**Exploring the World’s Oceans**

**Course Syllabus**

**11:628:125 3 Credits Fall 2020**

**Instructor:** Daphne Munroe

**Course Website:** This is a completely online course. The course website can be found on Canvas. <https://rutgers.instructure.com/courses/71776>

**Course Summary**

Welcome to Exploring the World’s Oceans! This course is a general introduction to the global oceans. The course is entirely online, meaning that there is certain flexibility in when and where you do the course work. That flexibility means that you are solely responsible for keeping on schedule and making sure you complete all assignments on time (a full schedule is provided below). Regardless of whether you want to become an ocean scientist, a lawyer, business person or a teacher - the ocean will have a large impact on your life. The oceans regulate the planet's climate and weather, provide food and energy, and are fundamental to the global economy. Having an understanding and awareness of the ocean and its role in shaping our planet is important. This is especially true today more than ever, as your generation will face big decisions about how humanity will manage and use the world's oceans. This course will provide a broad overview of the history, chemistry, physics and biology of the oceans. Once you have a general ocean understanding, we move into a series of lectures that deal with some of the big policy issues your generation will deal with. Your final paper of the term will be focus on summarizing an ocean policy of your choice, and debating the pros and cons.

**Lecture Schedule**

**Bold Blue** text notes the major dates for quizzes and the paper.

Assignments will be found within each lecture.

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| **Date** | **Focus** |
| September 1, 2020 | Class Introduction & Navigation |
| September 3, 2020 | Human Exploration of the Ocean |
| September 8, 2020 | Birth of Oceanography |
| September 10, 2020 | Formation of the Earth |
| September15, 2020 | Continental Drift |
| September 17, 2020 | Plate Tectonics |
| September 22, 2020 | Ocean Structures & the Seafloor |
| September 24, 2020 | Water’s Chemistry (why water is awesome!) |
| September 29, 2020 | Salt in the Ocean |
| October 1, 2020 | Ocean Currents and Tides |
| October 6, 2020 | Light in the Ocean |
| October 8, 2020 | Carbon Chemistry in the Ocean |
| October 13, 2020 | **(Quiz 1)** |
| October 15, 2020 | Phytoplankton |
| October 20, 2020 | Zooplankton |
| October 22, 2020 | Invertebrates **(Approval of Policy Paper)** |
| October 27, 2020 | Fish |
| October 29, 2020 | Marine Mammals |
| November 3, 2020 | Deep Sea Communities |
| November 5, 2020 | Fisheries & Aquaculture |
| November 10, 2020 | **(Quiz 2)** |
| November 12, 2020 | Changing Ocean (pH) |
| November 17, 2020 | Changing Ocean (Law of the Sea) |
| November 19, 2020 | Changing Ocean (Geoengineering) |
| December 1, 2020 | Changing Ocean (Sea Level Rise) |
| December 3, 2020 | Sea Monsters – Marine Creatures in Pop Culture |
| December 15, 2020 | **Policy Paper Due** |

**Grade Breakdown**

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| **Item** | **Notes** | **Value** |
| Weekly Assignments | There will be a total of 10 weekly assignments. Do them ALL, on time! Late assignments will not be accepted. Each is short and based on the lecture. This is an easy way to get 25% of your grade just by keeping up. | 25% |
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| Quiz 1 | Covers Lecture 1 through Light in the Ocean, inclusive. You must take this online on October 13th (any time of the day you like, must be complete before midnight EST)– no exceptions. Open book. | 20% |
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| Approval of Policy Paper Topic | A brief explanation of your desired policy paper topic, why you chose it, and how you will go about researching it. Hand this in using the course website no later than October 22nd. | 5% |
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| Quiz 2 | Covers Carbon Chemistry through Deep Sea Communities, inclusive. Take this online on November 10th (any time of the day you like, must be complete before midnight EST) no exceptions. Open book. | 20% |
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| Policy Paper | White paper on a marine policy. You will explain the policy, discuss pros and cons, and make a closing argument for or against. A detailed breakdown of required content and structure will be provided. Hand this in online no later than December 15th. | 30% |