Table of Contents

[Planning Email #1 -- The Job Application Portfolio 3](#_Toc75515621)

[Writing and Submission Requirements 3](#_Toc75515622)

[Assignment Prompt and Context 3](#_Toc75515623)

[Instructions 3](#_Toc75515624)

[Other Requirements 3](#_Toc75515625)

[Job Application Portfolio 4](#_Toc75515626)

[Writing and Submission Requirements 4](#_Toc75515627)

[Assignment Prompt and Context 4](#_Toc75515628)

[Instructions 4](#_Toc75515629)

[Tailor the Application to the Job 4](#_Toc75515630)

[Offer Convincing Proof 4](#_Toc75515631)

[Use Standard Letter Format and a Readable Résumé Layout 5](#_Toc75515632)

[Planning Email #2 The FA Paper 6](#_Toc75515633)

[Writing and Submission Requirements 6](#_Toc75515634)

[Assignment Prompt and Context 6](#_Toc75515635)

[Instructions 6](#_Toc75515636)

[Planning Email Checklist 7](#_Toc75515637)

[Failure Analysis Project, Part I: Methods and Types of Failure 9](#_Toc75515638)

[Writing and Submission Requirements 9](#_Toc75515639)

[Assignment Prompt and Context 9](#_Toc75515640)

[Document Design for Part 1 9](#_Toc75515641)

[Figure Requirements 10](#_Toc75515642)

[Failure Analysis Paper, Part 2: Case Analysis 10](#_Toc75515643)

[Assignment Context 10](#_Toc75515644)

[Document Design Instructions 10](#_Toc75515645)

[Figure Requirements 11](#_Toc75515646)

[Additional Requirements 11](#_Toc75515647)

[Proposal Prospectus 12](#_Toc75515648)

[Writing and Submission Requirements 12](#_Toc75515649)

[Assignment Prompt and Context 12](#_Toc75515650)

[Instructions 12](#_Toc75515651)

[“A but B” Problem Statement Structure 13](#_Toc75515652)

[Other Requirements 13](#_Toc75515653)

[Progress Memo 14](#_Toc75515654)

[Writing and Submission Requirements 14](#_Toc75515655)

[Assignment Prompt and Context 14](#_Toc75515656)

[Instructions 14](#_Toc75515657)

[Proposal Project: Research Report 16](#_Toc75515658)

[Writing and Submission Requirements 16](#_Toc75515659)

[Assignment Prompt and Context 16](#_Toc75515660)

[Instructions 16](#_Toc75515661)

[Other Requirements 17](#_Toc75515662)

[Research Report Style Guide 17](#_Toc75515663)

[The Proposal Project 18](#_Toc75515664)

[Writing and Submission Requirements 18](#_Toc75515665)

[Assignment Prompt and Context 18](#_Toc75515666)

[The Request for Proposal 18](#_Toc75515667)

[Instructions 19](#_Toc75515668)

[Elements of the Technical Proposal 19](#_Toc75515669)

[Other Requirements 20](#_Toc75515670)

[Proposal Style Guide 21](#_Toc75515671)

# Planning Email #1 -- The Job Application Portfolio

## Writing and Submission Requirements

**Length**:    as needed

**Format**:    Use the Planning Email Template (a Word doc) to compose your message. SAVE the template file so you can use the signature information again. Before submitting your planning email, please be sure to review the following:Top of Form

**Submission**:   Turn text in to E-Learning as an attached document in Word format (.docx). Name the file using your full name and the name of the assignment (e.g.: Emory Smith Planning Email 1.docx).

## Assignment Prompt and Context

**Planning Emails** are designed to model the early planning stages of a writing project. All writers put off writing while their brains are working on what they want to say; in other words, they procrastinate. However, the more complex a writing project is, the earlier the writer needs to begin thinking about the end product. Planning emails help you plan procrastination by asking leading questions and performing preparation tasks.

In addition to planning, the Planning Emails are intended to help you practice professional workplace email communication. Engineering projects managers frequently complain about poor written communication, and even project collaborators have a hard time understanding other members' communication. Thus, Planning emails are graded for the quality of the writing, including both structure and content. ALL email communication with instructors should follow the guidelines used for the Planning Emails (see "Submission Requirements" below.)

## Instructions

In this message, explain your internship choice to your Writing Coach. This will involve analyzing the organization and internship ad, as well as your own experiences/qualities.

* What organization are you applying to?
  + Describe it briefly – what does the organization specialize in? What services or products does it provide? How large is the organization? Does it have a mission statement, objective, or motto?
    - Remember to include the organization’s URL. If there is no web page, then include an explicit mention of how you learned about the organization.
  + Why is this a good internship choice for you?
    - What does the internship ad say it’s looking for?
    - What are your experiences and qualities?
    - How are you a good match?
  + What do you want to get out of the internship experience?

## Other Requirements

* + See “Submission” requirements above for required features. The Planning Email template is also linked on the Canvas Assignment Page.

# Job Application Portfolio

## Writing and Submission Requirements

**Length**:    600 words, minimum

**Format**:    Business Letter, résumé

**Submission**:  Submit to Canvas as Word files (.doc or .docx).  Name the file/s using your first and last name + the name of the assignment (e.g.: Allie Gator Job Application.doc).

## Assignment Prompt and Context

**Prompt**: Write a cover letter and résumé for an internship or job in your discipline/major that you could reasonably apply for now.

**Context:** Internships and other “real-world” experiences are vital for the applications of students in professional and technical fields. Most students will opt to write an application for an internship, but whether you are applying for an internship or an entry-level professional job, find an actual advertisement for the position and write your application in response to that particular position.

## Instructions

### Tailor the Application to the Job

In writing your application, the most important thing to do is to tailor your application to the job. That means you have to match your experience and skills to the requirements for the position. Look carefully at the advertisement, taking note of the terms used to describe the position and the requirements for the position.  Then reflect on your experience and find those elements in the work, research, and service that you have done. In your résumé and cover letter, use the same terminology found in the job advertisement.  For example, if the advertisement says that the organization seeks an “independent thinker” and a “leader,” those words should appear in your letter. You could also consider a section of your résumé devoted to “Leadership Experience.”

### Offer Convincing Proof

It isn’t enough that you put together a pretty application package. You also have to offer convincing proof that you are qualified for the position. In fact, your job is to convince the search committee that you are ideally suited to the position.

### Use Standard Letter Format and a Readable Résumé Layout

Using correct form for letters is your “foot in the door.” Without it, your letter may not even be read by a prospective employer. Like good grammar and mechanics, it is a sign of your professionalism and your ability to communicate. The résumé must be organized such that it can be read quickly and the most convincing evidence stands out emphatically.

# Planning Email #2 The FA Paper

## Writing and Submission Requirements

**Length**: as needed

**Format**: Use the Planning Email Template (a Word doc, linked in the class page) to compose your message. SAVE the template file so you can use the signature information again.

**Submission**: Turn text in to E-Learning as an attached document in Word format (.docx). Name the file using your full name and the name of the assignment (e.g.: Emory Smith Planning Email 1.docx).

## Assignment Prompt and Context

**Planning Emails** are designed to model the early planning stages of a writing project. All writers put off writing while their brains are working on what they want to say; in other words, they procrastinate.

However, the more complex a writing project is, the earlier the writer needs to begin thinking about the end product. Planning emails help you plan procrastination by asking leading questions and performing preparation tasks.

In addition to planning, the Planning Emails are intended to help you practice professional workplace email communication. Engineering projects managers frequently complain about poor written communication, and even project collaborators have a hard time understanding other members' communication. Thus, Planning emails are graded for the quality of the writing, including both structure and content. ALL email communication with instructors should follow the guidelines used for the Planning Emails (see "Submission Requirements" below.)

## Instructions

In this message, explain your plans for the Failure Analysis Paper. Include the following questions/issues in your message. These can be answered one by one, and as briefly as possibly without sacrificing needed detail.

* What is the historical case or recurrent case of failure you’ll focus on in Part 2? (I-beam bends, 2020 Michigan dam failure, I-beam bend or fatigues, software failures)
* What are 2 or 3 types of failures pertaining to this case you’ll discuss in Parts 1-2? (EX: fatigue, stress fracture, program bugs, etc.)?
* Does your field use both destructive or non-destructive methods for analyzing failures? If not, which method is relied on more?
* What are some industry standards that pertain to your case’s failure type(s) or testing methods? (Hint: these can be found in published reports, or references to a type of failure can lead you to look up standards relevant to failure type)
* Figures you are planning for the paper – explain your ideas for the figures and why they are appropriate to that section of the paper.
* In a separate References section, list at least three sources you intend to use for this paper. Include all the bibliographic information needed to verify the source is academic or high-quality trade.

## Planning Email Checklist

**Form** = email is properly formatted, including:

* + Single spaced
  + Left justified
  + One extra space between paragraphs
  + Correct/appropriate addressee, greeting, subject line, closing (including signature)
  + 12 pt serif font (such as Times New Roman) or 11 pt sans serif font (such as Calibri)

**Content** = email is about the correct topic:

* + All information requested is included and no irrelevant information is included

**Readability** = email is cohesive and coherent:

* + Professional tone, signified by neutral vocabulary choices (avoid excessively emotional words

choices such as “totally” or “gibberish” or “perfect”)

* + Appropriate vocabulary
    - jargon is allowed, but keep audience in mind – if a reader is not a content expert in your field of engineering, then provide definitions of necessary technical terms
    - use “standard” English – avoid idiomatic phrases, SMS-type writing, clichés, buzzwords, etc. (since accuracy and comprehensibility are the main goals, language use needs to be appropriate to any audience, with any language background, and various levels of content expertise)
  + Paragraphs are coherent, meaning that each paragraph is about one main thing.
    - overall, short paragraphs work better than long paragraphs
  + Headings and lists are used as necessary
    - If a message has clearly defined topics, using headings helps the reader navigate the next
    - Continue using short, coherent paragraphs within sections

**Mechanics** = sentences are grammatically correct and punctuated correctly

* + Mistakes with grammar and punctuation hurt credibility – the reader assumes that you don’t know the rules and/or didn’t care enough to proofread. Less often, mistakes interfere with comprehensibility.
  + The three most common errors are fragments, run-on sentences, and comma mistakes.
    - **Fragments** – most frequently created when using subordinate clauses, e.g. “I don’t like math. Though I enjoy reading engineering papers.” There should be a comma here – not a period – because “though” creates a subordinate clause, which is a complete sentence that is being added to a main sentence, thus can’t stand on its own. Other subordinating clauses include while, since, although, because.
    - **Run**-**on sentences** – most frequently created when two complete sentences are run together with no period or subordinating clause, e.g. “I enjoy reading engineering papers but I don’t like math my favorite articles are about sustainability and

biomimicry”. Something needs to happen between “math” and “my” – options include a period, a semi-colon, or a comma + conjunction (“, and my favorite…”)

* + - **Commas** – There are too many recommendations here, so I’ll refer you to resources:
      * [Commas via Chapel Hill](https://writingcenter.unc.edu/tips-and-tools/commas/)
      * [Videos from the Writing Studio at UF](https://writing.ufl.edu/writing-studio/for-students/video-resources/grammar-videos/)

# Failure Analysis Project, Part I: Methods and Types of Failure

## Writing and Submission Requirements

**Length**:    1300 words, minimum (for **both** parts of the paper)

**Format**:    IEEE manuscript form (columns not necessary); double spaced, pg #s in upper left, title, headings, both labeled and numbered

**Submission**:        Turn text in to E-Learning as an attached document in Word format (.docx). Name the file using your full name and the name of the assignment (e.g.: Emory Smith FA.docx).

## Assignment Prompt and Context

Failure Analysis (FA) is both a preventative process and forensic tool in engineering. FA is used during the design and development phase of a product, process, or service to systematically anticipate potential points of failure and correct them before the product is released to the consumer. As a forensic process, FA is used to diagnose actual failures and recommend solutions. For both kinds of FA, “standards” may be employed to guide decisions.

Failure analysis methods are discipline specific, but ALL fields of engineering have methods for preventing and diagnosing failures. Logically, “failure analysis” begins with the assumption that failures happen: computer engineers look for bugs, glitches, failed batching, security holes, invalid naming, input/output errors, etc., while those in more physically-oriented fields look for mechanical, chemical, environmental, and use-related stresses (among other possibilities). All fields of engineering have codes and standards to rely on. All fields of engineering have methods for testing during the development phase and as a forensic activity should a failure occur.

In the first part of the report, you will explain the failure analysis methods in your field of engineering. In the second part of the paper, you will select a particular case of failure. At least one of the types of failure in Part I should be related to the case in Part 2. Failure testing is a critical aspect of engineering, so much so that it has career tracks devoted solely to its practice. Thus, we don’t expect your report to be an exhaustive account of all methods! Instead, this report is an opportunity for you to learn about FA.

## Document Design for Part 1

Research and document types of failure as well as failure analysis methods in your field of engineering. Please include the following major subheadings:

1. **Common types of failure in [your field of engineering]**
   * Type of failure
   * Cause of failure
2. **Failure Analysis Methods**
   * **Preventative methods**
     + Non-destructive
     + Destructive
   * **Forensic Methods**
     + Non-destructive
     + Destructive

### Figure Requirements

* At least two images or figures must be used in this section paper. You may use more than two figures. Make sure to label and cite figures properly.
  + Use the Word “References” menu to insert captions.

# Failure Analysis Paper, Part 2: Case Analysis

## Assignment Context

Famous cases of engineering failure include the Challenger Shuttle Disaster, the I-35W Mississippi Bridge collapse in Minneapolis, MN, and more recently, the I-85 bridge collapse and fire in Atlanta, GA. Every day, though, engineering failures happen all over the world, both big and small, with damage ranging from minimal to catastrophic. Failures may be due to manufacturing decisions (e.g., using a lower quality material to cut costs), use violations (the consumer uses the item in an incorrect manner, e.g., pushing a machine past capacity), or unexpected environmental conditions (e.g., extreme weather events or unanticipated air flow through a building). FA as a process is at the heart of balancing production and performance in engineering.

In this part of paper, you will report on an engineering failure in your field and make recommendations for how this failure can be prevented in the future. This failure could be a famous or published case of failure (such as named above) or it can be a common type of failure, such as turbine failure, which you examine using published case studies. The emphasis in this paper is on the Recommendations section – this is your opportunity to use your engineering knowledge to recommend a solution to a problem.

The case doesn’t have to be related to the all the types of failure identified in the first part. However, it should exemplify at least one of them.

## Document Design Instructions

Please include the following sections in your paper:

1. