

Term Information

Effective Term Autumn 2023

General Information

Course Bulletin Listing/Subject Area Engineering
Fiscal Unit/Academic Org Engineering Administration - D1400
College/Academic Group Engineering
Level/Career Undergraduate
Course Number/Catalog 2300
Course Title Exploring Diversity, Equity & Inclusion in Engineering Contexts
Transcript Abbreviation DEInEngineering
Course Description This course engages with thematic concepts and definitions of citizenship, diversity, equity, inclusion, and justice through historical and contemporary lenses. Students explore the applications and implications of these concepts across a wide range of engineering contexts. Students will approach the writing process from a rhetorical perspective.
Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? Yes
Is any section of the course offered Greater or equal to 50% at a distance
Less than 50% at a distance
Grading Basis Letter Grade
Repeatable No
Course Components Lecture
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No
Off Campus Sometimes
Campus of Offering Columbus, Lima, Mansfield, Marion, Newark, Wooster

Prerequisites and Exclusions

Prerequisites/Corequisites Writing and Information Literacy Foundation
Exclusions Not open to students with credit for ENGR 2301
Electronically Enforced Yes

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code 14.0101
Subsidy Level Baccalaureate Course
Intended Rank Freshman, Sophomore, Junior, Senior

Requirement/Elective Designation

Citizenship for a Diverse and Just World

Course Details

Course goals or learning objectives/outcomes

- Engage in an advanced, in-depth scholarly exploration of diversity, equity, and inclusion in engineering/STEM cultures, especially how race, ethnicity, gender, sexuality, age are experienced and intersect
- Engage in critical & logical thinking about the influence of engineering culture & its technical processes on communities & society at the local, state, national, and global level, with a focus on intersections with equity & justice
- Reflect critically on processes and learning (metacognition).
- Understand the importance of rhetorical communication and writing for technical and non-technical contexts and audiences
- Understand processes for composing informative and persuasive documents and plan and deliver presentations for a variety of audiences and purposes.
- Apply strategies for common types of workplace communication

Content Topic List

- Course Intro, Conceptual and Theoretical Foundations, Rhetorical Foundations & Technical Writing Style
 - Applications, Extensions, and Intersections—Theoretical
 - Applications, Extensions, and Intersections—Equity, Justice, and Citizenship at School and Work— Equity in Hiring, Pay and Promotion
 - Applications, Extensions, and Intersections—Equity, Justice, and Citizenship in Urban Design, Transportation and the Environment
 - Applications, Extensions, and Intersections—Equity, Justice, and Citizenship in Engineering Design—Automation, Robotics, Algorithms, and Artificial Intelligence
 - Applications, Extensions, and Intersections—Equity, Justice, and Citizenship on the Internet—Social Media, Privacy and Surveillance, Big Data and Augmented Reality
- No

Sought Concurrence

Attachments

- ENGR 2300 and 2301 Citizenship Readings Resource Database.xlsx: readings database
(Other Supporting Documentation. Owner: Casado,Ana Maria)
- ENGR 2300 GE Citizenship Theme Submission Form.pdf: citizenship theme submission form
(Other Supporting Documentation. Owner: Casado,Ana Maria)
- Revised ENGR 2300.pdf: revised syllabus
(Syllabus. Owner: Casado,Ana Maria)
- Revised 2300 and 2301 Cover Letter.pdf: cover letter
(Cover Letter. Owner: Casado,Ana Maria)
- 022323 Revised 2300 and 2301 Cover Letter.pdf: Revised Cover Letter
(Cover Letter. Owner: Shepherd,Heather)
- ENGR 2300 Syllabus Revision 2.0.pdf: Revised Syllabus
(Syllabus. Owner: Shepherd,Heather)
- ENGR 2300 GE Citizenship Theme Submission Form.pdf: citizenship theme submission form
(Other Supporting Documentation. Owner: Shepherd,Heather)

Comments

- Revised materials per 2/16/23 Panel feedback. *(by Shepherd,Heather on 02/24/2023 10:51 AM)*
- Please see Panel feedback email sent 02/16/2023. *(by Hilty,Michael on 02/16/2023 03:08 PM)*
- - If this course is indeed requesting to be taught 100% online, please follow instructions for DL
<https://ascas.osu.edu/curriculum/distance-courses> Please look at instructions for non-ASC units
-If this course is indeed repeatable, the panel will need to have some information on how a second iteration will be different, right? *(by Vankeerbergen,Bernadette Chantal on 04/06/2022 10:50 AM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Casado,Ana Maria	01/31/2022 07:34 PM	Submitted for Approval
Approved	Quinzon-Bonello,Rosario	02/23/2022 05:16 PM	Unit Approval
Approved	Quinzon-Bonello,Rosario	02/23/2022 05:17 PM	College Approval
Revision Requested	Vankeerbergen,Bernadette Chantal	04/06/2022 10:50 AM	ASCCAO Approval
Submitted	Casado,Ana Maria	04/07/2022 12:20 PM	Submitted for Approval
Approved	Quinzon-Bonello,Rosario	04/07/2022 01:02 PM	Unit Approval
Approved	Quinzon-Bonello,Rosario	04/07/2022 01:03 PM	College Approval
Revision Requested	Hilty,Michael	08/02/2022 08:09 AM	ASCCAO Approval
Submitted	Casado,Ana Maria	01/23/2023 04:38 PM	Submitted for Approval
Approved	Quinzon-Bonello,Rosario	01/23/2023 10:43 PM	Unit Approval
Approved	Quinzon-Bonello,Rosario	01/23/2023 10:43 PM	College Approval
Revision Requested	Hilty,Michael	02/16/2023 03:08 PM	ASCCAO Approval
Submitted	Shepherd,Heather	02/24/2023 10:51 AM	Submitted for Approval
Approved	Quinzon-Bonello,Rosario	02/24/2023 11:08 AM	Unit Approval
Approved	Quinzon-Bonello,Rosario	02/24/2023 11:08 AM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Hanlin,Deborah Kay Hilty,Michael Vankeerbergen,Bernadette Chantal Steele,Rachel Lea	02/24/2023 11:08 AM	ASCCAO Approval



February 23, 2023

GE CDJW Theme Review Committee:

Please accept this re-submission for our proposed courses, *ENGR 2300: Exploring Diversity, Equity, & Inclusion in Engineering Contexts* (3 credit hours) **and** *ENGR 2301: Exploring Diversity, Equity, & Inclusion in Engineering Contexts, Integrative (Research & Creative Inquiry Designation – 4 Credit Hours)* based on feedback received from the committee on February 16, 2023. Again, we thank the committee for their feedback and hope you will find the below-explained changes to each course meets your requirements for approval.

