes an Original Infographic Element</td>
</tr>
<tr>
<td></td>
<td>• Course wrap up</td>
</tr>
</tbody>
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Course Policies

Students must apply, be accepted and pay program fees for the Education Abroad Faculty-Led Program AND register and pay tuition for the course (either EC 308, IB495 or MBA691). No other students or student companions are permitted on the study tour unless he or she is a student at UAB and has met both requirements.
The same policies that are in effect for “regular” courses are apply to this course. This includes the following:

**COLLAT SCHOOL OF BUSINESS CODES OF CONDUCT**
Because this course will be partially online and some online-only students will be enrolled in the course, the codes of conduct for both the online and classroom types of courses are relevant. View the [Collat School of Business Code of Professional Classroom Conduct](#) to learn about policies regarding conduct online and in the classroom.

**UAB POLICIES**
While on campus for class sessions or while traveling, students are under the ethical and professional standards and policies of the University of Alabama at Birmingham.

For details and more information, read the Policies section of the [Student Handbook](#).

The UAB Education Abroad office provides additional policies for the conduct of students while traveling abroad. These are provided when students apply for and register for the course.