ENVIRON 713A-01—Northern California Clean Energy Field Trip
Duke University—Nicholas School of the Environment
Spring 2019

Instructor
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Office hours: Monday 2:00 to 3:30 and and Wednesday 9:30 to 10:30, or by appointment

Teaching Assistant
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I. Course Description
This four-day field course in the San Francisco Bay Area (March 12-15, 2019) provides a first-hand exposure to the emerging clean energy industry. The trip includes meetings with private and public sector experts in the renewable energy industry, as well as tours of related facilities. The class also includes at least one pre-trip meeting (Friday, 18 January 2019 from 3:05 to 4:20).

II. Goals and Learning Outcomes

Goals
The course aims to:

- Give you a first-hand perspective of how the wind, solar, and related clean energy businesses operate
- Expose you to a variety of experts and allow you to hear their perspectives about issues facing the energy industry
- Put a face to the clean energy industry by having you meet and interact with people who work in it every day

Learning Outcomes
By the end of this course, you will have a first-order understanding of:

- How the emerging energy industry operates and how it is evolving in response to challenges and opportunities
- The major technologies used in providing environmentally cleaner energy
- The business strategies around which companies in the emerging energy economy are organized
- The policies, some national and some unique to California, that are driving change across the energy industry
III. Structure of the Course
This course is a mobile seminar. It will consist of three components:
- **Me:** I will provide context and continuity for the places and people we will be visiting.
- **You:** You will participate fully, by asking questions of our speakers, of me, and of your classmates.
- **Us:** We will hear from experts representing different areas of the emerging clean energy industry who are giving very generously of their time and resources to share their insights.

IV. Assessment and Grading
Grades will be based on the following:
- Field Guide written report (50%)
- Recorded Field Guide presentation and summaries (25%)
- Class participation (25%)

Details and instructions for the Field Guide written report and presentation (with summaries) are available in separate handouts.

Assignments handed in after the posted deadline will incur a 25 percent penalty for each 24 hour period they are late. Assignments submitted more than 3 days (72 hours) after the posted due date and time will not receive credit. Please do not ask for exceptions.

I will use the following rubric to translate your cumulate weighted score (percentage) into a final grade:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>[99 to 100]</td>
<td>A+</td>
</tr>
<tr>
<td>[93 to 99]</td>
<td>A</td>
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<tr>
<td>[90 to 93]</td>
<td>A-</td>
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<tr>
<td>[87 to 90]</td>
<td>B+</td>
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<tr>
<td>[83 to 87]</td>
<td>B</td>
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<td>[80 to 83]</td>
<td>B-</td>
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<td>[73 to 77]</td>
<td>C</td>
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<tr>
<td>[70 to 73]</td>
<td>C-</td>
</tr>
<tr>
<td>Below 70</td>
<td>F</td>
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</tbody>
</table>

The class participation component of your grade covers preparation for and participation during the pre-trip meetings and our time on site in California. **Please do not assume that you will earn an A for the course simply by showing up. You won’t. Participation counts for 25% of your grade and a lack of engagement will be noted as we go along.**

V. Reading
The Field Guide is the only required reading for this course. This guide, which will be a compilation of your reports, will provide information ranging from industry background to details about whom and where will be visiting.
VI. Course Requirements

Prior to the Trip
- Attend both the pre-trip session (Friday, 18 January 2019 from 3:05 to 4:20)
- Read all class emails and check the course Sakai site before the trip for last minute changes
- Respond to all information requests and surveys
- Sign the release forms (you cannot go on the trip otherwise)
- Submit your pre-trip report and recorded presentation on time
- Read through the Field Guide before the trip (the guide will be released in early March)

During the Trip
- Be an active and engaged participant!
- Dress appropriately
  - Wear appropriate business attire
  - Come prepared for the weather
  - Bring comfortable shoes

After the Trip
- Complete the course evaluation

VII. Course Policies
- Only students registered for the class may join the field trip.
- You must arrive at the hotel by 3:00 pm on Tuesday, March 12, and stay with the group until the trip concludes around 6:00 pm on Friday, March 15. You may not join late or leave early.
- The Nicholas School will pay for your hotel accommodations (double-occupancy), local transportation during the trip (but not to or from the airport), and several meals. You are responsible for your airfare, the remaining meals, and getting yourself to our hotel and eventually back to the airport.
- Your well-being is our number one priority, though you must also make every effort to stay safe.
  - Please follow all instructions
  - Avoid going anywhere alone, especially at night
- You must remember that you are representing Duke, not just yourself, and should act in the best interest of both.

VIII. Course Outline / Course Schedule
This syllabus is available on our Sakai site under Syllabus. We will provide the agenda in a separate document and post it on Sakai under “Resources”. Note that we may start early in the morning (between 7:00 and 8:00 am) and run well into the evening (to 9:00 or 10:00 pm).