ENGR 2300: Exploring Diversity, Equity, & Inclusion in Engineering Contexts
3 Credit Hours

Thank you for your positive feedback on ENGR 2300. We have addressed the contingency as outlined below.

Contingency: “The reviewing faculty ask that it be further clarified how the GE ELOs will be met and satisfied within the course syllabus. Currently, it is unclear how course assignments and readings will help students satisfy the GE ELOs. Additionally, it is a requirement of all GE syllabi to include an explanatory rationale within the course that explains to students how they will expect to meet the GE ELOs and they ask that this be added as well.”

Revision: We have added explanatory language after each of the CDJW Theme ELOs for clarification (pp 2-4). We have also tagged relevant assignments in the course schedule with their corresponding ELOs.

ENGR 2301: Exploring Diversity, Equity, & Inclusion in Engineering Contexts
Integrative Designation, Research & Creative Inquiry
4 Credit Hours

Following is a summary of the changes made to the ENGR 2301 course syllabus in response to the committee’s feedback:

Feedback: Clarification was requested regarding how the course engages with the course themes throughout the entirety of the semester and how the primary research project engages with the course themes.

Response & Revisions: The Funding Proposal project is a long-term, research-based project that directly addresses the course themes and driving questions. In the previous syllabus, the

descriptions of the course content were less detailed after week 4 because students will be working through a guided process to analyze and apply the course themes in their projects. The experience is designed to be scaffolded and guided, intentionally building from the foundational reading and discussion into a personalized and creative exploration of a relevant, real-world topic related to the “citizen engineer” and society.

We hope the changes and documentation outlined here will clarify the intentional connections between the research project and the course themes, emphasizing the long-term, in-depth engagement with the course themes that we expect from students in this course:

1. Significant revisions were made to the syllabus front matter to emphasize the continuity of the course themes and assignments.
2. More detail and topical labels were added to the Course Schedule (pp. 13-19).
3. Explanatory language was added after each of the CDJW Theme ELOs (see content in the “boxes” on pp. 2 – 5 in the syllabus).
4. Assignment descriptions have been reorganized and expanded, particularly the assignments related to the Funding Proposal (see Syllabus pp. 9-11); an effort was made throughout to clarify how these assignments were designed to scaffold and build upon each other throughout the semester (in both the assignment descriptions and the supporting Theme ELO content).
5. The “Student Engagement in Engineering and Citizenship” grant funding Request for Proposals has been provided as supplemental documentation; it will be introduced in Week 2 and will guide the thematic focus of the major Funding Proposal assignment deliverables.

Thank you again for your consideration and careful review of our proposed course materials. We are more than happy to be available during the committee’s next review of these courses to answer any questions or provide further clarity.

Sincerely,



Lynn Hall
Director, Engineering Technical Communications



ENGR 2300: Exploring Diversity, Equity & Inclusion in Engineering Contexts

Semester Year / Class Day /Time /Location

“Citizen Engineers are the connection point between science and society—between pure knowledge and how it is used. Citizen Engineers are techno-responsible, environmentally responsible, economically responsible, socially responsible participants in the engineering community.” – The Citizen Engineer

Instructor

Name _____

[Pronouns: _____ | Honorific: _____]

Email: _____

Office Hours: _____

Course Description / Overview

This course engages with thematic concepts and definitions of citizenship, diversity, equity, inclusion, and justice through historical and contemporary lenses. Students explore the applications and implications of these concepts across a wide range of engineering contexts, including workplace dynamics, urban planning and built environments, transportation, design, machines, algorithms, big data, and the internet.

Course Philosophy

This course has two overarching goals: to explore what it means to be an engaged and responsible “Citizen Engineer” and to learn and practice writing and communication strategies vital to success in engineering curriculum and careers. As such, we will explore the thematic content of this course while also approaching the writing process from a rhetorical or UX (end user experience) perspective. We will engage with the writing process (from initial brainstorming through final edits/submission) for multiple modes of communication.

While practicing critical analysis and research skills, students learn technical writing style and genre conventions and create documents using technical/professional communications style. Genres covered include memos, emails, recommendation reports, research proposals, and presentations. Course projects include individual and team-based assignments. Because writing conventions vary by profession and organization, students will develop and engage general communication strategies that can be applied to other writing tasks both in their academic careers and in the workplace.

We will focus on composing from a rhetorical perspective, which means we will always consider the relationships between rhetorical elements (audience, subject, purpose) and their roles in the choices we make as communicators. We will ask ourselves what, how, and especially why we use language in particular ways in our documents.

The course will also emphasize two basic tenets of writing:

1. First, the course focuses on the *process* of writing rather than on the end product alone by incorporating exercises in planning, drafting, and revising.
2. Second, writing is not always easy; improving our work takes time, effort, and practice, especially when learning new writing styles.

Course Goals & Outcomes: What are they and what do they mean for students?

General Education Theme Course: Citizenship for a Just & Diverse World Theme

This course has been created in alignment with the General Education (GE) goals and expected learning outcomes (ELOs) for the Theme: Citizenship for a Just & Diverse World (CJDW) Theme. These goals and outcomes are created and assessed to ensure educational goals across programs and courses at Ohio State. This means that the course content—readings, lectures, and the various assignments—has been developed to help students practice and build the skillsets captured by these ELOs.

Below you'll find each of the CDJW goals and corresponding ELOs, as well as an explanation of how this course meets them. ELOs have also been “tagged” for each assignment in the course schedule.

CJDW Theme Goals and Expected Learning Outcomes

Goal 1: Successful students will analyze concepts of citizenship, justice, and diversity at a more advanced and in-depth level than in the Foundations component.

ELOs:

1.1 Engage in critical and logical thinking about the topic or idea of citizenship for a just and diverse world.

1.2 Engage in an advanced, in-depth, scholarly exploration of the topic or idea of citizenship for a just and diverse world.

How will we achieve this goal/these ELOs in this course?

The defining quote at the beginning of this syllabus: “[c]itizen Engineers are the connection point between science and society—between pure knowledge and how it is used. Citizen Engineers are techno-responsible, environmentally responsible, economically responsible, socially responsible participants in the engineering community” (Douglas et al., 2009) serves as the starting point for our conversations in this course. Together, we will read, discuss, and write about a variety of texts encompassing a range of engineering fields to explore what it means to be a “responsible participant in the engineering community” or, in other words, a citizen engineer.

