

UC 1097310F

CBM003 ADD/CHANGE FORM

Undergraduate Council
 New Course Course Change
 Core Category: WI-ID Effective Fall 2011

or

Graduate/Professional Studies Council
 New Course Course Change
 Effective Fall 2011

APPROVED FEB 23 2011

1. Department: ENGR College: ENGR
 2. Faculty Contact Person: Chad Wilson Telephone: 3-0180 Email: cawilson@uh.edu

3. Course Information on New/Revised course:
- Instructional Area / Course Number / Long Course Title:
ENGI / 2304 / Technical Communications
 - Instructional Area / Course Number / Short Course Title (30 characters max.)
ENGI / 2304 / TECHNICAL COMMUNICATIONS
 - SCH: 3.00 Level: SO CIP Code: 14.0101.00 06 Lect Hrs: 2 Lab Hrs: 3

RECEIVED OCT 14 2010

4. Justification for adding/changing course: **To more accurately reflect course content/level**
 5. Was the proposed/revised course previously offered as a special topics course? Yes No
 If Yes, please complete:

- Instructional Area / Course Number / Long Course Title:
____ / ____ / ____
- Course ID: _____ Effective Date (currently active row): _____

6. Authorized Degree Program(s): BSBE, BSEE, BSCpE, BSPetE, BSCE, BSME, BSIE, BSCHE
- Does this course affect major/minor requirements in the College/Department? Yes No
 - Does this course affect major/minor requirements in other Colleges/Departments? Yes No
 - Can the course be repeated for credit? Yes No (if yes, include in course description)

7. Grade Option: Letter (A, B, C ...) Instruction Type: lecture laboratory (Note: Lect/Lab info. must match item 3, above.)

8. If this form involves a change to an existing course, please obtain the following information from the course inventory: Instructional Area / Course Number / Long Course Title
ENGI / 2304 / Technical Communications

- Course ID: 021302 Effective Date (currently active row): 08.24.2010

9. Proposed Catalog Description: (If there are no prerequisites, type in "none".)
 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. Description (30 words max.): 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.

10. Dean's Signature: [Signature] Date: 13 Oct 2010

Print/Type Name: Dr. David P. Shattuck

U N I V E R S I T Y of H O U S T O N

REQUEST for MODIFICATION to a CORE CURRICULUM COURSE

Originating Department/College: College of Engineering

Person making request: Chad Wilson Telephone: 3-0180

E-mail: cawilson@uh.edu

Dean's signature: David P. Shottel Date: 19 Oct 2010

I. General Information:

Course number and title: ENGI 2304; Technical Communications

II. Category of Core for which course is being proposed (mark only one):

- | | |
|--|--|
| <input type="checkbox"/> Communication | <input type="checkbox"/> Visual/Performing Arts Critical |
| <input type="checkbox"/> Mathematics | <input type="checkbox"/> Visual/Performing Arts Experiential |
| <input type="checkbox"/> Mathematics/Reasoning (IDO) | <input type="checkbox"/> Natural Sciences |
| <input type="checkbox"/> American History | <input type="checkbox"/> Social/Behavioral Sciences |
| <input type="checkbox"/> Government | <input checked="" type="checkbox"/> Writing in the Disciplines (IDO) |
| <input type="checkbox"/> Humanities | |

III. Briefly state the specific changes being made to the course and/or its catalog description, with an explanation of why such changes are needed.

A. Proposed change

Current prerequisites: ENGL 1304, admission to ENGR, and CHEE 2331 or CIVE 2330, or ECE 2331 or INDE 2333 or MECE 2336.

These current prerequisites will be changed to the following: ENGL 1304, an engineering major, and completion of one of the following courses: CHEE 1331, CIVE 1331, ECE 1331, INDE 1331, or MECE 1331.

Course description will change from the current description--Technical communication skills, with emphasis on writing of technical documents, oral presentations, and visual aids using modern computer technology.

To the following new 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.

B. Rationale for change

Changes in prerequisites more accurately reflect what is needed to succeed in the course, namely an introduction to engineering as a discipline and basic scientific

knowledge. Changes to the course description are needed to accurately describe the specific content of the course.

IV. Please attach a syllabus that clearly reflects that the Exemplary Educational Objectives are being met. If these objectives have changed from those originally tied to the course, briefly describe the change(s).

SVP. Effective 8/23/10. Replaces all previous forms, which may no longer be used.



Technical Communications Policy Statement – Fall 2010

Section

Section:

Instructor:

Phone:

Office:

E-mail:

Course Description

ENGI 2304: Technical Communications. Cr. 3. (2-3). ENGL 1304, admission to an Engineering major, and sophomore standing in Engineering. Technical communication skills, with emphasis on writing of technical documents, oral presentations, and visual aids using modern computer technology.

