ENGI - 2304 - Technical Communications for Engineers

3e. UH Core - Revising Existing Course to add to Core or Revise Existing Core Course and remain in Core (UGRD only)

1. Course Ownership/Implementation/Justification

Department*	**Engineering**

Required Approval Steps*	☐ Undergraduate Studies Department Committee Review
	☐ Undergraduate Studies Department Chair/Program Director
	☑ Undergraduate Studies College Curriculum Committee

Will the course be cross-listed with another area?*	○ Yes ● No

If yes, has an agreement with department(s) been reached?	○ Yes ○ No

Department(s) and Course(s) that will be cross-listed with this course	

Catalog year of implementation*	● 2016 - 2017
	○ 2017 - 2018

Term(s) Course will be TYPICALLY Offered:*	☑ Fall (including all sessions within term)
	☑ Spring (including Winter Mini all sessions within term
	☑ Summer (including Summer Mini and all sessions within term)
	☐ Contact Your Academic Advisor

Justification(s) for Adding/Revising Course for Core*	**2m. Other (use field below)**

State the rationale

for creating this new Core course or revising the existing Core course:*   To more accurately reflect course content/level.

Justification - if "other" selected above: To more accurately reflect course content/level.

2. Course Catalog Information

Instructional Area/Course Prefix*	ENGI
Course Number*	2304
Long Course Title*	Technical Communications for Engineers
Short Course Title (30 character limit)*	Technical Communications
Instruction Type*	**Lecture ONLY**
Lecture*	3
Lab*	0
Course Credit Level*	**Sophomore**
Grade Option*	**Letter (A, B, C.....)**

| **Can this course be repeated for credit?*** | ◯ Yes ⦿ No |

| **If Yes, how often and/or under what conditions may the course be repeated?** | |

| **Maximum number of credit hours required of this course in degree plan*** | 3.0 |

| **Number of course completions (attempts) allowed*** | 2 |

| **Are multiple enrollments allowed for course within a session or term?*** | ◯ Yes
⦿ No |

| **CIP Code*** | 14.0101.00 06 |

Requisite Checks in PeopleSoft (functionality within PeopleSoft)*	◯ Need to adjust requisite checks already in place - Begin enforcement Fall
	◯ Need to adjust requisite checks already in place - Begin enforcement Spring
	◯ Need to create requisite checks for course - Begin enforcement Fall
	◯ Need to create requisite checks for course - Begin enforcement Spring
	◯ No adjustment required - requisites not being changed
	⦿ No requisite check desired for course at this time

| **Prerequisite(s):*** | ENGL 1304, engineering undergraduate standing, and completion of one of the following courses: CHEE 2331, CIVE 2330, ECE 2201, INDE 2333, MECE 2336, and PETR 2311. |

| **Corequisite(s)** | |

Course Description* Engineering communication skills: written proposals, specifications, progress reports, and technical reports; individual and group oral presentations; essays on engineering ethics, contemporary engineering issues and the impact of engineering decisions.

Course Notes

3. Authorized Degree Program(s)/Impact Study

Is this a required course for any program (degree, certificate, or minor)?* ● Yes - enter additional information in field below

◯ No

If yes, for which program(s)?

BSBE, BSCE, BSME, BSEE BSCpE, BSIE, BShE, BSPetE

Does this change cause a change in any program?*   ○ Yes - attach copy of program plan
⦿ No

If yes, to which program(s)?

Does this change force changes in prerequisites for other courses?*   ○ Yes - enter additional information in field below
⦿ No

If yes, which course(s) and is a proposal being submitted to reflect the change?

Impact Report*

Impact Report for ENGI 2304

Sources: Undergraduate Catalog 2015 - 2016

Prerequisite:	**ECE 3355 - Electronics**
	ECE 3155 - Electronics Laboratory
	INDE 4331 - Analysis of Industrial Activities
	BIOE 5455 - Bioanalytics
	BIOE 4334 - Capstone Design
	BIOE 4335 - Capstone Design I
	CHEE 4321 - Chemical Engineering Design I
	INDE 4388 - Engineering Leadership and Entrepreneurism
	CIVE 3332 - Engineering Materials
	CIVE 3434 - Fluid Mechanics and Hydraulic Engineering
	CIVE 3339 - Geotechnical Engineering
	INDE 4374 - Industrial Supervision
	MECE 2361 - Introduction to Mechanical Design
Programs	**Bachelor of Science in Industrial Engineering/Master of Business Administration (Dual Degree)**
	Biomedical Engineering, B.S.B.E.
	Chemical Engineering, B.S.Ch.E.
	Civil Engineering, B.S.C.E.
	Computer Engineering, B.S.Cp.E.
	Electrical Engineering, B.S.E.E.
	Engineering General Degree Requirements
	Industrial Engineering, B.S.I.E.
	IX(b). Component Area Option (b): Writing in the Disciplines
	Mechanical Engineering, B.S.M.E.
	Petroleum Engineering, B.S.P.E.T.E.
	Sample Program - Biomedical Engineering (BIOE)

In order to run an impact report, you will first need to select one or more external systems to search. When you have finished, click "Generate Report" to return to the Impact Report.