Course readings are arranged topically in the table found under Required Materials. Foundational readings on citizenship (as well as reading rhetorically, information literacy best practices, and writing style focus) occur during Course Foundations weeks (See Course Schedule Weeks 1-3). The course is scaffolded, meaning students demonstrate engagement and build skills through assignments with varying degrees of formality. Course discussion boards/reading journals, reading responses and case study presentations are less formal engagements meant to practice critical and analytical thinking skills. Students will demonstrate their scholarly exploration of the course theme by learning and practicing sound research and information literacy-based practices in their researched assignments (synthesis memo 1, recommendation report, research paper, formal research presentation).

Goal 2: Successful students will integrate approaches to understanding citizenship for a just and diverse world by making connections to out-of-classroom experiences with academic knowledge or across disciplines and/or to work they have done in previous classes and that they anticipate doing in future.

ELOs:

2.1 Identify, describe and synthesize approaches or experiences as they apply to citizenship for a just and diverse world.

2.2 Demonstrate a developing sense of self as a learner through reflection, self-assessment and creative work, building on prior experiences to respond to new and challenging contexts.

How will we achieve this goal/these ELOs in this course?

Building on the readings/discussions/assignments in our Course Foundations (Weeks 1-3), the remainder of the course is categorized into “Applications, Extensions & Intersections” weeks where the reading and class discussions explore the Citizen Engineer and thematic content in conversation with specific technological and/or engineering areas. For example, Weeks 10-12 explore equity and justice in automation, robotics, algorithms, and AI. Student assignments for these Applications, Extensions & Intersections weeks ask student for continued engagement (discussion board, reading journal) and guides in application. Assignments at this point in these weeks of the course focus on applying our discussions of citizenship, diversity, and justice to these disciplinary areas.

The course assignments are scaffolded, asking students to use what they learn in various applications. For example, students learn about information literacy practices early in the semester and then apply and practice those skills throughout the course. Assignments in the course progress in levels of advancement, asking students to apply what they learn in smaller assignments into their major assignments and to varying modes of communications (memos, discussion boards, research papers, presentations).

Students in the course will develop a reflective nature through providing peer feedback and through the completion of self-assessments for major assignments. Self-assessments ask students to reflect on what they’ve learned as part of completing the readings/scaffolded assignments and how they applied what they learned to the major assignment. Students are also asked to evaluate what they did well and identify where they struggled/what they might change in their process for the future.

Students are asked to complete an introductory memo at the beginning of the term that sets goals for the course. Students are also given a mid-term and end-term self-assessment. The mid-term self that asks them about their participation/engagement in the course and asks them to revisit their goals, evaluate their progress, and revise/refresh as needed. The final self-assessment asks students to revisit both their beginning goal setting and mid-term self-evaluation to reflect on their time spent in the course.

Goal 3: Successful students will explore and analyze a range of perspectives on local, national or global citizenship and apply the knowledge, skills and dispositions that constitute citizenship.

ELOs:

3.1 Describe and analyze a range of perspectives on what constitutes citizenship and how it differs across political, cultural, national, global and/or historical communities.

3.2 Identify, reflect on and apply the knowledge, skills and dispositions required for intercultural competence as a global citizen.

How will we achieve this goal/these ELOs in this course?

This course is built from an understanding of citizenship as participatory. Therefore, the readings in this course are designed to be a starting point for student engagement with the theme. Our class-discussions

and discussion-based engagement assignments will ask students to engage with these perspectives and bring their own to the “table.” Other assignments (synthesis memos, research paper/presentation, case study presentations) will ask students to research and bring additional perspectives (local, national and/or global) into our conversations. Foundations lectures will be *intentional* in framing the entire course as an exercise in developing intercultural competence as a global citizen.

Goal 4: Successful students will examine notions of justice amid difference and analyze and critique how these interact with historically and socially constructed ideas of citizenship and membership within society, both within the United States and around the world.

ELOs:

4.1 Examine, critique and evaluate various expressions and implications of diversity, equity and inclusion, and explore a variety of lived experiences.

4.2 Analyze and critique the intersection of concepts of justice, difference, citizenship, and how these interact with cultural traditions, structures of power and/or advocacy for social change.

How will we achieve this goal/these ELOs in this course?

Course readings/discussions and lectures in the Course Foundations will provide students with these key concepts (with lectures including specifics on items that might not be explicitly covered in readings—for example, power structures or historical context). Applications, Extensions & Intersections weeks readings/discussions/lectures and assignments ask students to engage with, analyze, and conduct critical analysis of where the intersections occur. For example, the recommendation assignment might ask students to find examples of difference and lived experience here on OSU’s campus and make a recommendation for change.

Overarching Course Goals

The following course-level goals have been created to further outline the work of this. This course is an opportunity for students to:

1. Engage in an advanced, in-depth scholarly exploration of diversity, equity, and inclusion in engineering/STEM cultures, especially how race, ethnicity, gender, sexuality, and age are experienced and intersect.
2. Engage in critical and logical thinking about the influence of engineering culture and its technical processes, and products on communities and society at the local, state, national, and global level, with a focus on intersections with equity and justice
3. Reflect critically on processes and learning (metacognition).
4. Understand the importance of rhetorical communication and writing for technical and non-technical contexts and audiences.
5. Understand processes for composing informative and persuasive documents and plan and deliver presentations for a variety of audiences and purposes.
6. Apply strategies for common types of workplace communication.

Required Texts & Materials

This course uses Open Education Resources and therefore does not require purchased materials. All readings, handouts, and resources will be provided via Carmen.

Below is a general overview of the expected course readings and resources organized around major topic areas. Note that many of the readings span more than one topic area and our work with the theme

and the technical/professional communications and writing foundations will be discussed and practiced throughout the course. Specific reading assignments and materials will be distributed throughout the semester on Carmen and communicated to students via the detailed course schedule. Students will also curate readings around topics to assign to one another and present as case studies for class discussion.

