

Term Information

Effective Term Autumn 2022

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 1300
Course Title Introduction to Writing for STEM
Transcript Abbreviation IntroWritingSTEM
Course Description ENGR 1300 will introduce students to college writing with an emphasis on information literacy and the technical writing style conventions common to STEM academic and professional fields. Students will examine STEM-related topics in their field and will identify how these involve professional ethics in professional/public communications.
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? No
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

Prerequisites and Exclusions

Prerequisites/Corequisites
Exclusions
Electronically Enforced No

Cross-Listings

Cross-Listings n/a

Subject/CIP Code

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

Requirement/Elective Designation

Writing and Information Literacy

Course Details

Course goals or learning objectives/outcomes

- demonstrate skills in effective reading and writing as well as in oral, digital and/or visual communication for a range of purposes, audiences and context
- develop the knowledge, skills and habits of mind needed for information literacy

Content Topic List

- Career writing
- Identifying issues in STEM
- Communicating to STEM audiences
- Communication to non-technical audiences

Sought Concurrence

Yes

Attachments

- Updated GE Foundations Course Submission Form for ENGR 1300.pdf
(Other Supporting Documentation. Owner: Casado,Ana Maria)
- ENGR 1300_ Introduction to Writing for STEM (3 Credit Hours) Detail Syllabus[1].pdf
(Syllabus. Owner: Casado,Ana Maria)
- RE_ Concurrence Request_ ENGR 1300.pdf
(Concurrence. Owner: Casado,Ana Maria)

Comments

- Distance options have been removed. Updated concurrence from English attached. *(by Quinzon-Bonello,Rosario on 04/28/2022 01:23 PM)*
- - GE course should not be repeatable.
 - Please provide completed DL paperwork <https://ascas.osu.edu/curriculum/distance-courses>
 - Please remove current partial concurrence and upload final concurrence *(by Vankeerbergen,Bernadette Chantal on 04/26/2022 02:35 PM)*

COURSE REQUEST
1300 - Status: PENDING

Last Updated: Quinzon-Bonello,Rosario
04/28/2022

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Casado,Ana Maria	01/31/2022 02:35 PM	Submitted for Approval
Revision Requested	Quinzon-Bonello,Rosario	04/15/2022 03:28 PM	Unit Approval
Submitted	Casado,Ana Maria	04/19/2022 10:44 AM	Submitted for Approval
Approved	Quinzon-Bonello,Rosario	04/21/2022 09:47 AM	Unit Approval
Approved	Quinzon-Bonello,Rosario	04/21/2022 09:47 AM	College Approval
Revision Requested	Vankeerbergen,Bernadette Chantal	04/26/2022 02:41 PM	ASCCAO Approval
Submitted	Casado,Ana Maria	04/28/2022 10:18 AM	Submitted for Approval
Approved	Quinzon-Bonello,Rosario	04/28/2022 01:23 PM	Unit Approval
Approved	Quinzon-Bonello,Rosario	04/28/2022 01:23 PM	College Approval
Pending Approval	Cody,Emily Kathryn Jenkins,Mary Ellen Bigler Hanlin,Deborah Kay Hilty,Michael Vankeerbergen,Bernadette Chantal Steele,Rachel Lea	04/28/2022 01:23 PM	ASCCAO Approval

ENGR 1300: Introduction to Writing for STEM (3 Credit Hours)

Course Syllabus

Course Description / Overview

ENGR 1300 will introduce students to college writing with an emphasis on information literacy and the writing style conventions common to STEM academic and professional fields. Students will learn about rhetorical and stylistic conventions of common STEM writing, such as reports, lightning talks, and posters. Students will also examine STEM-related topics in their field and will identify how these involve professional ethics in professional/public communications. This course will require students to conduct research using multiple search strategies and tools, and to communicate their position on the topic to multiple audiences with varying levels of technical knowledge using writing conventions of the field. Students will evaluate sources for bias and credibility, use multiple sources to create a logical argument, and engage with counter arguments. Students will practice multiple modes of communication, including written assignments and oral presentations combining text, data, and visuals.

Students enrolled in ENGR 1300 will:

- Read and produce common genres in science and engineering
- Explore rhetorical functions and stylistic conventions of scientific and engineering writing
- Create documents to communicate a professional persona as appropriate to their field
- Identify a current controversy or issue in STEM that has an impact on their career
- Read current literature by STEM writers and understand conventions of the field
- Use research to identify a range of sources representing multiple perspectives
- Give and receive peer review of writing and use feedback to revise their writing
- Evaluate sources for credibility and authority
- Identify arguments for and against their own position on the issue
- Create an argument in favor of their position on the issues supported by research while engaging with counter-arguments
- Present the results of their research to their peers
- Combine text, data, and visuals to present information

This course meets The Ohio State University's Writing and Information Literacy General Education requirements as well as specific elements of ABET Criterion 3, detailed below.

OSU Writing & Information Literacy Foundation Goals

1. Successful students will demonstrate skills in effective reading and writing as well as in oral, digital and/or visual communication for a range of purposes, audiences and context.
2. Successful students will develop the knowledge, skills and habits of mind needed for information literacy.

OSU Writing & Information Literacy Foundation Expected Learning Outcomes

Successful students are able to:

- 1.1 Compose and interpret across a wide range of purposes and audiences using writing as well as oral, visual, digital and/or other methods appropriate to the context.
- 1.2 Use textual conventions, including proper attribution of ideas and/or sources, as appropriate to the communication situation.
- 1.3 Generate ideas and informed responses incorporating diverse perspectives and information from a range of sources, as appropriate to the communication situation.
- 1.4 Evaluate social and ethical implications in writing and information literacy practices.
- 2.1 Demonstrate responsible, civil and ethical practices when accessing, using, sharing or creating information.
- 2.2 Locate, identify and use information through context-appropriate search strategies.
- 2.3 Employ reflective and critical strategies to evaluate and select credible and relevant information sources.

ABET Criterion 3 Student Outcomes:

ENGR 1300 supports ABET's Student Outcomes for Engineering programs including:

- Outcome 3: an ability to communicate effectively with a range of audiences
- Outcome 4: an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- Outcome 7: an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Required Course Materials

This course will use open access/open education resources. Sample student reading selections/materials provided below (additional readings to be curated).

- Alley, M. (n.d.). Writing as an engineer or scientist. <https://www.craftofscientificwriting.com/>
- Boyle, J. & Ramsey, S. (2017) Working with data. In *Writing for Science Students*. pp. 87-110. Palgrave.
- Caulfield, M. (2020). *Check, please! Web fact checking for students*.
<https://www.notion.so/checkpleasecc/Check-Please-Starter-Course-ae34d043575e42828dc2964437ea4eed>
- The Critical Engineering Working Group. (2021). *Critical engineering manifesto*.
<https://criticalengineering.org/>
- Gopen, G.D. & Swan, J.A. (1990). The science of scientific writing. *American Scientist*.
<https://www.americanscientist.org/blog/the-long-view/the-science-of-scientific-writing>

- Last, S. (2019). *Technical writing essentials*. <https://pressbooks.bccampus.ca/technicalwriting/>
- Purugganan, M. & Hewitt, J. (n.d.). How to read a scientific article. Cain Project in Engineering and Professional Communication. <https://www.owl.net.rice.edu/~cainproj/courses/HowToReadSciArticle.pdf>
- Reeves, C. (2005). Language. *The Language of Science*. Routledge.
- Reeves, C. (2005). The experimental report in science. *The Language of Science*. Routledge.
- Reeves, C. (2005). Translators of science and their motives. *The Language of Science*. Routledge.
- University Libraries. (2019). *Choosing and using sources*. <https://ohiostate.pressbooks.pub/choosingsources/front-matter/introduction/>
- Wahlin, L. (n.d.). Fundamentals of Engineering Technical Communications: A Resource & Writing Guide for the Fundamentals of Engineering Program. <https://ohiostate.pressbooks.pub/feptechcomm/>
- Wired. *Five levels video series*. <https://www.wired.com/video/series/5-levels>
- World Health Organization. (2021). Public opening panel. Global Conference on Communicating Science During Health Emergencies. <https://youtu.be/fHQugtsARyU>

Course Requirements

This course consists of iterative, scaffolded assignments that focus on both the writing process and final products. Students will complete individual and team/collaborative assignments.

Course Topics & Assignments

General Class Assignments

- Discussion Board Posts/Replies: Each week students must compose a brief post in response to a reflective prompt and respond to their peers' posts. Posts will demonstrate comprehension of the weekly subject matter.
- Peer Review/Response (Process)
 - Draft Submission: All major assignments will require at least one draft version submitted for peer review. Students will learn the importance of revision in writing and use feedback to improve their work.
 - Peer Review of Writing: To increase collaboration and team learning, students will review peers' work using a guided process focused on sandwich approach for feedback (strengths, constructive criticisms, and strengths).
- Fact Checking Notebook: following the process outlined in *Check, Please!* Students will maintain a fact checking notebook for the semester's various activities and assignments.
- Scientific and Technical Communication Style Exercise Series: Students will practice analyzing scientific and technical writing and revising for effective technical communication style and scientific communication writing style.
- In-Class Activities: Time in class will be composed of lectures as needed and active learning. For example: polls, brainstorming for major assignments, writing-related exercises (focus on

concision, coherence, and clarity, including prepositions, word location and choice, information patterns)

Understanding and Analyzing Scientific and Technical Communication Writing Style

- IMRAD Paper Analysis: Students will analyze rhetorical and linguistic structures and patterns of an IMRAD paper and produce a written summary of their analysis.
- IMRAD Paper Revision: Students will analyze an IMRAD report for rhetorical and linguistic structures and patterns conventional to effective scientific communication; students will produce a revision of one section and write an analysis of the rationale for their choices in the context of effective scientific communication
- Writing about Data Lab Memo: Students will analyze demographic and institutional data from the OSU College of Arts and Sciences and the OSU College of Engineering, to draw conclusions about trends in their disciplinary area. Students will produce a lab memo targeting high school science and math teachers from their high schools using two additional sources to support the discussion of their data analyses. Students will create and include a unique table or figure to support the written portion of the memo.

Identifying/Exploring Issues in STEM

- Topic Exploration: Students will identify current ethical issues or other challenges within a STEM field at the national or global level, using news and popular sources. Assigned reading will provide examples of current issues and sources, but these might be issues around Augmented Reality; Climate Change-Related Crises and Energy/Engineering Solutions; Big Data, Artificial Intelligence, Data Security and User Privacy. Students will use independent research and class discussion boards to develop a topic statement that reflects their personal interests and perspective and connects to current issues in STEM.
- Topic Development: Students will identify different perspectives on the issue using resources such as Google or similar general search engines and Google Scholar to identify issues, distinguish positions in a national or global STEM issue, and develop a thesis for their project. Students will analyze sources for bias and credibility. They will present their initial thesis along with supporting sources and counterarguments to the class.
- Topic Lightning Talk Presentation: Students will present a Lightning Talk (generally a timed presentation of 3-5 minutes with a set number of slides) to their peers that summarizes/synthesizes information from two sources (to be used in their annotated bibliography assignment).
- Topic Research: Annotated Bibliography: Building on the lightning talk assignment, students will produce an annotated bibliography of sources gathered from University Libraries, Google Scholar, Government publications, and similar databases. Students will analyze sources for bias and assess their credibility. They will use annotations to summarize sources and place them in the context of their research thesis to develop an argument.
- Topic Writing: Investigative Report: Synthesizing information from sources captured in the annotated bibliography, students will develop a research thesis and support an argument targeting a technical audience. The investigative report will use research to define the issue and

characterize its nature, exploring and evaluating sources on the topic to support the description. The investigative report will evaluate the current situation surrounding the issue to identify and evaluate contextual factors influencing its specific causes. Supported by the analysis and evidence from sources, students will make recommendations to address the causes or further understand the issue. Students will include at least one table or figure to support the written portion of the report.

Communicating to STEM Audiences at Various Levels of Technicality

This unit builds on the topic developed in the Investigative Report. Assignments in this unit will require students to consider vocabulary, visual information, formality, and writing complexity in order to communicate technical concepts appropriate for various audiences and purposes. Assignments in this unit will introduce students to the Five Levels of Technicality and require students to communicate to a “Least Technical” / “Slightly Technical” STEM audience.

- Students will develop research questions about a STEM issue in conversation with their peers and the course instructor.
- Communicating Technical Information for Fifth Grade Explainer: Students will use appropriate vocabulary and visuals to explain a technical concept to a “Least Technical” middle school audience using materials developed by the Alan Alda Center for their annual “Explain ___ to an 11-year-old” challenge.
- Poster or Infographic: Students will create a document (format assigned by instructor) that communicates the key findings of their topic research to a “Slightly Technical” audience defined as a University showcase or a student academic conference poster session.
- Individual Presentation for a general audience (inspired by TED Talks)/Podcast episode: This assignment will require students to communicate to a “Slightly Technical” audience. Format to be determined by the instructor.

Sample Course Schedule (Tentative)

Week One: Intro to Rhetorical Foundations & STEM Writing Conventions

Assignments: Discussions and introductions on Carmen

Week Two: Reading and Analyzing Scientific Writing

Assignments: IMRAD Paper Analysis, Scientific Communication Style Exercises

Week Three: Reading and Analyzing Technical Communication

Assignments: IMRAD Paper Revision, Technical Communications Style Exercises

Week Four: Exploring STEM Disciplines and Careers / Finding, understanding, and evaluating Sources

Assignments: Discussion boards, Source Summary, Fact Checking Notebook

Week Four: Working with Data / Finding, understanding, and evaluating Sources

Assignments: Discussion boards, Source Summary, Fact Checking Notebook, Scientific Communication Style Exercises

Week Five: Using Tables and Graphics Effectively and Ethically / Presenting to peers, feedback discussion posts

Assignments: Discussion Posts, Lab Memo Outline, Technical Communication Style Exercises

Week Six: Using Library Research / Writing effective summaries

Assignments: Source worksheets, Fact Checking Notebook, Lab Memo Rough Draft and Peer Review

Week Seven: Identifying Evidence and Deriving Claims / Using a matrix to capture key points from sources

Assignments: Lightning Talk

Week Eight: Evaluating Evidence and Comparing Sources Using a Synthesis Matrix

Assignments: Fact Checking Notebook, Lab Memo Final Draft

Week Nine: Integrating Secondary Source Material / Developing a supported argument

Assignments: Annotation Rough Draft and Peer Review

Week Ten: Persuasive writing / Using format and text organization to create a credible argument

Assignments: Fact Checking Notebook, Annotated Bibliography

Week Eleven: Five Levels of Technicality / Adapting scientific and technical content for various audiences

Assignments: Discussion boards, Investigative Report Rough Draft and Peer Review

Week Twelve: Challenges and Strategies for Communicating with the Public About STEM

Assignments: Fifth Grade explainer, Fact Checking Notebook

Week Thirteen: Visualizing Information in Public Communication

Assignments: Investigative Report Second Draft and Peer Feedback Analysis,

Week Fourteen: Final Presentations/Podcasts and Peer Review/Feedback

Assignments: Final Presentations/podcasts and peer review, Final Fact Checking Notebook, Poster / Infographic Rough Draft

Finals Week:

Poster or Infographic Final Draft

Investigative Report Final Draft

From: [Casado, Ana](#)
To: [Quinzon-Bonello, Rosario](#)
Subject: RE: Concurrence Request: ENGR 1300
Date: Monday, April 25, 2022 1:36:00 PM

No, Lynn Hall asked me to update the concurrence information since English officially gave concurrence.

Ana M. Casado, Ph.D.

Graduate Program Coordinator & Grants Coordinator

Department of Engineering Education, College of Engineering

The Ohio State University

244 Hitchcock Hall (mailbox)

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2070 Neil Ave., Columbus, OH 43210

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President, [Association of Graduate and Professional Administrators](#)

Cultural Committee Leader, [Organization of Latinx/Hispanic Employees](#)

From: Quinzon-Bonello, Rosario <quinzon-bonello.1@osu.edu>

Sent: Monday, April 25, 2022 1:35 PM

To: Casado, Ana <casado.1@osu.edu>

Subject: RE: Concurrence Request: ENGR 1300

Did they send it back for revision since the last time I approved it?

From: Casado, Ana <casado.1@osu.edu>

Sent: Monday, April 25, 2022 1:33 PM

To: Quinzon-Bonello, Rosario <quinzon-bonello.1@osu.edu>

Cc: Hall, Lynn <hall.1812@osu.edu>

Subject: RE: Concurrence Request: ENGR 1300

Hi Rosie,

ENGR 1300 is with Arts & Sciences and I don't see how I can edit it at this point. Do you know if I'm able to? Thanks!

Ana

Ana M. Casado, Ph.D.

Graduate Program Coordinator & Grants Coordinator

Department of Engineering Education, College of Engineering

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President, [Association of Graduate and Professional Administrators](#)

Cultural Committee Leader, [Organization of Latinx/Hispanic Employees](#)

From: Hall, Lynn <hall.1812@osu.edu>
Sent: Sunday, April 24, 2022 2:22 PM
To: Casado, Ana <casado.1@osu.edu>
Cc: Abrams, Lisa <abrams.34@osu.edu>; Tomasko, David <tomasko.1@osu.edu>; Quinzon-Bonello, Rosario <quinzon-bonello.1@osu.edu>
Subject: Fwd: Concurrence Request: ENGR 1300

Ana,

Can you please update the 1300 submission to note concurrence has been received? We can replace the previously attached email thread with this one.

Thanks much!
Lynn

Lynn Hall, Ph.D.
Senior Lecturer | Director, Engineering Technical Communications
Department of Engineering Education
The Ohio State University | College of Engineering
244 Hitchcock Hall | [2070 Neil Avenue](https://www.osu.edu/2070-Neil-Avenue) | [Columbus, OH 43210](https://www.osu.edu/Columbus)
hall.1812@osu.edu
Pronouns: she/her/hers |Honorific: Dr.

From: Hewitt, Elizabeth <hewitt.33@osu.edu>
Sent: Sunday, April 24, 2022 2:08:46 PM
To: Hall, Lynn <hall.1812@osu.edu>; Lang, Susan M. <lang.543@osu.edu>; Casado, Ana <casado.1@osu.edu>
Cc: Williams, Susan S. <williams.488@osu.edu>; Vankeerbergen, Bernadette <vankeerbergen.1@osu.edu>; Teston, Christa B. <teston.2@osu.edu>; DeWitt, Scott <dewitt.18@osu.edu>; Abrams, Lisa <abrams.34@osu.edu>; Froyd, Jeffrey E. <froyd.1@osu.edu>; Tomasko, David <tomasko.1@osu.edu>; Herman, Jennifer <herman.125@osu.edu>; Williams, Susan S. <williams.488@osu.edu>
Subject: Re: Concurrence Request: ENGR 1300

Dear Lynn,

Thank you for your kind patience and for your detailed explanation of the proposed ENGR 1300. While there is some overlap between your course and English 1110, your course's STEM focus is sufficiently different that we have no objections to the course. And, as you explain, because your course is at the introductory level, there is no substantial overlap with our 3304/5 courses.

Once your course works through the approval process, and is on the books, we will look forward to working with you and CAA to make sure that we can coordinate the assessment of all the WIL courses.

Please feel free to get in touch with me if you have any questions. I'll be around all summer.

Best,
beth

Professor Elizabeth Hewitt
Department of English
OSU

From: Hall, Lynn <hall.1812@osu.edu>

Date: Friday, March 25, 2022 at 2:05 PM

To: Hewitt, Elizabeth <hewitt.33@osu.edu>, Lang, Susan M. <lang.543@osu.edu>, Casado, Ana <casado.1@osu.edu>

Cc: Williams, Susan S. <williams.488@osu.edu>, Vankeerbergen, Bernadette <vankeerbergen.1@osu.edu>, Teston, Christa B. <teston.2@osu.edu>, DeWitt, Scott <dewitt.18@osu.edu>, Abrams, Lisa <abrams.34@osu.edu>, Froyd, Jeffrey E. <froyd.1@osu.edu>, Tomasko, David <tomasko.1@osu.edu>, Herman, Jennifer <herman.125@osu.edu>

Subject: Re: Concurrence Request: ENGR 1300

Hi, Beth and everyone. Thank you for your continued review of ENGR 1300—it's much appreciated. I've made comments to your points below.

Point 1: Potential Course Overlap

Given that this is a 1000-level/intro course for the WIL GenEd, we do not foresee any overlap with the English Department's 3000-level courses given that those higher-level courses were developed for more advanced students/students who are interested in the technical writing minor.

Both English 3304 and 3305 list a 1110/WIL Foundations course as a pre-requisite so we see those as much more advanced courses attracting students with a more advanced understanding/aptitude in writing. Given that more advanced approach to technical writing/communication, we imagine English's 3000 courses are substantially different in terms of the level of content, assessment, and pacing than ENGR 1300 which, as a 1000-level course, is focused more on introductory writing/researching at the college level with the STEM/technical writing focus. We don't see this as "substantial curricular duplication" given that difference in level. It could, perhaps, be a pre-requisite/preparatory course if English is interested. We are happy to discuss this further if you'd like.