Current Maps:

- **Acalog**
- **2014-2015 Graduate Catalog**
- **Graduate Catalog 2015-2016**
- **Undergraduate Catalog 2014 - 2015**
- **Undergraduate Catalog 2015 - 2016**

Generate ReportCancel

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4. Core Curriculum Information

Learning Outcomes*	The outcomes should be changed to the following: • An ability to function on multi-disciplinary teams • An understanding of professional and ethical responsibility • An ability to communicate effectively • The broad education necessary to understand the impact of engineering solutions in a global and societal context • A recognition of the need for, and an ability to engage in life-long learning A knowledge of contemporary issues
Foundational Component Area for which the course is being proposed (select one)*	**Communication**
Component Area Option (optional)	**Component Area Option (b): Writing in the Disciplines**
UH Core: Single or Double Category Listing	○ List course in BOTH the Foundational Component Area and the Component Area Option categories ● List course in ONLY the Component Area Option category
Core Objectives addressed by the course*	**Communication Skills** **Critical Thinking** **Empirical & Quantitative Skills** **Personal Responsibility**

Teamwork

Critical Thinking,
if applicable

Students write five two-page essays on engineering education, engineering ethics, contemporary engineering issues, and the implications of engineering decisions.

The descriptions/prompts for these assignments are listed below. Samples are available in the sample student work file, pages 17 through 31.

Response Journal 1: Broad Education

Response Journal 1 concerns how your general courses will affect your engineering coursework or your abilities as a working engineer. Discuss how courses such as economics, government, philosophy, English, psychology, or other general education courses will affect your life as an engineer. Try to be as specific as possible and make an argument about exactly how they will or will not affect your life as an engineer or as an engineering student.

Response Journal 2: Ethics

Response Journal 2 is on Doyle's "The Engineer's Thumb," found at http://www.eastoftheweb.com/short-stories/UBooks/AdveEngi.shtml. Discuss an ethical situation found in the story, and refer to the engineering code of ethics (http://www.nspe.org/resources/pdfs/Ethics/CodeofEthics/Code-2007-July.pdf). Use proper citations to document at least one quote from the story and one quote from the engineering code of ethics.

Response Journal 3: Contemporary Issues and Ethics

Response Journal 3 discusses a subject from the news that may pose an ethical problem for engineers. Summarize the subject, explaining how it poses an ethical problem. Go into detail analyzing why it is an ethical situation and what challenges or solutions you see for the problem.

Response Journal 4: Contemporary Issues and Life-long Learning

Response Journal 4 covers a current issue facing engineers in your discipline. Find an important magazine or journal for your discipline (either online or in the library) such as IEEE Spectrum (www.spectrum.ieee.org) or ME Magazine (www.memagazine.org) and read one of the feature articles. Summarize and then comment on or analyze the article. Include proper website documentation in the text of your journal as well as at the end of the document.

Response Journal 5: Implications of Engineering Decisions

Response Journal 5 is on a contemporary issue that poses challenges for engineers in your discipline. Search cnn.com or another news source to find a current issue. Then analyze that issue to describe how it affects engineering and how engineers may or should deal with it. The point of this journal is to discuss the implications of engineering, whether those implications are

discuss the implications of engineering, whether those implications are economic, philosophical, environmental, or social. This journal differs from Response Journal 2 in that is discusses a current issue from a news source, not from an engineering magazine. Search the news to find anything you see that may pose challenges for engineers.

Communication Skills, if applicable	Students give three presentations during the class. They also submit 14 different assignments in different formats, including essays, technical recommendation reports, formal business letters, resumes, schedules, and specifications.

Empirical & Quantitative Skills, if applicable	For the Recommendation Report assignment, students write on one of the following topics: • Installing a dual-flush or conventional toilet • Owning or leasing a new car • Drinking bottled water or Houston tap water • Installing a corporate Macintosh system or Windows PC system • Buying a hybrid or a conventional car • Installing solar panels on a home The goal is to make a decision or to recommend which of the choices is best. Students must, therefore, determine the scope of their decision, the criteria they will use for the decision, as well as the intended audience. Then they look up available data on their criteria, such as cost, environmental benefits, or other information according to their own criteria. They must document their sources and analyze all data available for each criteria they choose. For instance, if a student chooses the topic on hybrid vehicles and conventional cars, they need to look up all of the specifications on each one, including miles per gallon, depreciation, efficiency, cost per refueling, emissions, and more. Then he or she should analyze the available data to recommend one of the choices. While students do not do experimental work to get the data, they are still analyzing currently available data to explain to the audience how one of the choices is better than the other.

Teamwork, if applicable	

Students work in a team of 4 to produce a 15-minute presentation.

Students work in a team of 2 to produce a 10-minute presentation.

Social Responsibility, if applicable	

Personal Responsibility, if applicable	Students write three two-page essays about the impact of engineering decisions and how current events affect engineering.

Will the syllabus vary across multiple section of the course?*	◯ Yes ⦿ No

If yes, list the assignments that will be constant across sections	

5. Supporting Documentation

Type of Attachments*	☐ Course Syllabus
	☐ Degree Plan
	☐ Memo
	☑ Other Document(s)

"Other" documents:	Already submitted.

6. Additional Information Regarding This Proposal

Contact person for questions about proposal:*	***Other, not listed**

Comments:	

Chad Wilson X30180 cawilson@uh.edu

Administrative Use Only

(Administrative Use Only) Proposal ID#	
Original Course Prefix	ENGI
Original Course Code	2304
Original Course Title	Technical Communications for Engineers
Original Course OID	53748

Technical Communications for Engineers

Policy Statement – Fall 2015

Section

Instructor:　　　　　　　　　　　**Phone**:
Office:　　　　　　　　　　　　　**E-mail**:

Course Description

ENGI 2304: Technical Communications. Cr. 3. (2-3). Prerequisites: ENGL 1304, an engineering major, and completion of one of the following courses: CHEE 1331, CIVE 1331, ECE 1331, INDE 1331 or MECE 1331. Engineering communication skills: written proposals, specifications, progress reports, and technical reports; individual and group oral presentations; essays on engineering ethics, contemporary engineering issues and the impact of engineering decisions.

Expected Course Goals and Outcomes

ENGI 2304 seeks to teach students the basics of engineering writing through various reading and writing projects. The course will introduce students to scientific research, including documents generally required in engineering, but will do so through projects that require critical thinking and analysis.

Outcomes

Students who successfully complete this course are expected to demonstrate the following course outcomes:

- An ability to function on multi-disciplinary teams
- An understanding of professional and ethical responsibility
- An ability to communicate effectively
- The broad education necessary to understand the impact of engineering solutions in a global and societal context
- A recognition of the need for, and an ability to engage in life-long learning
- A knowledge of contemporary issues

Expectations of the Student

Based on these outcomes, students are expected to develop or learn the following:

- Confidence in communication, both oral and written
- Knowledge about the style and format of engineering writing
- The ability to create documents written in the correct format
- The ability to adapt content and style depending on the needs of the audience
- The ability to adapt content and format depending on the purpose of the document

- The ability to edit and revise one's own work for content, style, and mechanics
- The ability to find information on scientific or engineering topics
- The ability to manage a group and produce group documents and/or presentations effectively and efficiently
- Knowledge of the impact of engineering decisions and solutions
- An understanding of engineering ethics

Required Texts

Finkelstein, Leo. *Pocket Book of Technical Writing for Engineers and Scientists*. Boston: McGraw-Hill, 2005.

Email and Blackboard

You should have an e-mail address tied to your UH account. We will use Blackboard to post all materials and to enable active communication. The procedures for joining Blackboard will be described during the first class period. You should consult Blackboard regularly to ensure that you are up-to-date on all course materials.

Discussions and In-Class Writing

This is a writing-intensive, discussion-based class, requiring active involvement, intellectual engagement, and constructive collaboration from every student. Class discussion is the foundation of this class. Thus, every student's presence, preparedness, and active participation are required.

The Role of Writing Consultants and the Writing Center
Students will have at least one conference with course Writing Consultants during the semester. These conferences give the student an opportunity to receive direct instruction and feedback and address individual and group learning concerns. Writing Consultants will be available by appointment and during scheduled office hours.

As integral members of the course's instructional team, course Writing Consultants will be able to help students clarify and apply writing instructions, techniques, and lessons throughout the development of each student's assignments. Though they are available for assistance, Writing Consultants *do not* proofread, dictate content, or co-author students' papers, nor do they predict what grade an assignment might earn.

The penalty for not attending a scheduled appointment with a Writing Consultant is a deduction of 2.5 points from the student's final grade in ENGI 2304. Attending a scheduled appointment without the required materials will result in the same deduction. If you need to cancel an appointment, you must do so with the Writing Center at least 24 hours before your appointment. Make sure you are there for your appointments and that you have material to work on.

Grading

Table 1 shows the grading for assignments in ENGI 2304. The Letter of Intent, Proposal, Progress Report, Description of a Mechanism, Individual Technical Presentation, and Poster comprise the semester project, as discussed later.

Table 1. Assignments and Grade Percentages for ENGI 2304.
Note that presentations are in italics.

Assignment	Grade Percentage
Document Creation Group Presentation	3%
WTF Presentation	8%
Recommendation Report	12%
Recommendation Report Presentation	8%
Recommendation Report Poster	8%
Response Journals (4 of them)	12%
Discussion Board Posts	10%
Presentation Critique	5%
Quizzes (10 of them)	5%
Conventions of Discipline Homework	3%
Formal Introduction Email	4%
Author Guidelines and Works Cited Guidelines Homework	2%
Resume	5%
Annotated Bibliography	5%
Letter of Intent for Recommendation Report	5%
Professionalism	5%
Total:	100%

Attendance

Students should contact the instructor in advance if they must be absent or tardy. Emergency absences will be handled on a case-by-case basis. Missing more than three (2 for hybrid classes) sessions may prevent the student from meeting the minimum requirements for the class, and will negatively affect the student's class contribution grade. The second occasion of tardiness will count as half an absence, provided the student arrives within the first 15 minutes of class. Arriving 15 minutes late to class equals a full absence. Students who miss class should arrange to get notes from a fellow student.

Withdrawal Policy

The withdrawal dates listed in the Academic Calendar section of the Class Schedule will be followed strictly. Please consult this document for appropriate dates. Grades of Incomplete (I) will be given only when a small portion of the course has not been completed for a good reason. If the material has been completed, an "I" grade cannot be

given. Detailed information about these issues is available in the <u>Student Handbook</u> on page 17.

Academic Honesty Policy

This class will function as a community of writers and project managers, sharing ideas and contributing to a general discourse. According to university and department policy, plagiarism (broadly defined as passing off somebody else's work as your own) constitutes grounds for penalties, including failure of the assignment in question, failure of the course, or suspension from the University. Students should protect themselves by keeping notes and drafts of all written work, and developing a clear understanding of documentation. Students in this course are expected to follow the <u>Academic Honesty Policy</u> of the University of Houston. It is your responsibility to know and follow this policy.