TOPIC AREAS	READINGS & RESOURCES
Citizenship	<p>Excerpts from “Citizenship and Social Class” (T.H. Marshall, 1950)</p> <p>Excerpts from <i>Citizen Engineer: A Handbook for Socially Responsible Engineering</i> (Douglas et al., 2009)</p> <p>Selections from <i>The Good Citizen: How a younger generation is reshaping American politics</i> (R. Dalton, 2020):</p> <ul style="list-style-type: none"> • “Chapter 1: Citizenship and the Transformation of American Society” (pp. 1 – 19) • “Chapter 2: The meaning and measurement of citizenship” (pp. 20 – 33) <p>Selections from <i>Digital Citizenship: The Internet, Society, and Participation</i> (Mossberger et al., 2007)</p> <ul style="list-style-type: none"> • 1: Defining Digital Citizenship (pp. 1 – 19) • 3: The Benefits of Society Online: Civic Engagement (pp. 47 – 66) • 5: From the Digital Divide to Digital Citizenship (pp. 95 – 122) <p>Excerpts from “What Kind of Citizen?: The Politics of Educating for Democracy” (Westheimer & Kahne, 2004)</p>
Diversity, equity, inclusion, justice	<p>“Chapter 3: Forming citizenship norms” (pp. 34 – 52) in <i>The Good Citizen</i> (R. Dalton, 2020)</p> <p>Diversity and Division in Advanced Economies (Pew Research Center, 2021)</p> <p>“Is it better to know?” [podcast] – <i>Hidden Brain</i></p> <p>“How they see us” [podcast] – <i>Hidden Brain</i></p> <p>Selections from <i>Defined by Design: The Surprising Power of Hidden Gender, Age, and Body Bias in Everyday Products and Places</i> (Anthony, 2017)</p> <ul style="list-style-type: none"> • “Introduction” (pp. 17-24) • “Helpful or Harmful to Your Health?: The Design of Your Home or Neighborhood” (pp. 159-172) <p>“2023 Retrospective: The Story of Gender Equity from the Past Decade in 10 Trends” (Roy, 2023)</p> <p>“Why Should I Care About Diversity in Engineering” (NSPE, 2020)</p>
Role of engineers / engineering in society	<p>Selections from <i>Citizen Engineer</i> (Douglas et al., 2009)</p> <ul style="list-style-type: none"> • “Part I. Advent of the Citizen Engineer”

	<ul style="list-style-type: none"> • “Part II. Environmental Responsibility” or “Part III. Intellectual Responsibility” <p>Selections from “Engineering Design for Social Justice” in <i>Engineering Justice: Transforming Engineering Education and Practice</i> (Leydens & Lucena, 2017):</p> <ul style="list-style-type: none"> • “Introduction: 1 Pressing Issues for Engineering Education and the Engineering Profession” (pp. 3 – 11) • “Introduction: 4 Engineering for Social Justice” (pp. 14 – 18) • “Introduction: 5 Engineering for Social Justice Criteria” (pp. 19 – 30) • “Chapter 2: Engineering Design for Social Justice” (pp. 67 – 201) <p>“Innovative tools for diversity, equity and inclusion in urban planning” (Agyeman (2016)</p>
Society, identity & technology	<p>“How to Put Out Democracy’s Dumpster Fire” in <i>The Atlantic</i> (Applebaum & Pomerantsev, 2021)</p> <p>Selections from <i>The Oxford Handbook of Digital Technology and Society</i> (Yates & Rice [Eds.], 2020)</p> <ul style="list-style-type: none"> • “Introduction to the Oxford Handbook of Digital Technology and Society: Terms, Domains, and Themes” (pp. 1 – 27 [pdf]) • “5: Communities, Identities, and Class” (pp. 1 – 19 [pdf]) • “6: Citizenship, Politics, and Participation” (pp. 1 – 18 [pdf]) <p>Race and Technology in America [interactive article series] – <i>Axios</i></p> <p><i>Automating Inequality</i> (Eubanks, 2017)</p> <ul style="list-style-type: none"> • “Introduction” (pp. 1-13) • “High-Tech Homelessness in the City of Angels” (pp. 84-126) <p><i>Technically Wrong: Sexist Apps, Biased Algorithms, and Other Threats of Toxic Tech</i> (Wachter-Boettcher, 2017)</p> <ul style="list-style-type: none"> • “Welcome to the Machine” (pp. 1-12) • “Algorithmic Inequity” (119-146) <p><i>Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy</i> (O, Neil, 2017)</p> <ul style="list-style-type: none"> • “Introduction” (pp. 1-13) • “Civilian Casualties: Justice in the Age of Big Data” (pp. 84-122)
Problem solving and designing solutions	<p>“What is Design Thinking and Why is it so Popular?” (via Interaction Design Foundation, 2022)</p> <p>“Rethinking Design Thinking” (Norman, 2013)</p> <p>Design for All [documentary] (Target, 2020)</p> <p>Gendered Innovations [website and case studies] – Stanford</p>

Writing & research / communication in an Engineering context	<p><i>Choosing and Using Sources: A Guide to Academic Research</i> (University Libraries)</p> <p><i>Technical Writing Essentials</i> (Last, 2019)</p> <p><i>Planning and Organizing Proposals and Technical Reports</i> (Johnson-Sheehan, n.d.)</p> <p><i>Engineered to Speak: Helping You Create and Deliver Engaging Technical Presentations</i> (Chilcutt & Brooks, 2019)</p> <p>Revising Prose (Lanham, 2007)</p>
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Course Technology

For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the Ohio State IT Service Desk. Standard support hours are available at ocio.osu.edu/help/hours, and support for urgent issues is available 24/7.

- **Self-Service and Chat support:** ocio.osu.edu/help
- **Phone:** 614-688-4357(HELP)
- **Email:** servicedesk@osu.edu
- **TDD:** 614-688-8743

Required Technology Skills Specific to This Course

- Carmen Zoom (for attending office hours or in the event of a shift in COVID policies/course delivery)

Required Equipment

- Computer: iPad or tablet or Mac (OS X) or PC (Windows 7+) with reliable/stable internet connection/WiFi capabilities
- Other: a mobile device (smartphone or tablet) to use for BuckeyePass authentication

Required Software

- You will need access to word processing software (Word, Google Docs) and the ability to save/export documents as PDFs.
- [Microsoft Office 365](#): All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Full instructions for downloading and installation can be found at go.osu.edu/office365help.

Carmen Access

This course uses Carmen *extensively* (announcements, resources, homework readings, assignments, graded work/feedback, etc.). You will need to use [BuckeyePass](#) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](#) help article for step-by-step instructions.

- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- Download the [Duo Mobile application](#) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357 (HELP) and IT support staff will work out a solution with you.

Course Requirements/Assignments & Grading Policies

Grades in this course are calculated based on both individual and team-based assignments as listed. The assignments in this course are scaffolded, with smaller assignments geared toward topical exploration and building foundations for the major assignments. All assignments are designed to guide students to approach rhetorically (engage with and demonstrate an understanding of audience, purpose, and context) and learn and practice technical writing style and genre conventions. Course grades are determined by the quality of projects and level of class participation, as explained below.