Point 2: Target Student Audience & Course Function

We imagine the student audience for the course to be mainly COE students and perhaps some students from sciences. ENGR 1300 is a WIL GE Foundations course, which means it would fulfill the WIL Foundations requirement and would be open to any student who wants to take it.

Our guess is that students taking this course are unlikely to be the same as the target student audience for English's 3000-level technical writing courses or the professional writing minor.

The GE curriculum committee would evaluate this, but we designed this course and are developing it specifically to meet GE Foundations WIL outcomes and expectations.

Point 3: ELO 1.3

ELO 1.3 is “Generate ideas and informed responses incorporating diverse perspectives and information from a range of sources, as appropriate to the communication situation.” We will be working with/guiding students through finding, evaluating, analyzing, synthesizing, and incorporating appropriate sources and will have lectures, readings, activities, and assignments specifically dedicated to this. This particular section of our syllabus under *Identifying/Exploring Issues in STEM* (Page 4) might be what you are looking for:

Topic Exploration: Students will identify current ethical issues or other challenges within a STEM field at the national or global level, using news and popular sources. Assigned reading will provide examples of current issues and sources, but these might be issues around Augmented Reality; Climate Change-Related Crises and Energy/Engineering Solutions; Big Data, Artificial Intelligence, Data Security and User Privacy. Students will use independent research and class discussion boards to develop a topic statement that reflects their personal interests and perspective and connects to current issues in STEM.

Topic Development: Students will identify different perspectives on the issue using resources such as Google or similar general search engines and Google Scholar to identify issues, distinguish positions in a national or global STEM issue, and develop a thesis for their project. Students will analyze sources for bias and credibility. They will present their initial thesis along with supporting sources and counterarguments to the class.

Students will engage with a range of sources, including IMRAD reports, demographic and institutional reports, writing and information literacy related readings, podcasts and popular sources, and academic sources and will be completing assignments for a range of audiences. Students will be exploring a range of perspectives on topics outlined above and we believe these topics can't be fully discussed without including diverse perspectives (who is developing/deploying technology, who is impacted and how, etc.).

As an FYI, the reading list included in the syllabus draft is in progress and we plan to work more on this list and related in-class lectures/activities as part of curricular development for the course. Students will engage with a diverse range of readings (both topical and writing-related).

Point 4: OT36

Thank you for this information. This is certainly something to keep in mind/evaluate once the course is through approvals and in the catalog.

I hope this adds clarity and addresses your concerns.

I have added our EED leadership, Lisa Abrams and Jeff Froyd and our curricular dean, David Tomasko to the list of CCs. I'm also adding Jennifer Herman, who did extensive work in revising the ENGR 1300 syllabus to address your initial concerns from February 24th.

Please let me know what additional information you need to continue your evaluation for concurrence. Jennifer and I would be happy to meet with any/all of you if it helps with your review.

Lynn

From: Hewitt, Elizabeth <hewitt.33@osu.edu>
Date: Monday, March 14, 2022 at 2:41 PM
To: Hall, Lynn <hall.1812@osu.edu>, Lang, Susan M. <lang.543@osu.edu>, Casado, Ana <casado.1@osu.edu>
Cc: Williams, Susan S. <williams.488@osu.edu>, Vankeerbergen, Bernadette <vankeerbergen.1@osu.edu>, Teston, Christa B. <teston.2@osu.edu>, DeWitt, Scott <dewitt.18@osu.edu>
Subject: Re: Concurrence Request: ENGR 1300

Dear Lynn,

Thank you very much for sending on further information about the proposed course, and I also want to apologize for taking so long to get back to you. Because so many things are changing with writing instruction under the new GE, I wanted to consult with a range of people—especially faculty in the English department who regularly teach and administrate our writing courses and programs. I have shared the new material you provided with a number of my colleagues to get their feedback. Here are some of our thoughts and concerns.

1. We do not think that this course replicates our own WIL Foundation course (English 1110), but it does have overlap with our higher-level courses in Professional & Business and Technical Writing (English 3304 and 3305). These courses are more advanced than your proposed ENGR 1300, but because there is substantial curricular duplication, we wonder if it makes sense to discuss the relationship between these courses.
1. Is ENGR 1300 targeted specifically at students in the College of Engineering? Or, since it is a GE class, can any undergraduate across the university take the course? If the former, then is it a class that fulfills the function of a general education curriculum?
2. The English department no longer has any supervisory role in GE foundational classes in WIL, but we are concerned that the syllabus does not address ELO 1.3.
3. This course will not be approved as a first writing course with the OT36, which means that its credit will not be automatically transferred to other Ohio universities. This may be an issue

that you will want to consider.

Because of these questions and concerns, we do not yet feel ready to offer concurrence to the proposed course. But we would welcome an opportunity to talk with you and Susan Lang about the proposal. I've also cc'ed two of our faculty specialists in writing and composition (Christa Teston and Scott DeWitt), the chair of English (Susan Williams), and the Assistant Dean for Curriculum at the College of Arts and Sciences (Bernadette Vankeerbergen) with whom I've been in consultation, since they will be useful to this broader conversation about writing instruction in the new GE.

I will look forward to speaking with you more,
beth

Elizabeth Hewitt

Professor of English & Director of Undergraduate Studies
530 Denney Hall
Ohio State University
164 Annie & John Glenn Avenue
Columbus, OH 43210

From: Hall, Lynn <hall.1812@osu.edu>

Date: Monday, March 7, 2022 at 3:40 PM

To: Lang, Susan M. <lang.543@osu.edu>, Casado, Ana <casado.1@osu.edu>, Hewitt, Elizabeth <hewitt.33@osu.edu>

Subject: Re: Concurrence Request: ENGR 1300

Hello, Beth and Susan.

As requested, I'm attaching a more detailed version of the syllabus. I hope this gives you a better sense of the topics, assignments, readings, and writing pedagogy practices for the course. We are approaching this course as a foundations WIL course focused on STEM topics and writing style.

With respect to the instructors teaching the course, the Engineering Technical Communications program faculty would be teaching. We have a range of teaching and professional backgrounds and all of us are current instructors of ENGR 2367 (which we approach as a writing course, not as a content course with writing—I know that's been a concern with some versions of 2367s in the past). Three of us have been with OSU in our current teaching roles (and have been teaching ENGR 2367) since 2012. Two of our faculty hold PhDs from OSU's English Department. My PhD is in English from Miami University (Ohio). Aside from degrees, all of us have training in, among other areas: rhetoric, composition, and the teaching of writing. We regularly participate in professional development in these areas. Any new hires to our programmatic area in the Engineering Education Department would be expected to have similar combinations of educational degrees, backgrounds, and or experiences.

Please let me know if I can provide any additional information. Thank you for your time and review of the course.

Lynn



Lynn Hall, Ph.D.

Senior Lecturer | Director, Engineering Technical Communications

Department of Engineering Education

The Ohio State University | College of Engineering

244 Hitchcock Hall | 2070 Neil Avenue | Columbus, OH 43210

hall.1812@osu.edu

Pronouns: she/her/hers | Honorific: Dr.