Proper documentation must be provided for any use of data, ideas, or work that did not originate with the student. Any statement of facts that are not the student's own and are not accepted as common knowledge must be properly referenced. The documentation style you follow is up to you, but make sure you are consistent. I recommend the one in Finkelstein, IEEE, or CMS.

All aid from students, professors, family members, etc. should be noted at the end of each assignment. Seeking assistance with most written assignments is perfectly acceptable – provided that assistance is documented, credited, and permissible within the limits of the assignment. Students are strongly encouraged to seek assistance from the instructor, course Writing Consultants, or fellow students within the class. Students who fail to acknowledge all assistance they receive will be penalized according to the University's standards regarding academic honesty.

Students with Disabilities

Students with recognized disabilities will be provided reasonable accommodations appropriate to the course, upon documentation of the disability with a Student Accommodation Form from the Center for Students with DisAbilities. To receive these accommodations, you must request the specific accommodations by submitting them to the instructor in writing by the 16th calendar day of the semester. Students who fail to submit a written request will not be considered for accommodations. For more information, see the <u>Student Handbook</u>, page 27. Contact CSD in room 305 of the Student Service Center (or call 743-5400 / voice, 749-1527 / TDD).

The Counseling and Psychological Services Office (CAPS) offers individual and group counseling for a variety of personal, vocational, and academic issues. Health professionals are available to address a variety of concerns, including stress, anxiety, depression, financial worries, time management, and academic adjustment. All services are confidential. CAPS is located on the second floor of the Student Service Building (or call 743-5454).

Religious Holy Days

Students whose religious beliefs prohibit class attendance on designated dates may request an excused absence. Request the excused absence in writing by the 15th calendar day of the semester. Consult the <u>Student Handbook</u> for more info.

Explanation of Assignments

Written Assignments
Unless otherwise directed, all papers MUST
- be submitted to the Blackboard Assignments tab
- be in standard 12-point font
- have standard margins
- have **numbered pages** (if appropriate)
- include an appropriate heading
- include an appropriate title
- acknowledge all aid from students, professors, family members, etc. at the end of every assignment.

Late Assignments
Late assignments will be accepted, but not without penalty. One letter grade will be deducted for the first class period an assignment is late. After the first class period has passed, three letter grades will be deducted, and one grade will be deducted for every class period after the second. For example, if an essay is due on Monday and is not turned in during the class period, it is considered late. If it is turned in during or anytime before the following class, ten points will be deducted from the final grade. If it is turned in after the following class, but before or during the next class, 30 points will be deducted from the final grade on the assignment.

Peer reviews may not be made up. Not attending a peer review session or coming without a COMPLETE draft will result in a grade of 0 for the peer review.

Digital Submission of Materials
All assignments, including presentations, must be turned into the Assignments tab of your Blackboard account **before class** on the day they are due. They must be saved in the following manner:

Last name First name Major Abbreviated Assignment title.doc (or .ppt)

Therefore, if I were turning in my technical report, I would label it

Wilson Chad CPE Tech Report.doc

Please follow these guidelines for all of your work.

Professionalism
This portion of your grade will be determined by your quizzes, absences, tardies, willingness to participate in class discussions and during group work, peer reviews, as well as your overall professionalism in the class. Treat the class professionally, and you will do well in this category. (A sense of humor is generally not grounds for deduction.)

Peer Reviews

We will have several Peer Reviews, and the goal of these assignments is to help your peers. You will be graded on the depth of your response, as well as the helpfulness of your comments. Always try to provide concrete, clear suggestions in your Peer Reviews. As stated earlier, if you miss a Peer Review session, come in after the session has already begun, or if you do not have a COMPLETE draft, you will receive a grade of 0 for the Peer Review.

Discussion Board Entries

Each student is required to post to our course Discussion Board at least two times a week. However, you are encouraged to post more than two times a week, and multiple posts will improve your Professionalism grade.

Discussion Board posts should be a mixture of new posts and responses to other students. I encourage you to read and respond to what other students are asking or saying. If you only post new ones without responding to other students' posts, your Professionalism grade will suffer.

Discussion Board entries can cover anything about the class, about technical writing, or about school in general. You may comment, ask questions, or answer questions so that other students can benefit from your knowledge and so that you can help others, as well. **Posts must be substantial, however**. Although I don't really grade on length, a lone question such as "Does anyone understand the proposal?" will generally be seen as Unacceptable, unless the student has posted another response during the posting period. If the student explains why the proposal is confusing, however, then the response would be Acceptable. There are only three don'ts here:

- Do not merely complain about the class. These entries don't really help anyone, and they tend to annoy the instructor, which is never a good idea.
- Do not insult anyone. Remember to treat the class professionally, which means you should treat your classmates professionally, too.
- Do not merely repeat information from your Response Journals. Your posts should be wholly different.

Discussion Board posts will be graded as either "Acceptable" or "Unacceptable" based on the following criteria:

- Depth of response (evidence of thought)
- Appropriateness for audience and forum
- Clarity of writing

Although "clarity of writing" is included here, spelling, grammar, and mechanics will not generally be a factor in your grade. However, if an entry is not easily comprehensible because of its confusing writing, then there is no way to judge the "depth of response," and the entry is therefore not "appropriate" for the given audience. Thus, any entry which has numerous mistakes or errors that impede its understanding will be graded as Unacceptable. Unacceptable responses are equivalent to a grade of 0, or not doing the assignment at all. I will email you if one of your posts is Unacceptable.