Individual Assignments

- Reading Engagement/Reflection: Reading Journal or Discussion Boards (10%)
- Reading Engagement/Reflection: Reading Response (Synthesis) Memos x2 (10%)
- Recommendation Memo (15%)
- Case Study Presentation (10%)
- Process: Peer Response (5%)
- Process: Self- & Team Reflections/Evaluations (5%)
- Participation (5%)

Team Assignment: Research Project (White Paper / Proposal)

- Research Plan & Team Contract (5%)
- Annotated Bibliography (10%)
- Research Project (15%)
- Research Project Presentation (10%)

Project Assignments. Each project has a detailed assignment sheet and rubric outlining instructions, requirements, and grading criteria. All work is turned in via Carmen. Always check your work against the assignment sheet, rubric, and submission instructions prior to turning in your work for a grade.

Grading Criteria for Projects. As noted above, each project will have a detailed assignment sheet and rubric. In addition to meeting assignment criteria, I expect work that shows you put effort and care into preparing it. I also expect you to apply the concepts you've learned earlier in the term to each subsequent project, as appropriate. In addition to the specific project criteria, the following general criteria apply to all your projects:

- *Audience.* Your communication should be directed to a specific audience and should reflect a concern with the needs and potential responses of all who may read it.
- *Clarity.* Your writing should convey its message precisely and with immediate clarity to the reader. In style, it should be substantially free of wordiness, jargon, or other stylistic awkwardness.

- *Completeness.* Your communication should contain all of the information necessary for your audience to act or make a decision, but no irrelevant information.
- *Organization.* Your communication should be appropriately organized. The information should be conveyed usefully and persuasively. Your organization should be clear to your readers so they'll know what point you're making and how that point relates to the rest of your message.
- *Grammar and Mechanics.* Your writing should be free of grammatical and mechanical errors. Though I will point out and help you learn from mistakes, I am not an editor and I expect the work you turn in to be polished and proofread.
- *Promptness.* In this course, as in the workplace, you must turn in your work on time. All homework and projects are due at the beginning of class on the dates given in the syllabus. See the "Late Work" section for further details.
- *Appearance.* Whether a memo, proposal, or presentation, you should follow the appropriate conventions of that genre.

With the above-noted general criteria in mind, this course uses the following standard grading scale:

A	100-93 %	B-	82-80 %	D+	69-67 %
A-	92-90 %	C+	79-77 %	D	66-60 %
B+	89-87 %	C	76-73 %	F	Below 60%
B	86-83 %	C-	72-70 %		

Late Work. All assignments are to be turned in by their assigned due date/time. **I do not accept late work.** If you should have an emergency, contact me as soon as possible. Each student is entitled to one extension provided the extension is requested at least 24 hours in advance with adequate explanation.

Process Points (Peer Response + Self-Evaluation). This course follows the premise that writing is a process. To that end, we workshop our drafts in peer response writing group workshops and reflect on our finished products. In these workshops, you and your classmates will be given prompts to help guide you, and you'll be able to see how others are approaching the same assignment. Peer response workshops require that you (1) upload a *complete* draft to the assignment's draft folder on the day it is due and (2) review the work of others in your workshop group. To receive credit for peer response (10 points), you must meet both of those criteria.

Each project for this course also requires you to reflect in the form of a self-evaluation consisting of a rhetorical analysis of your work and an earnest reflection of your effort on the project. Process points are built into each assignment. **NOTE:** You cannot receive a grade for the major project/overall unit without completing each component part of the project. This includes process points. All major projects must be completed to receive a passing grade for the course.

Reading Engagements: Reading Journals & Discussion Boards. The class offers a variety of ways for us to engage with readings and one another. We will use reading journals and discussion boards to help prepare for and/or extend discussions over class topics and readings. Detailed instructions and prompts for each type of assignment can be found on Carmen.

Reading Engagements: Reading Response Synthesis Memos. You will be asked to write two memos (a common professional workplace genre) this semester in order to practice putting texts into conversation with one another. Detailed instructions can be found on Carmen.

Participation Overview: We will utilize the scheduled class times for lectures, class activities and scheduled work sessions for team projects. As with any class, you will also be expected to use out-of-class time to complete course readings, assignments, and engage with your project teams as required. You can anticipate participating in the following ways:

- **Participating in our scheduled class sessions. [CLASS SESSIONS “X” WEEKLY]**
You are expected to attend our scheduled class sessions and actively participate. You’ll find more details on participation below. Please note the attendance policy and communicate with me if you have questions/concerns or are experiencing illness.
- **Office Hours: OPTIONAL**
Regular office hours every week as noted at the top of this syllabus and on Carmen. If you are unavailable during office hours, email for an appointment.
- **Discussion Boards, ICW, Homework Readings. FREQUENT ENGAGEMENT**
In addition to our work together during our scheduled class time, you are also expected to complete assigned homework readings, and complete reading engagements/discussion board posts/replies. The work in this course is scaffolded; this means that every smaller assignment is meant to help with the major assignments for each module. The course schedule is designed so background readings happen early in the module and then taper off as work is expected to shift to drafting the final assignment for the module. Many of these assignments will have their own point value assigned, as documented on Carmen; others will be factored into the overall participation grade for the course (see Course Policies).

The participation points for this class are **earned**, not automatically awarded. They are earned through your active engagement with your instructor, your peers, and the course content. The most successful students in this course:

- make effective use of all course resources: text/readings, instructor, assignment sheets, peer review opportunities, grading rubrics, informational handouts, Carmen site, videos, web links, etc.,
- are on time and are present at every class meeting,
- ask questions,
- participate meaningfully in discussions (via discussion boards; via Zoom audio or chat feature during class, etc.),
- treat others and their instructor with respect,
- keep track of their course progress and turn assignments in on time,
- are diligent in planning their time in advance by utilizing the course calendar and working ahead, and
- consider the ways that skills gained in this course will help them to be more successful in future classes, in searching for internships and jobs, and in their early experiences of professional life.

Unless designated as “suggested,” course readings are a required part of course participation. Over the course of the term, you are expected to read assigned reading carefully and thoughtfully—engaging with the reading and spending time thinking about it in preparation for completing course projects and participating in class discussion. In class discussions will often draw on assigned readings and I will assume that you have read and applied the assigned readings to your project assignments when I grade.

Credit hours and work expectations: This is a **3-credit-hour course**. According to [Ohio State policy](#), students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of (C) average.

