**TCORE 112C: Introduction to Science
“Oceans Full of Trash”
Winter 2014, 5 credits SLN 19504
Instructor:** Julie Masura

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| **Class Times:** | Tu/Th 12:50-2:55 p.m. Joy 109 |
| **Office Hours:****Office:**  | Tu, 3-4 p.m. W 11 a.m. – noonIn the Teaching and Learning Center**(also by appointment)**102a Science |
| **Contact:**  | jmasura@uw.edu, 253-692-4317 |

 **Librarian:**
**Academic Advisers:**
**Peer Advisers:**

**Course Description:**  We will be exploring the North Pacific Garbage Patch, noted to be the size of Texas!  We will review various types of communications, including the **media and internet**.  We will also apply various scientific concepts to question the validity of claims made by researchers from our culture and other **cultures** around the world, especially the **myths** connected to the virtual **supernatural**.  Finally, we will be **checking ourselves** and reflecting on our contribution to the garbage patch.

**Core:** The Core program consists of a coordinated series of courses that represent the various disciplines in the university.  This course, along with the others in your cohort, fulfills one of the university’s general education requirements in each of the areas of knowledge plus composition.  The courses are designed to both support and challenge you to develop the critical thinking, writing, research, and analytical skills you’ll need at UWT while introducing you to relevant topics in the social sciences, humanities, and sciences.

 **Core Student Learning Objectives:**

* express ideas clearly in writing and speaking in orders to synthesize and evaluate information before presenting it
* identify, analyze, and summarize/represent the key elements of a text
* think outside of cultural norms and values, including own perspectives to critically engage the larger world
* approach complex issues by taking a large question and breaking it down into manageable pieces
* make meaningful connections among assignments and readings in order to develop a sense of the big picture
* collect, evaluate, and analyze information and resources to solve problems or answer questions

 **Required Texts and Materials:**

* Ebbesmeyer, C. and E. Scigliano. 2009. Floatsametrics and the Floating World. Toronto: Harper Collins.
* All students must have access to the online Canvas classroom for this course.

 **Grading:**

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| --- | --- |
| Papers | 30% |
| Assignments/Quizzes | 25% |
| Discussions | 20% |
| Group Project | 20% |
| Participation | 5% |
| Total | 100% |

**Note:**  You will be given points for assignments throughout the quarter.  Your final grade will be calculated using percentage of points.

**Late work:** I will accept late work.  One point will be deducted for every day the assignment is late.

**Writing Requirements:** This course will use CSE format.  The format is very similar to APA format, and varies from one discipline to another.  Be advised that many formats are used in your collegiate courses and will be specific from course to course, year to year, and discipline to discipline.

**Teaching and Learning Center (TLC):**  The TLC provides a wide variety of instructional resources and support for teaching and learning at UW Tacoma.  Teaching and learning are ongoing processes that take practice, commitment, and time.  We are here to assist you in achieving your goals and provide math/quantitative, writing, science, and other tutoring services. <http://www.tacoma.washington.edu/tlc/>

**Academic Standards/Plagiarism:**  All student work must be free of plagiarism. Plagiarism is defined in the University catalog and in the Student Handbook. Consult your professor if you have any questions.

A major part of your experience in the class will be reading, synthesizing, and using the knowledge and ideas of others. It is the responsibility of the faculty to help you in this process and to be certain you learn to credit the work of others upon which you draw. To plagiarize is to appropriate and to pass off, as one's own ideas, writing or works of another. Plagiarism is no less of a misconduct violation than vandalism or assault. Ignorance of proper documentation procedures is the usual cause of plagiarism. This ignorance does not excuse the act. Students are responsible for learning how and when to document and attribute resources used in preparing a written or oral presentation.

For more information, please refer to the Academic Honesty: Cheating and Plagiarism document prepared by the Committee on Academic Conduct in the College of Arts and Sciences, UW Seattle:  <http://depts.washington.edu/grading/issue1/honesty.htm>

**Library:**  The UWT Library provides resources and services to support students at all levels of expertise. We guide students through the research process, helping them learn how to develop effective research strategies and find and evaluate appropriate resources. For more information about the Library and its services, see: <http://www.tacoma.washington.edu/library/>

**Electronic Devices:**  Electronic devices (including, but not limited to, cell phones, pagers, laptops, and personal digital assistants) may only be used in the classroom with the permission of the instructor. Activities that are non-relevant to the course, such as checking/sending email, playing games, and surfing the web, are considered disruptive activities when class is in session.

**E-mail Policy:**  <http://www.tacoma.washington.edu/policies_procedures/E-mail_Policy.pdf>

**Access and Accommodations:**  Disability Support Services (DSS) offers resources and coordinates reasonable accommodations for students with disabilities.  Reasonable accommodations are established through any interactive process between you, your instructor(s) and DSS.  If you have not yet established services through DSS, but have, or think you have a temporary or permanent disability that requires accommodations (this can include mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DSS at 253-692-4522 V/ 253-692-4413 / [DSSUWT@UW.EDU](https://ap12.alpine.washington.edu/alpine/alpine/2.0/mailto?to=DSSUWT%40UW%2EEDU&pop=view/0/INBOX/68560) e-mail/ <http://www.tacoma.washington.edu/studentaffairs/SHW/dss_about.cfm>

**Campus Safety Information:**<http://www.tacoma.washington.edu/safety/emergency/Emergency_plan.pdf>

**Escort Service:**  Safety Escorts are available Monday - Thursday 5:00pm - 10:30pm. They can be reached either through the duty officer or by dialing #300 from a campus phone.

**In case of a fire alarm:**  Take your valuables and leave the building. Plan to return to class once the alarm has stopped. Do not return until you have received an all clear from somebody "official," the web or email.

**In case of an earthquake:** DROP, COVER, and HOLD. Once the shaking stops, take your valuables and leave the building. Do not plan to return for the rest of the day. Do not return to the building until you have received an all clear from somebody "official," the web‚ or email.

**Inclement Weather:** Call (253) 383-INFO to determine whether campus operations have been suspended. If not, but driving conditions remain problematic; call the professor's office number. This number should provide information on whether a particular class will be held or not, and/or the status of pending assignments. If the first two numbers have been contacted and the student is still unable to determine whether a class will be held, or the student has a part-time instructor who does not have an office phone or contact number, call the program office number for updated information.

**TCORE 112 Agenda
(this schedule is subject to change)**

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| **Week/****Day** | **Topic** | **Activities** | **Reading** | **Assignments** |
| 1 | Introduction to Oceans Full of Trash |  | SyllabusEbbesmeyer, C. and E. Scigliano. 2009. Preface *in* Flotsametrics and the Floating World. Toronto: Harper Collins.Ebbesmeyer, C. and E. Scigliano. 2009. Chasing Water *in* Flotsametrics and the Floating World. Toronto: Harper Collins, p. 1-17. | Quiz 1Autobiography Discussion 1Preface SummaryChasing Water Summary |
| 1/5 - Joy | Putting the Puzzle Together | IntroductionsReview CourseIntroduce ShowcasePieces of the Puzzle |  |  |
| 1/7 - Joy | Orientation | CANVAS Training (bring lap tops)Introduction to Assignment RequirementsWriting Summaries & Reaction Papers |  |  |
| 2 | Introducing the Garbage Patch |  | Ebbesmeyer, C. and E. Scigliano. 2009. Oil and Icebergs *in* Flotsametrics and the Floating World. Toronto: Harper Collins, p. 18-44.Wikipedia [Internet]. Great Pacific Garbage Patch. Available from: <http://en.wikipedia.org/wiki/Great_Pacific_Garbage_Patch> Wikipedia [Internet]. Marine Debris. Available from <http://en.wikipedia.org/wiki/Marine_debris> Wikipedia [Internet]. Marine Pollution. Available from: <http://en.wikipedia.org/wiki/Marine_pollution> Wikipedia [Internet]. Microplastics. Available from: <http://en.wikipedia.org/wiki/Microplastics> Wikipedia [Internet]. Plastic Particle Water Pollution. Available from: <http://en.wikipedia.org/wiki/Plastic_particle_water_pollution>  | Quiz 2Oil and Icebergs SummaryTapped Reaction PaperReferencesDiscussion 2 |
| 1/12 - Joy | Tapped Out | Tapped – Taking Notes & Reaction Paper |  |  |
| 1/14 - Joy | Plastics Problem | Creating QuestionsWikepedia |  |  |
| 3 | The Size of Texas? |  | Ebbesmeyer, C. and E. Scigliano. 2009. Messages in Bottles in Flotsametrics and the Floating World. Toronto: Harper Collins, p. 45-69.McCauley, L. 2015. In victory against pointless plastic, microbead ban signed into law. Common Dreams [Internet]. Available from <http://www.commondreams.org/news/2015/12/29/victory-against-pointless-plastic-microbead-ban-signed-law> Clarey, C. 2015. In pollution fight, the sailing world has just scratched the surface. The New York Times [Internet]. Available from <http://www.nytimes.com/2015/12/25/sports/polluted-waters-give-rise-to-environmental-pulpit.html?_r=0> Hill, T. 2015. The ocean is contaminated by trillions more pieces of plastic than thought. TakePart.com [Internet] Available from <http://news.yahoo.com/ocean-contaminated-trillions-more-pieces-plastic-thought-221817109.html;_ylt=AwrXnCc_OIRWfxsA.hzQtDMD;_ylu=X3oDMTByc3RzMXFjBGNvbG8DZ3ExBHBvcwM0BHZ0aWQDBHNlYwNzcg--> Zimmer, R. 2015. Microbeads and the ocean’s plastic smog. App.com [Internet]. Available from <http://www.app.com/story/news/local/land-environment/nj-enviro-watchdog/2015/12/29/microbeads-plastics-ocean-smog/75506566/> Mercene, F. 2015. Marine debris. Tempo [Internet]. Available from <http://www.tempo.com.ph/2015/12/28/marine-debris/>  | Quiz 3Messages in Bottles SummaryAddicted to Plastic ReactionGroup Project DevelopmentLibrary AssignmentReferences IIDiscussion 3 |
| 1/19 - Joy | Stating the Problem | Types of InformationMarine DebrisPlastic Properties |  |  |
| 1/21 - Joy | Finding Answers | Primary Research – Using the Library and RefWorksCSE Format |  |  |
| 4 | Exploring Plastic Properties |  | Ebbesmeyer, C. and E. Scigliano. 2009.Eureka, a Sneaker! in Flotsametrics and the Floating World. Toronto: Harper Collins, p. 70-93. | Quiz 4Eureka, A Sneaker Summary Lab ReportAnnotated BibliographyDiscussion 4  |
| 1/26 – Science 311 | What’s in Your Toothpaste?Meet in Science 311 | Concentrating Plastic in Toothpaste |  |  |
| 1/28 – Science 311 | Talking TrashMeet in Science 311 | Lab ReportsAnnotated Bibliography |  |  |
| 5 | Finding Plastics in the Sand |  | Ebbesmeyer, C. and E. Scigliano. 2009. Coffins, Castaways, and Cadavers *in* Flotsametrics and the Floating World. Toronto: Harper Collins, p. 94-117. | Quiz 5Coffins, Castaways, and Cadavers SummaryDiscussion 5 |
| 2/2 – Thea’s Beach | Beach Sampling on Thea’s BeachDirections: <http://goo.gl/maps/fWWyc> |  Group 1 : 12:50-1 :50Group 2 : 1 :50-2 :50 |  |  |
| 2/4 – JoyVisit from Global Honors | Tell It Like It Is | Writing Field Reports |  |  |
| 6 | Fishing for Plastics |  | Ebbesmeyer, C. and E. Scigliano. 2009. The Admiral of the Floating World in Flotsametrics and the Floating World. Toronto: Harper Collins, p. 118-137.GESAMP (2015). Executive Summary and Background to GESAMP Assessment *in* “Sources, fate and effects of microplastics in the marine environment: a global assessment” (Kershaw, P. J., ed.). (IMO/FAO/UNESCO-IOC/UNIDO/WMO/IAEA/UN/UNEP/UNDP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection). Rep. Stud. GESAMP No. 90, 96, p. 1-11. | Quiz 6The Admiral of the Floating World SummaryBeach ReportGroup Project DevelopmentDiscussion 6 |
| 2/9 – Center for Urban Waters | Water SamplingMeet at the Center for Urban WatersDirections: <http://goo.gl/maps/CunDJ> | Group 1: 12:30-1:15 (volunteers)Group 2: 1:15-2Group 3: 2-2:45Group 4: 2:45-3:30 (volunteers) |  |  |
| 2/11 - Joy | Lights, Camera, Action | Making a Video |  |  |
| 7 |  |  | Ebbesmeyer, C. and E. Scigliano. 2009. Borne on a Black Current in Flotsametrics and the Floating World. Toronto: Harper Collins, p. 138-151.GESAMP (2015). Assessment Framework and Sources and Fate of Microplastics in the Marine Environment *in* “Sources, fate and effects of microplastics in the marine environment: a global assessment” (Kershaw, P. J., ed.). (IMO/FAO/UNESCO-IOC/UNIDO/WMO/IAEA/UN/UNEP/UNDP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection). Rep. Stud. GESAMP No. 90, 96, p. 12-29. | Quiz 7Borne on a Black Current SummaryWater Field ReportLab ReportGroup Project DevelopmentDiscussion 7  |
| 2/16 – Center for Urban Waters | Separating Bits of PlasticMeet at the Center for Urban WatersDirections: <http://goo.gl/maps/CunDJ> | Group 1: 12:30-1:15 (volunteers)Group 2: 1:15-2Group 3: 2-2:45Group 4: 2:45-3:30 (volunteers) |  |  |
| 2/18 - Joy |  | Field ReportLab Report |  |  |
| 8 |  |  | Ebbesmeyer, C. and E. Scigliano. 2009. The Great Conveyor in Flotsametrics and the Floating World. Toronto: Harper Collins, p. 152-170.GESAMP (2015). Effects of Microplastics on Marine Biota *in* “Sources, fate and effects of microplastics in the marine environment: a global assessment” (Kershaw, P. J., ed.). (IMO/FAO/UNESCO-IOC/UNIDO/WMO/IAEA/UN/UNEP/UNDP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection). Rep. Stud. GESAMP No. 90, 96, p. 30-53. | Quiz 8The Great Conveyor SummaryUNEP Report ResponsesCitizen Science ActivityDiscussion 8 |
| 2/23 - Joy | Citizen Science | Science Project |  |  |
| 2/25 - Joy | Citizen Science | Science Project |  |  |
| 9 |  |  | Ebbesmeyer, C. and E. Scigliano. 2009. Ashes to Ashes, Life from the Sea in Flotsametrics and the Floating World. Toronto: Harper Collins, p. 171-186.GESAMP (2015). Social Aspects of Microplastics in the Marine Environment and Key Observations and Conclusions *in* “Sources, fate and effects of microplastics in the marine environment: a global assessment” (Kershaw, P. J., ed.). (IMO/FAO/UNESCO-IOC/UNIDO/WMO/IAEA/UN/UNEP/UNDP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection). Rep. Stud. GESAMP No. 90, 96, p. 53-65. | Quiz 9Ashes to Ashes SummaryGroup Project ComponentsDiscussion 9 |
| 3/1 - Joy |  |  |  |  |
| 3/3 - Joy |  |  |  |  |
| 10 |  |  | GESAMP (2015). Key Policy-Related Recommendations *in* “Sources, fate and effects of microplastics in the marine environment: a global assessment” (Kershaw, P. J., ed.). (IMO/FAO/UNESCO-IOC/UNIDO/WMO/IAEA/UN/UNEP/UNDP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection). Rep. Stud. GESAMP No. 90, 96, p. 65-69. |  |
| 3/8 - Joy | Previews | Peer Review of Videos |  | Group Project Video |
| 3/10 - Joy | Previews | Peer Review of Videos |  |  |
| 3/11 – William Philips Hall | Show Time | Winter Student ShowcaseGroup 1: 11-noonGroup 2: 11:30-12:30Group 3: noon-1Group 4: 12:30-1:30 |  |  |
| FINALS |  |  |  |  |
| 3/15 | Peer Reviews |  |  |  |