Response Journals

You will turn in four Response Journals over the course of the semester. Make sure you follow the syllabus to see when your Response Journals are due and what material they should cover. Your Response Journal entries should be more than one double-spaced page, and should contain at least three or four complete paragraphs. They should be a maximum of two pages.

These journals require you to do two different things:

1. Your first **short** paragraph should provide context. If you are required to read a Sherlock Holmes story or a news story, you should summarize the main points of those items. This portion should be rather short—a quarter to a half a page.

2. The next paragraphs of each Response Journal should react to the reading or summary—asking questions, offering answers, clarifying, or problematizing anything discussed in the reading assignment. This part is difficult, but it is also the place where you demonstrate your critical thinking abilities. The point is to show me that you have not only read, but that you have paid attention, thought about, dissected, and learned from the material. Use your engineering problem-solving abilities to question and examine.

I have fielded a few questions about how students can improve their Response Journals, and most of them boil down to my phrase "go deeper." What I mean by "go deeper" is this: any situation that you talk about in your Response Journals needs to be viewed from every possible angle. That's perhaps impossible, granted, but you need to examine situations as complex problems with no easy answer.

For example, in "The Adventure of the Engineer's Thumb," Holmes says that Hatherley gained experience, hinting that he now knows not to accept jobs like that again. Do we have to take Holmes's word for that, though? Could Hatherley have gone through the same situation and come out fine? Is it possible that Hatherley was in on the counterfeiting scheme all along? Is it possible that Hatherley did not tell the truth about everything he says about that night? Would you really have done anything differently?

So when it comes to contemporary issues, don't be content with describing what happens with technology or in the news. Instead, "go deeper." If there is an explosion at an oil refinery, perhaps you can go into an examination of government regulations of these refineries. Why are there some strict regulations and some lax ones? Does the fact that we live in Houston have anything to do with how strict they are? What about the number of cars we drive? The lack of public transportation?

We want to see that you are thinking critically, which means to try to see and describe something from all sides. Doing this requires a lot of space, however, so it is generally better if you pick one aspect and flesh it out. The best response journals discuss one idea in depth instead of hitting the surface of a few different ones.

Response Journal 1: Broad Education

Response Journal 1 concerns how YOUR general courses will affect your engineering coursework or your abilities as a working engineer. Discuss how courses such as economics, government, philosophy, English, psychology, or other general education courses will affect your life as an engineer. Try to be as specific as possible and make an argument about exactly how they will or will not affect your life as an engineer or as an engineering student. This journal is specifically inquiring about your individual experience and is seeking your particular thoughts. You are speaking for the self not all engineers in general.

Response Journal 2: Contemporary Issues and Ethics

Response Journal 2 discusses a subject from the news that may pose an ethical problem for engineers. Summarize the subject, explaining how it poses an ethical problem. Go into detail analyzing why it is an ethical situation and what challenges or solutions you see for the problem. Remember to cite the source that you are referring to in your response. Be sure to use the standard citation/referencing system that Finkelstein recommends in Chapter 14 of *PBTW* or one that is used in your major. Failure to document these sources correctly will result in a grade of Unacceptable.

Response Journal 3: Ethics

Response Journal 3 is on Doyle's "The Engineer's Thumb," found at http://www.eastoftheweb.com/short-stories/UBooks/AdveEngi.shtml. Discuss an ethical situation found in the story, and refer to the engineering code of ethics http://www.nspe.org/sites/default/files/resources/pdfs/Ethics/CodeofEthics/Code-2007-July.pdf. Use proper citations to document at least one quote from the story and one quote from the engineering code of ethics. Use Finkelstein's documentation system or the one used in your major. Failure to document these sources correctly will result in a grade of Unacceptable.

Response Journal 4: Implications of Engineering Decisions

Response Journal 4 is on a contemporary issue that poses challenges for engineers in your discipline. Search cnn.com or another news source to find a current issue. Then analyze that issue to describe how it affects engineering and how engineers may or should deal with it. The point of this journal is to discuss the implications of engineering, whether those implications are economic, philosophical, environmental, or social. This journal differs from Response Journal 2 in that it discusses a current issue from a news source, not from an engineering magazine. Search the news to find anything you see that may pose challenges for engineers. Remember to cite the source that you are referring to in your response. Be sure to use the standard citation/referencing system that Finkelstein recommends in Chapter 14 of *PBTW* or one that is used in your major. Failure to document these sources correctly will result in a grade of Unacceptable.

Document Creation Group Project

For this assignment, you will join with two partners to write a 1-2 page handout posted to the Discussion Board and create a PowerPoint presentation on the following topics:

> **Group 1**: How to use MS Word's outline feature to help write complicated documents.
> **Group 2**: How to paginate a long technical report in MS Word.
> **Group 3**: How to create and label tables, figures and equations in MS Word.
> **Group 4**: How to create an automatic table of contents and list of tables and figures.
> **Group 5**: How to create and import Gantt Charts from MS Excel to MS Word.
> **Group 6**: How to use MS Project to plan work.

Assume that your audience will write a long technical report with the sections listed in Table 2.

Table 2. List of Sections for Standard Technical Report

Letter of Transmittal
Title Page
Table of Contents
List of Figures and Tables
Abstract
• Introduction
    o Purpose
    o Background
	• Statement of Goals and Accomplishments
	• Design and Methodology
	• Results
	• Professional Component
	• Conclusion/Summary
	References
	Appendices

Goal

The goal for your group presentation is to teach the class about your subject. You may reference your handout during your presentation, and you may also ask your "students" to work on their computers during your presentation. Students will then have the detailed handout to help them in the future.