From: Lang, Susan M. <lang.543@osu.edu>

Date: Friday, March 4, 2022 at 10:30 AM

To: Hall, Lynn <hall.1812@osu.edu>, Casado, Ana <casado.1@osu.edu>, Hewitt, Elizabeth <hewitt.33@osu.edu>

Subject: RE: Concurrence Request: ENGR 1300

Thanks, Lynn!

Susan

From: Hall, Lynn <hall.1812@osu.edu>

Sent: Friday, March 4, 2022 10:29 AM

To: Casado, Ana <casado.1@osu.edu>; Lang, Susan M. <lang.543@osu.edu>; Hewitt, Elizabeth <hewitt.33@osu.edu>

Subject: Re: Concurrence Request: ENGR 1300

Good morning, all. I should have the more detailed syllabus and additional requested information about credentials to you by end of day Monday (at latest).

Lynn

From: Casado, Ana <casado.1@osu.edu>

Date: Friday, March 4, 2022 at 10:22 AM

To: Lang, Susan M. <lang.543@osu.edu>, Hewitt, Elizabeth <hewitt.33@osu.edu>

Cc: Hall, Lynn <hall.1812@osu.edu>

Subject: RE: Concurrence Request: ENGR 1300

Good morning,

I've copied the course director here, who said she would be able to send what you need.

Ana M. Casado, Ph.D.

Graduate Program Coordinator & Grants Coordinator

Department of Engineering Education, College of Engineering

The Ohio State University

244 Hitchcock Hall (mailbox)

225 Hitchcock Hall (office)

2070 Neil Ave., Columbus, OH 43210

(614) 688-3166

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President, [Association of Graduate and Professional Administrators](#)

Cultural Committee Leader, [Organization of Latinx/Hispanic Employees](#)

From: Lang, Susan M. <lang.543@osu.edu>

Sent: Friday, March 4, 2022 10:18 AM

To: Casado, Ana <casado.1@osu.edu>; Hewitt, Elizabeth <hewitt.33@osu.edu>

Subject: RE: Concurrence Request: ENGR 1300

Have you sent a full syllabus and other information, Ana? I don't seem to have anything else.

Susan



Susan M. Lang, Ph.D.

Director, Center for the Study and Teaching of Writing

Professor of English

4132C Smith Lab

174 W. 18th Ave.

Columbus Ohio 43210

From: Casado, Ana <casado.1@osu.edu>

Sent: Thursday, February 24, 2022 10:20 AM

To: Hewitt, Elizabeth <hewitt.33@osu.edu>; Lang, Susan M. <lang.543@osu.edu>

Subject: RE: Concurrence Request: ENGR 1300

Hi Elizabeth,

Thanks so much for getting back to me. I've spoken to the instructor, who suggested I attach this form here that may provide more information. If your department would like more detail, we can amend the syllabus again. I'll get back in touch with you soon regarding training of instructors.

Best,

Ana

Ana M. Casado, Ph.D.

Graduate Program Coordinator & Grants Coordinator

Department of Engineering Education, College of Engineering

The Ohio State University

244 Hitchcock Hall (mailbox)

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Cultural Committee Leader, [Organization of Latinx/Hispanic Employees](#)

From: Hewitt, Elizabeth <hewitt.33@osu.edu>

Sent: Thursday, February 24, 2022 9:21 AM

To: Casado, Ana <casado.1@osu.edu>

Cc: Lang, Susan M. <lang.543@osu.edu>

Subject: Concurrence Request: ENGR 1300

dear Ana,

Your email requesting concurrence for the course ENGR 1300, Introduction to Writing for STEM was directed to me. It took a little bit of time, because the person who used to handle all concurrence requests has recently retired and I'm relatively new to my position as director of undergraduate studies. But thank you for reaching out to the department.

Right now, the syllabus is a bit too undetailed for us to determine whether the course duplicates our own offerings and if it meets the requirements and standards of writing instruction at OSU. Could you provide a more robust syllabus that includes details of a) classroom assignments; b) readings; and c) writing assignments. We would also like to know plans for training of instructors to teach this dedicated writing course.

I am cc'ing Susan Lang, director of the Center for the Study and Teaching of Writing, on this email, since CSTW has been working with other departments in designing writing courses. I'm certain they will be helpful to your course development.

Please send a new syllabus back to me once you have developed it, as I can be the contact person in English for concurrence requests from now on. And, of course, please reach out if you have any questions.

Sincerely,
beth

Elizabeth Hewitt

Professor of English & Director of Undergraduate Studies

530 Denney Hall

Ohio State University
164 Annie & John Glenn Avenue
Columbus, OH 43210

GE Foundation Courses

Overview

Courses that are accepted into the General Education (GE) Foundations provide introductory or foundational coverage of the subject of that category. Additionally, each course must meet a set of Expected Learning Outcomes (ELO). Courses may be accepted into more than one Foundation, but ELOs for each Foundation must be met. It may be helpful to consult your Director of Undergraduate Studies or appropriate support staff person as you develop and submit your course.

This form contains sections outlining the ELOs of each Foundation category. You can navigate between them using the Bookmarks function in Acrobat. Please enter text in the boxes to describe how your class meets the ELOs of the Foundation(s) to which it applies. Because this document will be used in the course review and approval process, you should use language that is clear and concise and that colleagues outside of your discipline will be able to follow. Please be as specific as possible, listing concrete activities, specific theories, names of scholars, titles of textbooks etc. Your answers will be evaluated in conjunction with the syllabus submitted for the course.

Accessibility

If you have a disability and have trouble accessing this document or need to receive the document in another format, please reach out to Meg Daly at daly.66@osu.edu or call 614-247-8412.

GE Rationale: Foundations: Writing and Information Literacy (3 credits)

Requesting a GE category for a course implies that the course fulfills **all** expected learning outcomes (ELOs) of that GE category. To help the reviewing panel evaluate the appropriateness of your course for the Foundations: Writing and Information Literacy, please answer the following questions for each ELO.

A. Foundations

Please explain in 50-500 words why or how this course is introductory or foundational in the study of Writing and Information Literacy.

Students enrolled in ENGR1300 will learn about and practice information literacy skills. Our approach will align with the information literacy framework outlined by the Association of College and Research Libraries. These frames are: (1) Authority Is Constructed and Contextual, (2) Information Creation as a Process, (3) Information Has Value, (4) Research as Inquiry, (5) Scholarship as Conversation, and (6) Searching as Strategic Exploration). Within this framework, and with a focus on current issues in STEM, students will guide students through learning about and practicing sound research, including:

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developing research questions/planning research, conducting research and evaluating a wide range of sources.

Students will also learn how to integrate sources—through summary, paraphrasing, and citation—in order to effectively support claims in their writing/communication.

The course is both scaffolded and iterative in nature, with students building on and adding to their skills as we move through the semester, creating a foundation they can apply to future academic and professional communication scenarios.