How this Course Works: Policies, Procedures and Resources

The course policies below outline the expectations for this course. If you have any questions about a course policy or about the course in general, please see me. It also contains information about resources and services you may find helpful. The course has been carefully designed and each assignment created to build on the previous with the goal of meeting the goals and objectives noted in the learning outcomes expressed above.

Academic Integrity & Misconduct. I expect all work to be your own. When you use someone else's ideas or words as your own without proper attribution (such as citations), you are plagiarizing. Plagiarism is a form of academic dishonesty, as is cheating on a quiz or exam. Cheating and plagiarism are serious offenses that could result in a grade of F for the course. If at any time you are unclear about how to include others' ideas or words within your writing, please ask me. **Do not copy the writing of others.** Examples of documents given in class or on Carmen are to provide guidance and perspective, not an opportunity to copy someone else's work.

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Academic Support. I encourage you to take advantage of academic support services offered to students here at OSU. If you are having difficulty with this course or need help accessing resources available to you here at Ohio State, please contact me. I will do everything I can to help connect you with resources.

Civility and Title IX. I am committed to making the classroom a comfortable space for all of us, and I ask that we all work toward this goal during our class sessions and in all of the course's online spaces. We will respect each other and practice civility at all times. Disrespectful language including, but not limited to, sexist, racist, homophobic, or anti-ethnic slurs, or bigotry will not be tolerated.

All students and employees at Ohio State have the right to work and learn in an environment free from harassment and discrimination based on sex or gender, and the university can arrange interim measures, provide support resources, and explain investigation options, including referral to confidential resources. If you or someone you know has been harassed or discriminated against based on your sex or gender, including sexual harassment, sexual assault, relationship violence, stalking, or sexual exploitation, you may find information about your rights and options at titleix.osu.edu or by contacting the Ohio State Title IX Coordinator at titleix@osu.edu. Title IX is part of the Office of Institutional Equity (OIE) at Ohio State, which responds to all bias-motivated incidents of harassment

and discrimination, such as race, religion, national origin and disability. For more information on OIE, visit equity.osu.edu or email equity@osu.edu.

Copyright Disclaimer. The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Disability Services. The University strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Health and Safety Requirements. All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (<https://safeandhealthy.osu.edu>).

Instructor Contact and Grading/Feedback. I monitor and respond to email within 24 hours. If you send an email after normal business hours (M-F; 9-5 EST), I will respond the next day—please keep this in mind and plan accordingly since assignments are sometimes due at 11:59PM. I am also available during my posted office hours and by appointment.

Feedback/graded work for this class is returned via Carmen so be sure to familiarize yourself with how to use Carmen's gradebook and feedback viewing features. You should feel free to meet with me during office hours or by appointment to discuss feedback and/or grades. I do not discuss grades via email. Grades are non-negotiable and, absent a math error, will not be adjusted—no exceptions. Grades, whether on assignments or cumulative final course grades, are not curved or rounded—no exceptions.

Mental Health/Wellbeing. As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities.

The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling [614-292-5766](tel:614-292-5766). CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at [614-292-5766](tel:614-292-5766) and 24 hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

Syllabus. This syllabus and course schedule may be modified from time to time as appropriate in order to ensure course objectives are being met. All changes will be announced and posted to the course site on Carmen.

The Writing Center (Center for the Study and Teaching of Writing). We have a fantastic writing center! The trained writing consultants can help with individual or team projects at all stages of the writing process. Please visit <https://cstw.osu.edu/writing-center> to make an appointment and check out their resources.

Course Schedule (Sample)

Assignments are scaffolded throughout the course to build upon one another. In addition to overarching topics listed below, students will be introduced to and practice technical and professional communication strategies (including technical writing style conventions document design). All readings, assignment descriptions/instructions and rubrics, and deadlines are provided on Carmen.

Week 1: Course Foundations	
Theme Concept/Theoretical Foundations; Rhetorical Strategy; Technical Writing Style	
CLASS	<p>Introductions, course overview and goals, our Thinking – Writing – Thinking approach; initial course theme discussion</p> <p>In-class writing prompt: Reflection on “Citizenship for a Just and Diverse World” Theme and syllabus opening quotation on the citizenship engineer</p>
CLASS	<p>Introduction to Rhetorical Strategy / Audience Centered Approach to Writing; Introduction to Technical Writing Style</p> <p>Forming Writing Groups</p>
READINGS & RESOURCES	<p>Course Syllabus; Carmen Course Shell</p> <p>Citizen Engineer (Douglas et al., 2009): “Part I. Advent of the Citizen Engineer” and either “Part II. Environmental Responsibility” or “Part III. Intellectual Responsibility” (based on writing group assignment)</p> <p>“Chapter 2: The meaning and measurement of citizenship” (pp. 20 – 33) in <i>The Good Citizen</i> (R. Dalton, 2020);</p> <p>Excerpts from “What Kind of Citizen?: The Politics of Educating for Democracy” (Westheimer & Kahne, 2004);</p> <p>Rhetorical Foundations: What is Rhetoric and Applications in Technical Communications from <i>A Guide to Technical Communications: Strategies and Applications</i> (Hall & Wahlin, n.d.)</p> <p>What is Technical Communications (Last, 2009)</p> <p>Excerpts from “Citizenship and Social Class” (T.H. Marshall, 1950);</p>
ASSIGNMENTS	<p>Intro Reflection (2.2)</p> <p>Reading Response: Discussion Board <u>or</u> Reading Journal (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 4.2)</p>
Week 2: Course Foundations	
Theme Concept/Theoretical Foundations; Rhetorical Strategy; Technical Writing Style	
CLASS	<p>Class Discussion of theme concepts (citizenship, justice, diversity, equity, inclusion) and readings; Overview / Assign Recommendation Report Assignment</p>
CLASS	<p>Review of OSU Library Resources and Information Literacy (research questions, choosing and evaluating sources, source integration); APA citation</p>