Presentation

Your presentation should not last more than 15 minutes (and it should be as close to that time as possible). You will need PowerPoint slides, but the number will depend on whether you ask students to work on their own computers. Remember that you should spend at least one minute per slide, but you may spend longer than this. Remember to document all sources, including pictures you use on your slides.

Handout

Your handout should follow the guidelines for instructions in *PBTW* (167-190). Use clear explanations and include step-by-step instructions for specific parts. Try to make these look like professional instructions using clear guidelines and a variety of figures or pictures.

Research

Although you may need to research MS Word to gather information on your topic, no part of your handout or presentation should be taken directly from a source without proper documentation. For information on documentation, see *PBTW*.

The Presentation will need to be uploaded in TWO areas. Upload your presentation to:

1. the Blackboard Discussion Board so that other students may see it.

2. the Blackboard Assignments tab in order to receive your grade.

Resume

Write a perfected resume that you can take to the Engineering Career Fair to pass out to prospective employers. The resume should accurately represent where you are right now to get either an internship or a full-time position.

When Technology Fails Presentations

A team of no more than two students will be responsible for one presentation covering a chapter from *When Technology Fails* by Neil Schlager. The book is available in the library's reserve section. Photocopy the chapter you have chosen. Your PowerPoint presentation should be an approximately 10 minute long, and it should summarize the material from the chapter. The rest of the class has not read the material, so the team's job is to teach them the material using PowerPoint slides. Keep in mind that you are the only ones who have read the material and that you must explain everything carefully so we can understand it.

To do well in these presentations, keep the following in mind:
*   Read the chapter from Schlager several times until you fully understand his points.
*   Decide which points from the chapter are most interesting or most important. In other words, which parts should you concentrate on? You only have a few minutes, so you may need to choose the important information from the chapter and disregard the rest.
*   Do not follow the format of the chapter if it doesn't work well for a PowerPoint presentation.
*   Concentrate on ethical or design failures.
*   Use pictures (clearly documented with the URL or list of references) to help explain the author's points. You should be able to find pictures from websites. If not, you may scan pictures from the text.
*   Do not read long passages of text in your presentation unless it is absolutely necessary and you will dissect those passages for us.

The PowerPoint Presentation will need to be uploaded in TWO areas. Upload your presentation to

1. the Blackboard Discussion Board so that other students may see it and refer back to it.
2. the Blackboard Assignments tab in order to receive your grade.

Presentation Critiques

You will be required to review another *When Technology Fails* presentation on the same day that you present. Your *When Technology Fails* Presentation Critiques will be due one class period after the presentation was completed, no matter what else is due that class period.

Your Presentation Critiques must include the following:
- One-paragraph summary of the presentation. Include an explanation of the topic, a few details about the topic, and the purpose of the talk.
- One paragraph discussing the presentation slides. Did the presenter follow all of the guidelines for good presentations? What did the presenter do well? What did the presenter do poorly? Did he or she use animation? Bullet slides? Pictures, diagrams, tables? Overview slides? Were the slides interesting or boring?
- One paragraph discussing the oral delivery of the presentation. Did the presenter make eye contact? Did he or she get lost? Had the presenter practiced the presentation before? What did he or she do well and poorly?

Remember that your critiques are not anonymous, so the presenter will know who has written the critique. Therefore, you should write your critique as nicely as possible. Do not make statements such as "This was the worst [or best] presentation I have ever seen." Instead, say, "The presenter was very good with his eye contact. He constantly looked around the room. However, at several points, he kept his hand in his pocket and stared at the floor." Also, refer to the presenters by name. Writing "the presenters" or simply using "he/she" throughout your critique implies that close enough attention was not being paid or that the time to learn the names of your peers was not taken. Be precise and avoid ambiguity.

Your Presentation Critiques should be no more than two double-spaced pages and will be graded on the following criteria:
- Quality of summary
- Understanding of the guidelines for good slides and critique of the presenter's slides
- Understanding of a quality presentation and critique of the presenter
- Quality of writing and use of judicious language to critique the presentation
- Grammar and mechanics

The Presentation Critiques will need to be uploaded in TWO areas. Upload your critique to

1. the Blackboard Discussion Board so that other students may see it.
2. the Blackboard Assignments tab in order to receive your grade.

Recommendation Report

Choose one of the following options and write a recommendation report that explains your choice:

- Hydrogen fuel or gasoline powered vehicles
- Genetically modified food or organic food
- Seawater desalination or water recycling
- Green roofs or white roofs
- Electric or hybrid vehicles
- Wind energy or fossil fuels
- LED or CFL bulbs
- Nuclear energy or other types of energy

Consider all aspects of the decision, which may include but are not limited to
- Environmental concerns
- Cost/Benefit analysis
- Productivity
- Social concerns
- Political concerns

You may focus on one of those aspects, however, and define your scope to match your purpose. If you are only looking at the economic aspects of the decision, make sure your report stays on that focus.

Your report should have at least six reputable sources. While your sources can be from the web, they should be reputable and credible.

Your completed recommendation report should follow the format in *The Pocket Book of Technical Writing* and should include all front matter: transmittal letter, title page, table of contents, list of tables and figures, and abstract. It should be paginated correctly.

The recommendation report should include at least one figure or table. Remember that it is better to explain material graphically or in tables than to merely write paragraphs.