Assignments and activities will be structured to engage the research and source evaluation process as essential to the process of writing. Students will be introduced to and use the writing process to develop their ideas and drafts (brainstorming, planning, drafting, evaluating through peer response, evaluating and using peer response feedback to guide revision, and editing)

Students will be introduced to and apply rhetorical strategy to communicate about current issues in STEM (focusing on audience and purpose). Students will be introduced to stylistic conventions of scientific and technical writing and consider their role in constructing effective communication for appropriate audiences. Students will produce communications attentive to a variety of genres common to STEM fields and using multiple communication modes (oral, written, and multimedia)

B. Specific Goals of Writing and Information Literacy

GOAL 1: Successful students will demonstrate skills in effective reading, and writing, as well as oral, digital, and/or visual communication for a range of purposes, audiences, and context.

Expected Learning Outcome 1.1: Successful students are able to compose and interpret across a wide range of purposes and audiences using writing, as well as oral, visual, digital and/or other methods appropriate to the context.

Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. Explain how the course includes opportunities for feedback on writing and revision. Furthermore, please describe how you plan to insure sufficiently low instructor-student ratio to provide efficient instruction and feedback. (50-700 words)

Course-level goals are outlined as A-L below. Course assignments are listed with the course-level goal(s) designated in parentheses behind each assignment. As demonstrated in this mapping, students will use multiple communication modes across assignments to meet the course goals and Goal 1 / ELO 1.1.

- A. Read and produce common genres in science and engineering
- B. Explore rhetorical functions and stylistic conventions of scientific and engineering writing
- C. Create documents to communicate a professional persona as appropriate to their field
- D. Identify a current controversy or issue in STEM that has an impact on their career
- E. Read current literature by STEM writers and understand conventions of the field
- F. Use research to identify a range of sources representing multiple perspectives
- G. Give and receive peer review of writing and use feedback to revise their writing
- H. Evaluate sources for credibility and authority
- I. Identify arguments for and against their own position on the issue

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- J. Create an argument in favor of their position on the issues supported by research while engaging with counter-arguments
- K. Present the results of their research to their peers
- L. Combine text, data, and visuals to present information

Class writing assignments are both informal and formal. Assignments include:

- Students will write and reply to topical reading using LMS discussion boards as a way of extending in-class work and discussions (A-B; D-E);
- Students will maintain a fact checking notebook (process outlined in *Check, Please!* resource) that documents their journey through SIFT (Stop, Investigate the Source, Find Better Coverage, Trace Claims, Quotes and Media to the Original Context) source investigation (E-F; H-J);
- Students will complete Scientific and Technical Communication Style Exercise Series (B)
- Students will find an IMRAD paper, read and analyze for linguistic structures/patterns, produce a summary of their analysis, and revise one section of their chosen IMRAD paper. The final step in this assignment sequence will be a summary and analysis justifying their revisions (A-B; E; G; L)
- Students will produce a Data Lab Memo, reading and evaluating reports on career data and demographics in their field; they will use data to interpret trends and support interpretations with sources on the topic of demographics and career success in their discipline. Students will compose a memo report addressing high school science and math teachers, presenting a central claim developed through their evaluation and analysis of the data and secondary sources. (A-C; F-I; L)
- Students will develop and present a timed Lightning Talk to their peers that summarizes information from two sources to identify and explore a topic in STEM (sources will be used in annotated bibliography and larger investigative report) (A; F; H-I; K)
- Building on the research of the Lightning Talk, students will produce an Annotated Bibliography to summarize and evaluate sources and their connections to develop and support a central claim (D-F; H-J; L)
- Students will produce an Investigative Report that synthesizes sources from the annotated bibliography into a research-supported argument for a technical audience. (A-L)
- Students will develop research questions about a STEM issue, develop research questions and conduct research on that issue. Research will be used to communicate information to a range of audiences (A-L):
 - Produce a Poster or Infographic for a less technical audience (A-L)
 - Individual Presentation to a general audience. Students will develop a presentation on their chosen STEM topic to a “slightly technical” audience (A-L)

For all of the assignments above, students will actively engage in the writing process, individually and collaboratively. Students will draft iteratively and revise based on feedback from peers and the instructor.

Class resources (readings, lectures, activities) will be designed to support students in meeting the course goals.

Enrollment in the course will be capped at 24 students.

Expected Learning Outcome 1.2: Successful students are able to use textual conventions, including proper attribution of ideas and/or source, as appropriate to the communication situation. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. Is an appropriate text, writing manual, or other resource about the pedagogy of effective communication being used in the course? (50-700 words)

Course Goals:

- A. Read and produce common genres in science and engineering
- E. Read current literature by STEM writers and understand conventions of the field
- F. Use research to identify a range of sources representing multiple perspectives
- H. Evaluate sources for credibility and authority
- I. Identify arguments for and against their own position on the issue
- J. Create an argument in favor of their position on the issues supported by research while engaging with counter-arguments
- L. Combine text, data, and visuals to present information

This course will rely on Open Education Resources (OER), a selection of which is noted on the syllabus. All of the assignments in the course are designed to build student skill in textual conventions and a rhetorical (audience, purpose, context) approach to the same. Students will read and analyze the work of others in addition to conducting their own research. Assignments specific to this ELO include (course goals engaged noted in parenthesis):

- Students will maintain a fact checking notebook (process outlined in *Check, Please!* resource) that documents their journey through SIFT (Stop, Investigate the Source, Find Better Coverage, Trace Claims, Quotes and Media to the Original Context) source investigation (E-F; H-J);
- Students will find an IMRAD paper, read and analyze for linguistic structures/patterns, produce a summary of their analysis, and revise one section of their chosen IMRAD paper. The final step in this assignment sequence will be a summary and analysis justifying their revisions (A-B; E; G; L)
- Students will produce a Data Lab Memo, reading and evaluating reports on career data and demographics in their field; they will use data to interpret trends and support interpretations with sources on the topic of demographics and career success in their discipline. Students will compose a memo report addressing high school science and math teachers, presenting a central claim developed through their evaluation and analysis of the data and secondary sources. (A-C; F-I; L)
- Students will develop and present a timed Lightning Talk to their peers that summarizes information from two sources to identify and explore a topic in STEM (sources will be used in annotated bibliography and larger investigative report) (A; F; H-I; K)
- Building on the research of the Lightning Talk, students will produce an Annotated Bibliography to summarize and evaluate sources and their connections to develop and support a central claim (D-F; H-J; L)
- Students will produce an Investigative Report that synthesizes sources from the annotated bibliography into a research-supported argument for a technical audience. (A-L)
- Students will develop research questions about a STEM issue, develop research questions and conduct research on that issue. Research will be used to communicate information to a range of audiences (A-L):
 - Produce a Poster or Infographic for a less technical audience (A-L)
 - Individual Presentation to a general audience. Students will develop a presentation on their chosen

STEM topic to a “slightly technical” audience (A-L)

Expected Learning Outcome 1.3: Successful students are able to generate ideas and informed responses incorporating diverse perspectives and information from a range of sources, as appropriate to the communication situation. 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 Goals

- A. Read and produce common genres in science and engineering
- D. Identify a current controversy or issue in STEM that has an impact on their career
- E. Read current literature by STEM writers and understand conventions of the field
- F. Use research to identify a range of sources representing multiple perspectives
- F. Evaluate sources for credibility and authority
- H. Identify arguments for and against their own position on the issue
- I. Create an argument in favor of their position on the issues supported by research while engaging with counter-arguments
- K. Present the results of their research to their peers
- L. Combine text, data, and visuals to present information

Course materials (topical and writing-related readings) will be from a diverse authorship. Additionally, students will be conducting research on issues in STEM and will be asked to find, review/analyze, and discuss sources on that issue from multiple perspectives. Specific assignments include:

- Students will maintain a fact checking notebook (process outlined in *Check, Please!* resource) that documents their journey through SIFT (Stop, Investigate the Source, Find Better Coverage, Trace Claims, Quotes and Media to the Original Context) source investigation (E-F; H-J);
- Students will find an IMRAD paper, read and analyze for linguistic structures/patterns, produce a summary of their analysis, and revise one section of their chosen IMRAD paper. The final step in this assignment sequence will be a summary and analysis justifying their revisions (A-B; E; G; L)
- Students will produce a Data Lab Memo, reading and evaluating reports on career data and demographics in their field; they will use data to interpret trends and support interpretations with sources on the topic of demographics and career success in their discipline. Students will compose a memo report addressing high school science and math teachers, presenting a central claim developed through their evaluation and analysis of the data and secondary sources. (A-C; F-I; L)
- Students will develop and present a timed Lightning Talk to their peers that summarizes information from two sources to identify and explore a topic in STEM (sources will be used in annotated bibliography and larger investigative report) (A; F; H-I; K)
- Building on the research of the Lightning Talk, students will produce an Annotated Bibliography to summarize and evaluate sources and their connections to develop and support a central claim (D-F; H-J; L)
- Students will produce an Investigative Report that synthesizes sources from the annotated bibliography into a research-supported argument for a technical audience. (A-L)
- Students will develop research questions about a STEM issue, develop research questions and conduct research on that issue. Research will be used to communicate information to a range of audiences (A-L):
 - Produce a Poster or Infographic for a less technical audience (A-L)
 - Individual Presentation to a general audience. Students will develop a presentation on their chosen

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STEM topic to a “slightly technical” audience (A-L)

Expected Learning Outcome 1.4: Successful students are able to evaluate social and ethical implications in writing and information literacy practices. Please link this ELO to the course goals and topics and indicate *specific* activities/ assignments through which it will be met. (50-700 words)

As noted above, students enrolled in ENGR1300 will learn about and practice information literacy skills. Our approach will align with the information literacy framework outlined by the Association of College and Research Libraries. These frames are: (1) Authority Is Constructed and Contextual, (2) Information Creation as a Process, (3) Information Has Value, (4) Research as Inquiry, (5) Scholarship as Conversation, and (6) Searching as Strategic Exploration). The social and ethical implications of information literacy and writing/communication are embedded within these frames and will be discussed/explored with students through lectures and homework readings as part of sound and ethical research and communication practices. The course will also cover citation practices and students will practice citation in all assignments where outside sources are required.

Course Goals:

- A. Read and produce common genres in science and engineering
 - B. Explore rhetorical functions and stylistic conventions of scientific and engineering writing
 - C. Create documents to communicate a professional persona as appropriate to their field
 - E. Read current literature by STEM writers and understand conventions of the field
 - F. Use research to identify a range of sources representing multiple perspectives
 - F. Evaluate sources for credibility and authority
 - H. Identify arguments for and against their own position on the issue
 - I. Create an argument in favor of their position on the issues supported by research while engaging with counter-arguments
 - K. Present the results of their research to their peers
 - L. Combine text, data, and visuals to present information
- Students will write and reply to topical reading using LMS discussion boards as a way of extending in-class work and discussions (A-B; D-E).
 - Students will maintain a fact checking notebook (process outlined in *Check, Please!* resource) that documents their journey through SIFT (Stop, Investigate the Source, Find Better Coverage, Trace Claims, Quotes and Media to the Original Context) source investigation (E-F; H-J);
 - Students will find an IMRAD paper, read and analyze for linguistic structures/patterns, produce a summary of their analysis, and revise one section of their chosen IMRAD paper. The final step in this assignment sequence will be a summary and analysis justifying their revisions (A-B; E; G; L)
 - Students will produce a Data Lab Memo, reading and evaluating reports on career data and demographics in their field; they will use data to interpret trends and support interpretations with sources on the topic of demographics and career success in their discipline. Students will compose a memo report addressing high school science and math teachers, presenting a central claim developed through their evaluation and analysis of the data and secondary sources. (A-C; F-I; L)
 - Students will develop and present a timed Lightning Talk to their peers that summarizes information from two sources to identify and explore a topic in STEM (sources will be used in annotated bibliography and larger

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investigative report) (A; F; H-I; K)

- Building on the research of the Lightning Talk, students will produce an Annotated Bibliography to summarize and evaluate sources and their connections to develop and support a central claim (D-F; H-J; L)
- Students will produce an Investigative Report that synthesizes sources from the annotated bibliography into a research-supported argument for a technical audience. (A-L)
- Students will develop research questions about a STEM issue, develop research questions and conduct research on that issue. Research will be used to communicate information to a range of audiences (A-L):
 - Produce a Poster or Infographic for a less technical audience (A-L)
 - Individual Presentation to a general audience. Students will develop a presentation on their chosen STEM topic to a “slightly technical” audience (A-L)

GOAL 2: Successful students will develop the knowledge, skills, and habits of mind needed for information literacy.

Expected Learning Outcome 2.1: Successful students are able to demonstrate responsible, civil, and ethical practices when accessing, using, sharing, or creating information. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. (50-700 words)

As noted above, students enrolled in ENGR1300 will learn about and practice information literacy skills. Our approach will align with the information literacy framework outlined by the Association of College and Research Libraries. These frames are: (1) Authority Is Constructed and Contextual, (2) Information Creation as a Process, (3) Information Has Value, (4) Research as Inquiry, (5) Scholarship as Conversation, and (6) Searching as Strategic Exploration). Within this framework, students will learn (via readings, lectures, and class discussion) and then demonstrate (through scaffolded assignments) responsible, civil, and ethical practices noted by this ELO. The course will also cover citation practices and students will practice citation in all assignments where outside sources are required.

Course Goals:

- A. Read and produce common genres in science and engineering
- B. Explore rhetorical functions and stylistic conventions of scientific and engineering writing
- C. Create documents to communicate a professional persona as appropriate to their field
- E. Read current literature by STEM writers and understand conventions of the field
- F. Use research to identify a range of sources representing multiple perspectives
- F. Evaluate sources for credibility and authority
- H. Identify arguments for and against their own position on the issue
- I. Create an argument in favor of their position on the issues supported by research while engaging with counter-arguments
- K. Present the results of their research to their peers
- L. Combine text, data, and visuals to present information

- Students will write and reply to topical reading using LMS discussion boards as a way of extending in-class

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work and discussions (A-B; D-E).

- Students will maintain a fact checking notebook (process outlined in *Check, Please!* resource) that documents their journey through SIFT (Stop, Investigate the Source, Find Better Coverage, Trace Claims, Quotes and Media to the Original Context) source investigation (E-F; H-J);
- Students will find an IMRAD paper, read and analyze for linguistic structures/patterns, produce a summary of their analysis, and revise one section of their chosen IMRAD paper. The final step in this assignment sequence will be a summary and analysis justifying their revisions (A-B; E; G; L)
- Students will produce a Data Lab Memo, reading and evaluating reports on career data and demographics in their field; they will use data to interpret trends and support interpretations with sources on the topic of demographics and career success in their discipline. Students will compose a memo report addressing high school science and math teachers, presenting a central claim developed through their evaluation and analysis of the data and secondary sources. (A-C; F-I; L)
- Students will develop and present a timed Lightning Talk to their peers that summarizes information from two sources to identify and explore a topic in STEM (sources will be used in annotated bibliography and larger investigative report) (A; F; H-I; K)
- Building on the research of the Lightning Talk, students will produce an Annotated Bibliography to summarize and evaluate sources and their connections to develop and support a central claim (D-F; H-J; L)
- Students will produce an Investigative Report that synthesizes sources from the annotated bibliography into a research-supported argument for a technical audience. (A-L)
- Students will develop research questions about a STEM issue, develop research questions and conduct research on that issue. Research will be used to communicate information to a range of audiences (A-L):
 - Produce a Poster or Infographic for a less technical audience (A-L)
 - Individual Presentation to a general audience. Students will develop a presentation on their chosen STEM topic to a “slightly technical” audience (A-L)

Assignments will require class members to engage with a variety of sources and to analyze them for bias, reliability, and misinformation. Class lectures, readings, and discussions will have students discuss the role of misinformation and bias in public and professional communication.

Expected Learning Outcome 2.2: Successful students are able to locate, identify and use information through context appropriate search strategies. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. (50-700 words)

As noted above, students enrolled in ENGR1300 will learn about and practice information literacy skills. Our approach will align with the information literacy framework outlined by the Association of College and Research Libraries. These frames are: (1) Authority Is Constructed and Contextual, (2) Information Creation as a Process, (3) Information Has Value, (4) Research as Inquiry, (5) Scholarship as Conversation, and (6) Searching as Strategic Exploration). Within this framework, students will learn (via readings, lectures, and class discussion) and then demonstrate (through scaffolded assignments) responsible, civil, and ethical practices noted by this ELO. The course will also cover citation practices and students will practice citation in all assignments where outside sources are required.

Course Goals:

F. Use research to identify a range of sources representing multiple perspectives

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F. Evaluate sources for credibility and authority

H. Identify arguments for and against their own position on the issue

I. Create an argument in favor of their position on the issues supported by research while engaging with counter-arguments

K. Present the results of their research to their peers

L. Combine text, data, and visuals to present information

- Students will write and reply to topical reading using LMS discussion boards as a way of extending in-class work and discussions (A-B; D-E).
- Students will maintain a fact checking notebook (process outlined in *Check, Please!* resource) that documents their journey through SIFT (Stop, Investigate the Source, Find Better Coverage, Trace Claims, Quotes and Media to the Original Context) source investigation (E-F; H-J);
- Students will find an IMRAD paper, read and analyze for linguistic structures/patterns, produce a summary of their analysis, and revise one section of their chosen IMRAD paper. The final step in this assignment sequence will be a summary and analysis justifying their revisions (A-B; E; G; L)
- Students will produce a Data Lab Memo, reading and evaluating reports on career data and demographics in their field; they will use data to interpret trends and support interpretations with sources on the topic of demographics and career success in their discipline. Students will compose a memo report addressing high school science and math teachers, presenting a central claim developed through their evaluation and analysis of the data and secondary sources. (A-C; F-I; L)
- Students will develop and present a timed Lightning Talk to their peers that summarizes information from two sources to identify and explore a topic in STEM (sources will be used in annotated bibliography and larger investigative report) (A; F; H-I; K)
- Building on the research of the Lightning Talk, students will produce an Annotated Bibliography to summarize and evaluate sources and their connections to develop and support a central claim (D-F; H-J; L)
- Students will produce an Investigative Report that synthesizes sources from the annotated bibliography into a research-supported argument for a technical audience. (A-L)
- Students will develop research questions about a STEM issue, develop research questions and conduct research on that issue. Research will be used to communicate information to a range of audiences (A-L):
 - Produce a Poster or Infographic for a less technical audience (A-L)
 - Individual Presentation to a general audience. Students will develop a presentation on their chosen STEM topic to a “slightly technical” audience (A-L)

Assignments in the class will require students to use increasingly rigorous search strategies and information literacy skills to engage with issues in STEM.

Expected Learning Outcome 2.3: Successful students are able to employ reflective and critical strategies to evaluate and select credible and relevant information sources. Please link this ELO to the course goals and topics and indicate *specific* activities/assignments through which it will be met. (50-700 words)

As noted above, students enrolled in ENGR1300 will learn about and practice information literacy skills. Our approach will align with the information literacy framework outlined by the Association of College and Research Libraries. These frames are: (1) Authority Is Constructed and Contextual, (2) Information Creation as a Process, (3) Information Has Value, (4) Research as Inquiry, (5) Scholarship as Conversation, and (6) Searching as Strategic Exploration). Within this framework, students will learn (via readings, lectures, and class discussion) and then demonstrate (through scaffolded

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assignments) through their choices this reflective and critical engagement with appropriate sources.

Class writing assignments are both informal and formal. Assignments include:

- Students will write and reply to topical reading using LMS discussion boards as a way of extending in-class work and discussions (A-B; D-E);
- Students will maintain a fact checking notebook (process outlined in Check, Please! resource) that documents their journey through SIFT (Stop, Investigate the Source, Find Better Coverage, Trace Claims, Quotes and Media to the Original Context) source investigation (E-F; H-J);
- Students will find an IMRAD paper, read and analyze for linguistic structures/patterns, produce a summary of their analysis, and revise one section of their chosen IMRAD paper. The final step in this assignment sequence will be a summary and analysis justifying their revisions (A-B; E; G; L)
- Students will produce a Data Lab Memo, reading and evaluating reports on career data and demographics in their field; they will use data to interpret trends and support interpretations with sources on the topic of demographics and career success in their discipline. Students will compose a memo report addressing high school science and math teachers, presenting a central claim developed through their evaluation and analysis of the data and secondary sources. (A-C; F-I; L)
- Students will develop and present a timed Lightning Talk to their peers that summarizes information from two sources to identify and explore a topic in STEM (sources will be used in annotated bibliography and larger investigative report) (A; F; H-I; K)
- Building on the research of the Lightning Talk, students will produce an Annotated Bibliography to summarize and evaluate sources and their connections to develop and support a central claim (D-F; H-J; L)
- Students will produce an Investigative Report that synthesizes sources from the annotated bibliography into a research-supported argument for a technical audience. (A-L)
- Students will develop research questions about a STEM issue, develop research questions and conduct research on that issue. Research will be used to communicate information to a range of audiences (A-L):
 - Produce a Poster or Infographic for a less technical audience (A-L)
 - Individual Presentation to a general audience. Students will develop a presentation on their chosen STEM topic to a “slightly technical” audience (A-L)

Both Reflection and peer response activities are built into the writing process throughout the course.