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

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 two conferences 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
<i>Document Creation Group Presentation</i>	2.5%
<i>WTF Presentation</i>	10%
Milestone 1: Technical Definition	
Milestone 2: Letter of Intent with Technical Definition	10%
Milestone 3: Schedule	
Milestone 4: Specifications	
Milestone 5: Resume	
Milestone 6: Proposal	15%
Milestone 7: Progress Report Memo	10%
Milestone 8: Poster	10%
<i>Milestone 9: Technical Presentation</i>	10%
Response Journals	15%
Discussion Board Posts	5%
Presentation Critiques	2.5%
Semester Review Essay	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 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 Student Handbook 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 Academic Honesty Policy 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.

Use of Turnitin.com

Assignments should be submitted to www.Turnitin.com for review. You may submit all of your assignments to check them yourself, but the final version should be submitted on the date it is due. It should also be submitted to Blackboard. We will discuss this during class.

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 Student Handbook, 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 Student Handbook for more info.

Explanation of Assignments

Written Assignments

Unless otherwise directed, all papers must

- be submitted to the Blackboard Assignments tab
- be submitted to www.turnitin.com
- be typed in 12-point Times New Roman font
- be double-spaced
- have 1.25 in. 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 Digital Drop Box 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 ENGI 2304 Assignment title.doc (or .ppt)

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

Wilson Chad CPE ENGI 2304 Technical Report.doc

Please follow these guidelines for all of your work.

Professionalism

This portion of your grade will be determined by your 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.) Any reading quizzes will affect this category.

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 *twice* a week. However, you are encouraged to post more than twice 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 five 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 two or three complete paragraphs. They should be a maximum of two pages.

1st Paragraph. These journals require you to do two different things. Your first **short** paragraph should summarize whatever reading assignment you have for that week. If you are required to read a Sherlock Holmes story or a news story, you should summarize the main points of those items. This paragraph should be rather short—a quarter to a half a page. If your summary is longer than half a page, your journal will be deemed Unacceptable.

2nd (and 3rd) Paragraphs. The next paragraphs of each Response Journal should react to the reading—asking questions, offering answers, clarifying, or problematizing anything discussed in the reading assignment. This 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 in our readings. Use your engineering problem-solving abilities to question and examine our readings.

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?

All I want to see is 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.

Response Journals will be graded on an Excellent—Acceptable—Unacceptable scale based on

- Evidence of reading
- Depth of response
- Clarity of writing

As with the Discussion Board posts, grammar and mechanics will not generally be grounds for Unacceptability unless the Response Journal is incomprehensible. Still, a number of errors in any piece of writing show carelessness or a lack of professionalism, which is enough to dock a Response Journal from Excellent to Acceptable or from Acceptable to Unacceptable.

Make sure you keep all graded Response Journals for submission in your portfolio.

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. 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 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. 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 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. 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 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 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. Be sure to use the standard citation/referencing system that

ENGI-2304

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.

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 presentation should be an approximately 10 minute long PowerPoint presentation, 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.

Your presentations should be uploaded to Blackboard's Digital Drop Box before class begins, and you must complete your entire presentation with questions answered by 15 minutes after class is scheduled to begin. The presentation should then be uploaded to the Blackboard Discussion Board so that other students may see your presentation.

Presentation Critiques

Students will be required to review two presentations, including the *When Technology Fails* Presentations and the Individual Research Report Presentations. For the *When Technology Fails Presentations*, you will choose the date of your review on the same day you choose the date of your presentation. For the Individual Research Report Presentations, you will be randomly assigned a presentation to critique.

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. Therefore, you should choose the day of your review wisely and plan accordingly.

Individual Research Report Presentations will be due the class period after all presentations have been completed.

You should email your presentation critiques via Blackboard both to the presenter and to the instructor.

Your Presentation Critiques should 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."

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

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 to 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	<ul style="list-style-type: none"> • Statement of Goals and Accomplishments • Design and Methodology • Results • Professional Component • Conclusion/Summary References Appendices
Title Page	
Table of Contents	
List of Figures and Tables	
Abstract	
• Introduction	
o Purpose	
o Background	

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*.

Overview of Semester Project

The semester project for ENGI 2304 includes ten milestones:

- Milestone 1:** Technical definition
- Milestone 2:** Letter of intent with technical definition
- Milestone 3:** Schedule
- Milestone 4:** List of specifications with introductory paragraph
- Milestone 5:** Resume
- Milestone 6:** Proposal
- Milestone 7:** Progress Report Memo
- Milestone 8:** Poster for Engineering Students
- Milestone 9:** Technical Presentation

- Option 1:** design a dimmable light switch.
- Option 2:** design a refillable ink pen.
- Option 3:** design a whole-house water purification device.
- Option 4:** design a backyard garden for a family of four.

For these projects, you must design one of the selected devices or systems. If you wish to design a different device, you must have the device approved by your instructor.

You will produce the following documents concerning this project:

- **Milestone 1:** Submit technical definition. For this milestone, you will write a one-page paper defining the device you chose to redesign. You will define an existing device using guidelines from Finkelstein for technical definitions. Include a header with your name and title.
- **Milestone 2:** Submit letter of intent with technical definition. Write a formal business letter to your instructor explaining the option you have chosen for your semester project and why you chose that option. Your letter should be at least three paragraphs—context (explain why you are writing), content (explain your project and include the technical definition revised from Milestone 1), and contact (give your contact information). Follow example 18.3 on page 327 of PBTW, but eliminate the “From,” “Date,” “Subject,” and “To” words. An example of a letter of transmittal is shown in Figure 1. The content will be different for your Letter of Intent, but the format is similar.
- **Milestone 3:** Submit schedule. Use the remaining milestones (3-10) and due dates to develop a schedule for your project. Break up each milestone into three to five specific tasks. Then create a Gantt chart that states all milestones with associated tasks and the dates that you plan to finish them. Include an introductory paragraph that explains the project.

Center for Filtration Studies
 University of Houston
 4800 Calhoun Rd.
 Houston, TX 77004

July 26, 2006

James Bradshaw, Ph.D.
 Cole Associates
 4520 Greeley Lane
 Houston, TX 77004

Dear Dr. Bradshaw:

The following report documents the progress made on the microfiltration project contracted through the Center for Filtration Studies at the University of Houston. This project was begun on March 23 and is scheduled to be completed by November 1. The report includes an updated schedule and budget and details which milestones have been reached and which have tasks have been completed.

This project describes the fabrication and testing of a new microfilter to eliminate lead particles within home filtration systems. The completed system can be installed in homes built prior to 1975 to reduce the dangers of lead water carrying systems.

So far, the project is two weeks behind schedule but well under budget. Our progress is excellent, and we expect to be able to make up the lost time during the testing phase.

If you have questions, please contact me at cwilliams@uh.edu or at (713) 743-5555.

Sincerely,

Clark Williams, Ph.D.
 Research Associate

Figure 1. Sample Letter of Transmittal

- **Milestone 4:** Submit list of specifications with introductory paragraph. Specifications act like a technical definition of your redesign. If the newly designed device were a black box plugged into a system, how would it function? Specifications should include an appropriate header with your name and title, an introductory paragraph that explains the project, and then a list of bullets that defines how your redesigned device will work. Remember to have *specific* specifications and to give quantifiable values. For instance, don't say that the system should be able to "supply enough water to keep a lawn living through the Houston summer." Instead, state that it should be able to "supply 75 gallons of water per week during June, July, and August."
- **Milestone 5:** Submit resume. The resume will become a part of the proposal itself.
- **Milestone 6:** Submit proposal.
 - Include all formal front matter (letter of transmittal, title page, table of contents, lists of tables and figures, abstract)
 - Combine the technical definition, schedule, and specifications to explain what your new design will include. Explain the milestones and tasks and pay yourself twenty dollars an hour.

- The schedule should be revised so that no work completed until now is included. In other words, Milestones 1 through 6 will not be included in the schedule. Be sure to break down Milestone 6 into its requisite tasks, each with a due date.
- Include pictures or drawings of the existing device.
- Begin with an explanation of why the design is necessary and then explain how your new design will attempt to meet all of the specifications. Note that you have not completed the design. This is a proposal to create a new design that meets the specifications you list in the proposal. Then you begin the work of actually designing the innovative device.
- Under the section "Personnel," include your revised resume.
- Sources should be used as a method to define the device. All sources must be properly documented.
- The proposal should be at least four pages long, *not including the front matter* (letter of transmittal through table of contents).
- For the fiscal portion of the proposal, pay yourself \$50 an hour. For the facilities portion, assume that most of the work will be completed at the University of Houston.
- **Milestone 7:** Submit progress report memo. Your progress report is an internal memo addressed to your instructor that lets him or her know how the project is going.
- **Milestone 8:** Submit poster for engineering students. For this poster, each of you will explain your device in a single PowerPoint slide. See <http://www.swarthmore.edu/NatSci/cpurin1/posteradvice.htm> for more information on technical posters.
- **Milestone 9:** Present technical information.
 - At this point, your new design is completed and you have met all of the specifications you outlined for your device. Here, you present the new design to your client.
 - For this presentation, you will present how your new design works using pictures, drawings, and a logical organization. These PPT presentations should be a maximum of 10 minutes long.

Semester Review Essay

Your semester review is an essay about your work in ENGI 2304. It should contain at least two complete pages of material, organized in paragraphs. Please include discussions of the following information, but use effective transitions to flow between your ideas:

- Discussion of your writing process: Now that you have completed ENGI 2304, describe your process when you write. Has this process changed since you entered this course? How and why or why not?
- Discussion of your writing abilities: After completing this course, describe how your writing abilities have changed or not changed. Identify your strong and weak points. How can you continue to work on these weak points?
- Discussion of what you consider to be your best and worst final pieces included in the portfolio: Why do you consider these to be your best and worst pieces?
- Discussion of your future as an engineer: How much writing will you have to do when you graduate? What sorts of writing? How do you feel about your abilities to complete these writing tasks? How will you proceed with them?

NOTE: You may also turn in a complete revision of one assignment. Depending on the extent of the revisions, the paper may be regraded. The revision is due at the same time as the semester review essay.