You will then make your report into a poster and presentation.

Recommendation Report Presentation

Create slides in PowerPoint, and then give a 5 to 8 minute presentation that explains your recommendation for the project above. Follow all of the guidelines for good presentations but remember especially to keep bullet slides to a minimum and to face the audience.

Recommendation Report Poster

Explain your recommendation in a single PowerPoint slide that could be printed out and made into a poster. For this project, you will NOT print your poster but will instead submit your single PowerPoint slide that could be printed if necessary. This project is different from the Recommendation Report Presentation described above. It explains the same information but does it in a stand-alone slide, not in an interactive presentation. Be sure to watch the Youtube videos on posters to be able to successfully complete this assignment.

Fall 2015 Schedule

Tuesday, August 25: Introduction
- IN CLASS: Discuss Turnitin.com and Blackboard
- IN CLASS: Discuss Policy Statement and Schedule

Thursday, August 27: Conventions of engineering documents
- VIDEO: Watch "Convincing Engineering Resumes" on Youtube.
- QUIZ: Take quiz on "Convincing Engineering Resumes."
- READING: Read Chapter 12 in PBTW.
- HOMEWORK DUE TODAY: Write a formal email to your instructor explaining who you are and what you want to do with your life. Explain a few of your hobbies, where you work, and anything else interesting about yourself. Also submit a Word document version to the Assignments tab. This assignment should be several paragraphs long. It should follow the context, content, contact format (CCC).
- IN CLASS: Put into Document Creation Group Presentation Groups and leave 15 minutes to work on group presentations.
- IN CLASS: Discuss Response Journals.

Tuesday, September 1: Resumes and conventions of engineering documents
- HOMEWORK DUE TODAY: Draft of resume.
- IN CLASS: Peer review resume.
- VIDEO: Watch "Conventions of Engineering Documents" on Youtube.
- QUIZ: Take quiz on "Conventions of Engineering Documents."
- HOMEWORK DUE TODAY: Conventions of Discipline homework. Submit links and a paragraph about one of each of the following for your discipline (submit a Word document version to the Assignments tab). Describe the kind of information the sources/links contain and how they will help you after you graduate:
  - Blog
  - Newsletter from a professional society
  - Magazine
  - Journal
  - Conference
- IN CLASS: Discuss conventions of engineering documents: email, memos, letters, reports.
- IN CLASS: Leave 15 minutes to work on group presentations.

Thursday, September 3: Presentation fears and creating presentations that tell a story
- HOMEWORK DUE TODAY: Final Version of Resume due today.
- VIDEO: Watch "Overcoming Presentation Fears, Part 1" and "Overcoming Presentation Fears, Part 2" on Youtube.
- QUIZ: "Overcoming Presentation Fears."

- VIDEO: Watch "Advantages of Presentations" on Youtube.
- QUIZ: Take quiz on "Advantages of Presentations"
- READING: Read about presentations in Chapter 17 of PBTW.
- IN CLASS: Leave 15 minutes to work on group presentations.

Tuesday, September 8: Presentation delivery

- HOMEWORK DUE TODAY: Response Journal 1: Broad Education due today. See page 9 in the Policy Statement.
- VIDEO: Watch "Importance of Nonverbal for Technical and Scientific Presentations" on Youtube.
- VIDEO: Watch "The Do's of Professional Presenters," parts 1 and 2 on Youtube.
- QUIZ: Take quizzes on "Importance of Nonverbal for Technical and Scientific Presentations" and "The Do's of Professional Presenters."
- IN CLASS: Finish discussing PPT and presentations.
- IN CLASS: Leave 15 minutes to work on group presentations.

Thursday, September 10: Presentation slides, best practices

- HOMEWORK DUE TODAY: Submit links to the author guidelines and works cited guidelines for your discipline: ASME, IEEE, IIE, ASCE, AIChE, or others. Submit a Word copy to the Assignments tab. First, state your major and then link to the best sites.
- IN CLASS: Leave 15 minutes to work on group presentations.

Tuesday, September 15: Document creation group presentations

- IN CLASS: Document Creation Group Presentations, one through three.

Thursday, September 17: Document creation group presentations

- IN CLASS: Document Creation Group Presentations, four through six.

Tuesday, September 22: Using figures and tables

- VIDEO: Watch "Figures, Tables, and Equations in Reports," parts one and two available on Youtube.
- READING: Read Chapter 4 and Chapter 15 in *PBTW*.
- QUIZ: Take quiz on "Figures, Tables and Equations in Reports."
- IN CLASS: Look at examples of figures and tables in reports, discuss conventions.

Thursday, September 24: Professional correspondence

- HOMEWORK DUE TODAY: Bring in an example of a business letter within an engineering firm. Submit links to the letter to the Discussion Board forum "Business letters that you find online."
- IN CLASS: Discuss business letters.
- IN CLASS: Discuss Concision and Precision Homework sheet in class. Rewrite each one to make it more concise, more correct, or more precise.
- READING: Read about correspondence in Chapter 18 of PBTW.
- QUIZ: Take quiz on correspondence.

Tuesday, September 29: Proposals

- HOMEWORK DUE TODAY: Bring in an example of an engineering proposal that you find online. Submit links to the Discussion Board forum "Proposals that you find online."
- IN CLASS: Discuss proposals.
- IN CLASS: *When Technology Fails* Presentations.
    - Tacoma Narrows bridge collapse.
    - Exxon Valdez.