READINGS & RESOURCES	<p>“Chapter 3: Forming citizenship norms” (pp. 34 – 52) in <i>The Good Citizen</i> (R. Dalton, 2020); <i>Diversity and Division in Advanced Economies</i> (Pew Research Center, 2021); “Is it better to know?” and “How they see us” [podcast] – Hidden Brain; <i>Race and Technology in America</i> [interactive article series] – Axios</p> <p>Selections from <i>Choosing & Using Sources: A Guide to Academic Research</i> (OSU Libraries)</p>
ASSIGNMENTS	<p>Reading Response: Discussion Board <u>or</u> Reading Journal (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 4.2)</p> <p>Technical Writing Style Exercise</p> <p>Recommendation Report Synthesis Matrix + Outline</p>
Week 3: Course Foundations	
Theme Concept/Theoretical Foundations; Rhetorical Strategy; Technical Writing Style	
CLASS	<p>Continued in-class exploration and discussion about diversity, equity, and inclusion in engineering contexts (working with <i>Gendered Innovations</i> [website and case studies] in class)</p> <p>Putting texts in conversation / incorporating research; more with technical style</p> <p>Genre Intro: Memos</p>
CLASS	<p>Lecture and discussion about the role of engineering in society; problem solving processes and design (review case studies); watch and discuss <i>Design for All</i> documentary</p> <p>Genre Intro: Recommendation Reports</p>
READINGS & RESOURCES	<p>“Engineering Design for Social Justice” in <i>Engineering Justice: Transforming Engineering Education and Practice</i> (Leydens & Lucena, 2017): “Introduction: 1 Pressing Issues for Engineering Education and the Engineering Profession” (pp. 3 – 11); “Correspondence: Text Messages, Emails, Memos, and Letters” and “Recommendation Reports” (Last, 2009)</p>
ASSIGNMENTS	<p>Reading Response: Synthesis Memo 1 (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 4.2)</p> <p>Information Literacy Exercise</p>
Week 4: Applications, Extensions & Intersections	
Digital Citizenship	
CLASS	<p>Writing Process Focus: Revision, Lanham’s Paramedic Method; Giving/Receiving Feedback; Self-Evaluations: Building a Reflective Approach to Writing and Learning</p>
CLASS	<p>Recommendation Report Peer Response Workshop</p>
READINGS & RESOURCES	<p>Technical Writing Essentials: “Appendix H: Peer Review Essentials”; <i>Revising Prose</i> (Lanham, 2007); <i>Reflective Practice: Thinking About the Way You Do Things</i> (Shatz, n.d.)</p>
ASSIGNMENTS	<p>Recommendation Report Draft Due for Workshop</p>

Week 5: Applications, Extensions & Intersections Digital Citizenship	
CLASS	Class Discussion: Digital Citizenship
CLASS	Analyzing arguments, evidence, and claims by examining digital citizenship and technology in society (using <i>The Oxford Handbook of Digital Technology and Society</i> for in-class activities and discussion)
READINGS & RESOURCES	Selections from <i>Digital Citizenship: The Internet, Society, and Participation</i> (Mossberger et al., 2007): 1: Defining Digital Citizenship (pp. 1 – 19); 3: The Benefits of Society Online: Civic Engagement (pp. 47 – 66); 5: From the Digital Divide to Digital Citizenship (pp. 95 – 122)
ASSIGNMENTS	Recommendation Report Due (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 4.2) Self-Evaluation Due (2.2)
Week 6: Applications, Extensions, Intersections Equity, Justice, and the Citizen Engineer at School & Work: Equity in Hiring, Pay and Promotion	
CLASS	Discussion of Case Study Assignment Presentations (presented via topic from either Gendered Innovations or Project Drawdown or related to readings topic); in class gathering of resources to assign to one another for reading and discussing specific to Week 6/7 topics (organized and posted to Carmen page for student selection)
CLASS	Genre: Presentations: Effective Presentations from Preparation to Delivery
READINGS & RESOURCES	Technical Writing Essentials: "8.1 Building Confidence as a Presenter" and "8.2 Developing Presentation Skills"; Engineered to Speak: "Ch. 4 Asking the Questions" and "Ch. 5 Organizing and Outlining Your Presentation"; Class curated readings
ASSIGNMENTS	Reading Response: Discussion Board <u>or</u> Reading Journal (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 4.2)
Week 7: Applications, Extensions, Intersections Equity, Justice, and the Citizen Engineer at School & Work: Equity in Hiring, Pay and Promotion	
CLASS	Case study presentation and class discussion
CLASS	Case study presentation and class discussion
READINGS & RESOURCES	"2023 Retrospective: The Story of Gender Equity from the Past Decade in 10 Trends" (Roy, 2023); "Why Should I Care About Diversity in Engineering" (NSPE, 2020); Class curated readings
ASSIGNMENTS	Reading Engagement Journal <u>or</u> Discussion Board (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 4.2) Case Study Presentation (ELO 1.1; 1.2; 2.1; 2.2; 3.1; 3.2; 4.1; 4.2) Mid-Term Self-Assessment and Reflection (ELO 2.2)
Week 8: Applications, Extensions, and Intersections Equity, Justice, and the Citizen Engineer in Urban Design, Transportation, and the Environment	

CLASS	Case study presentation and class discussion; Introduce Team Project: Research Proposal or White Paper and Presentation
CLASS	Case study presentation and class discussion; Skills for effective teamwork; collaborative writing strategies; Introduce Annotated Bibliography assignment
READINGS & RESOURCES	Defined by Design: The Surprising Power of Hidden Gender, Age, and Body Bias in Everyday Products and Places (Anthony, 2017): “Introduction” (pp. 17-24) And “Helpful or Harmful to Your Health?: The Design of Your Home or Neighborhood” (pp. 159-172); Class curated readings; “Proposals” and “Teamwork and Communication” (all sections within) (Last, 2009)
ASSIGNMENTS	Case Study Presentations and Class Discussion Case Study Presentation (ELO 1.1; 1.2; 2.1; 2.2; 3.1; 3.2; 4.1; 4.2) Reading Engagement Journal <u>or</u> Discussion Board (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 4.2) Team Agreement/Contract (ELO 1.2) Project Topic Memo & Research Plan (ELO 1.2)
Week 9: Applications, Extensions, and Intersections Equity, Justice, and the Citizen Engineer in Urban Design, Transportation, and the Environment	
CLASS	Case Study Presentations and Class Discussion
CLASS	Case Study Presentations and Class Discussion
READINGS & RESOURCES	“Innovative tools for diversity, equity and inclusion in urban planning” (Agyeman (2016); “High-Tech Homelessness in the City of Angels” (Eubanks, 2017); Class curated readings; “Progress Reports” (all) (Last, 2009)
ASSIGNMENTS	Case Study Presentations (ELO 1.1; 1.2; 2.1; 2.2; 3.1; 3.2; 4.1; 4.2) Reading Engagement Journal <u>or</u> Discussion Board (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 4.2) Annotated Bibliography (Individual) (ELO 1.2; 2.1; 3.1) Team Progress Report
Week 10: Applications, Extensions, and Intersections Equity, Justice, and the Citizen Engineer in Engineering Design: Automation, Robotics, Algorithms, and Artificial Intelligence	
CLASS	Case Study Presentations and Class Discussion
CLASS	Case Study Presentations and Class Discussion
READINGS & RESOURCES	<i>Technically Wrong: Sexist Apps, Biased Algorithms, and Other Threats of Toxic Tech</i> (Wachter-Boettcher, 2017): “Welcome to the Machine” (pp. 1-12)
ASSIGNMENTS	Case Study Presentations (ELO 1.1; 1.2; 2.1; 2.2; 3.1; 3.2; 4.1; 4.2) Reading Engagement Journal <u>or</u> Discussion Board (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 4.2)
Week 11: Applications, Extensions, and Intersections Equity, Justice, and the Citizen Engineer in Engineering Design: Automation, Robotics, Algorithms, and Artificial Intelligence	
CLASS	Case Study Presentations and Class Discussion

CLASS	Project Team Work Session
READINGS & RESOURCES	<i>Technically Wrong: Sexist Apps, Biased Algorithms, and Other Threats of Toxic Tech</i> “Algorithmic Inequity” (pp. 119-146)
ASSIGNMENTS	Case Study Presentations (ELO 1.1; 1.2; 2.1; 2.2; 3.1; 3.2; 4.1; 4.2) Synthesis Memo 2 (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 4.2)

Week 12: Applications, Extensions, and Intersections Equity, Justice, and the Citizen Engineer in Engineering Design: Automation, Robotics, Algorithms, and Artificial Intelligence	
CLASS	Case Study Presentations and Class Discussion
CLASS	Case Study Presentations and Class Discussion
READINGS & RESOURCES	Weapons of Math Destruction (O’Neil, 2017) “Introduction” (pp. 1-14); Class curated readings
ASSIGNMENTS	Case Study Presentations (ELO 1.1; 1.2; 2.1; 2.2; 3.1; 3.2; 4.1; 4.2) Reading Engagement Journal <u>or</u> Discussion Board (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 4.2)
Week 13: Applications, Extensions, and Intersections Equity, Justice, and the Citizen Engineer on the Internet–Social Media, Privacy and Surveillance, Big Data and Augmented Reality	
CLASS	Team Work Session
CLASS	Team Project Peer Response Workshop
READINGS & RESOURCES	Technical Writing Essentials: "8.3 Presenting as a Team" Engineered to Speak: "Ch. 6 Perfecting Your Pitch" (pp. 63 – 69) and "Visualizing Your Message" (pp. 71 – 85)
ASSIGNMENTS	Peer Response Workshop
Week 14: Applications, Extensions, and Intersections Equity, Justice, and the Citizen Engineer on the Internet–Social Media, Privacy and Surveillance, Big Data and Augmented Reality	
CLASS	Team Presentations and Class Discussion
CLASS	Team Presentations and Class Discussion
ASSIGNMENT	Presenter Feedback Worksheets
Finals Week	
DUE	Team Project: White Paper / Proposal (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 3.2) Team Presentation Slides (ELO 1.1; 1.2; 2.1; 3.1; 3.2; 4.1; 3.2) Team Assessment Project Self-Evaluation (ELO 2.2) Course Self-Evaluation (ELO 2.2)

GE THEME COURSES

Overview

Courses that are accepted into the General Education (GE) Themes must meet two sets of Expected Learning Outcomes (ELOs): those common for all GE Themes and one set specific to the content of the Theme. This form begins with the criteria common to all themes and has expandable sections relating to each specific theme.

A course may be accepted into more than one Theme if the ELOs for each theme are met. Courses seeking approval for multiple Themes will complete a submission document for each theme. Courses seeking approval as a 4-credit, Integrative Practices course need to complete a similar submission form for the chosen practice. It may be helpful to consult your Director of Undergraduate Studies or appropriate support staff person as you develop and submit your course.

Please enter text in the boxes to describe how your class will meet the ELOs of the Theme to which it applies. Please use language that is clear and concise and that colleagues outside of your discipline will be able to follow. You are encouraged to refer specifically to the syllabus submitted for the course, since the reviewers will also have that document. Because this document will be used in the course review and approval process, you should be *as specific as possible*, listing concrete activities, specific theories, names of scholars, titles of textbooks etc.

Course subject & number

General Expectations of All Themes

GOAL 1: Successful students will analyze an important topic or idea at a more advanced and in-depth level than the foundations.

Please briefly identify the ways in which this course represents an advanced study of the focal theme. In this context, “advanced” refers to courses that are e.g., synthetic, rely on research or cutting-edge findings, or deeply engage with the subject matter, among other possibilities. *(50-500 words)*

Course subject & number

ELO 1.1 Engage in critical and logical thinking about the topic or idea of the theme. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. (50-700 words)

ELO 1.2 Engage in an advanced, in-depth, scholarly exploration of the topic or idea of the theme. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. (50-700 words)

Course subject & number

GOAL 2: Successful students will integrate approaches to the theme by making connections to out-of-classroom experiences with academic knowledge or across disciplines and/or to work they have done in previous classes and that they anticipate doing in future.

ELO 2.1 Identify, describe, and synthesize approaches or experiences as they apply to the theme.

Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. (50-700 words)

ELO 2.2 Demonstrate a developing sense of self as a learner through reflection, self-assessment, and creative work, building on prior experiences to respond to new and challenging contexts.

Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. (50-700 words)

Course subject & number

Specific Expectations of Courses in Citizenship

GOAL 1: Successful students will explore and analyze a range of perspectives on local, national, or global citizenship, and apply the knowledge, skills, and dispositions that constitute citizenship.

ELO 1.1 Describe and analyze a range of perspectives on what constitutes citizenship and how it differs across political, cultural, national, global, and/or historical communities. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. (50-700 words)

ELO 1.2 Identify, reflect on, and apply the knowledge, skills and dispositions required for intercultural competence as a global citizen. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. (50-700 words)

Course subject & number

GOAL 2: Successful students will examine notions of justice amidst difference and analyze and critique how these interact with historically and socially constructed ideas of citizenship and membership within societies, both within the US and/or around the world.

ELO 2.1 Examine, critique, and evaluate various expressions and implications of diversity, equity, inclusion, and explore a variety of lived experiences. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. (50-700 words)

2.2 Analyze and critique the intersection of concepts of justice, difference, citizenship, and how these interact with cultural traditions, structures of power and/or advocacy for social change. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. (50-700 words)