Thursday, October 1: Progress reports

- HOMEWORK DUE TODAY: Response Journal 2: Ethics due today.
- HOMEWORK DUE TODAY: Bring in an example of an engineering progress report that you find online. Submit links to the forum "Progress reports that you find online."
- IN CLASS: Discuss progress reports.
- IN CLASS: *When Technology Fails* Presentations.
    - Hyatt Regency walkways collapse.
    - MGM Grand hotel fire.

Tuesday, October 6: Schedules

- HOMEWORK DUE TODAY: Response Journal 3: Contemporary Issues and Ethics due today.
- HOMEWORK DUE TODAY: Bring in an example of a project schedule. Submit a link to the schedule to the Discussion Board forum "Schedules that you find online."
- IN CLASS: Discuss schedules, milestones and tasks.
- IN CLASS: *When Technology Fails* Presentations.
    - Titanic sinking.
    - Ford Pinto rear-impact defect.

Thursday, October 8: Specifications

- IN CLASS: *When Technology Fails* Presentations.
    - Agent Orange contamination.
    - DDT insecticide contamination.
- HOMEWORK DUE TODAY: Bring in an example of specifications that you find online. Submit links to the Discussion Board forum "Specifications that you find online."
- IN CLASS: Discuss specifications.

Tuesday, October 13: Grammar!

- IN CLASS: *When Technology Fails* Presentations.
    - Apollo I capsule fire.
    - Challenger explosion.
- IN CLASS: Bring in an example of a funny misuse of punctuation or grammar.

Thursday, October 15: Grammar!

- IN CLASS: *When Technology Fails* Presentations.
    - Chernobyl accident, Ukraine.
    - Bhopal toxic vapor leak.
- VIDEO: Watch "Punctuation Disasters!" on Youtube.

- HOMEWORK DUE TODAY: Bring in an example of a punctuation disaster, a time when a punctuation error or lack of precision in writing led to disastrous consequences for a company, agency, or society. In a Word document, explain or narrate the story in a summary that clearly shows how writing led to a problem. Then explain how it happened or how it could have been avoided.

Tuesday, October 20: The recommendation report

- HOMEWORK DUE TODAY: Letter of Intent for Recommendation Report. Write a formal business letter in block letter format that explains your topic for your Recommendation Report. Include at least three parts or paragraphs in your letter (context, content, contact). Explain why you want to write about that topic, what you know about it already, and what you hope to learn about the topic. This assignment should be one single-spaced page. It is a mini-proposal.

Thursday, October 22: Criteria for the recommendation report

- HOMEWORK DUE TODAY: List of criteria. Include the criteria you will use for your recommendation and the information you need to make a decision for those criteria. Bring a copy to the library research day.
- READING: Read Chapter 12 on Abstracts.
- QUIZ: Take quiz on "Abstracts."
- IN CLASS: Included on Blackboard are eight engineering articles with the abstracts removed. Pick one of these articles and write a descriptive abstract and an informative abstract for it.
- IN CLASS: Discuss abstracts and appendices.

Tuesday, October 27: Library Research Day

- Meet in basement of library, 10G

Thursday, October 29: Library Research Day

- Meet in basement of library, 10G

Tuesday, November 3: Drafting the recommendation report

- HOMEWORK DUE TODAY: Annotated Bibliography. Write ten complete citations using the format you used for your author guidelines. Describe where you found each source (which database, Google, Google Scholar, library catalog) and what information you plan to use from the source in your recommendation report.

Thursday, November 5: Concision and precision

- IN CLASS: Discuss Concision and Precision Homework sheet in class. Rewrite each one to make it more concise, more correct, or more precise.

Tuesday, November 10: Posters

- VIDEO: Watch "Scientific and Engineering Posters," parts one through five available on Youtube
- QUIZ: Take quiz on "Scientific and Engineering Posters."
- HOMEWORK DUE TODAY: Draft of Introduction due today.

Thursday, November 12: Drafting the recommendation report

- HOMEWORK DUE TODAY: Draft of Discussion section due today.
- HOMEWORK DUE TODAY: Response Journal 4 due today.

Tuesday, November 17: Drafting

- HOMEWORK DUE TODAY: Draft of Conclusion due today.

Thursday, November 19: Drafting and posters

- HOMEWORK DUE TODAY: Draft of Poster due today. Submit a copy of your draft poster to the Discussion Board forum Peer Review of Posters.
- HOMEWORK DUE TODAY: Complete draft of recommendation report due today.

Tuesday, November 24: Presentations

- IN CLASS: Recommendation Report Presentations 1 through 8.

Thursday, November 26: NO CLASS

Tuesday, December 1: Presentations

- HOMEWORK DUE TODAY: Final Recommendation Report due today.
- IN CLASS: Recommendation Report Presentations 9 through 16.

Thursday, December 3: Presentations

- HOMEWORK DUE TODAY: Posters due today.
- IN CLASS: Recommendation Report Presentations 17 through 24.
- IN CLASS: Administer course evaluations.

Final Exam: Presentations

2:30 to 4:00 p.m. section will meet 2:00 to 5:00 p.m. Thursday, December 10

4:00 to 5:30 p.m. section will meet 5:00 to 8:00 p.m. Tuesday, December 15

5:30 to 7:00 p.m. section will meet 5:00 to 8:00 p.m. Thursday, December 10

7:00 to 8:30 p.m. section will meet 8:00 to 11:00 p.m. Tuesday, December 15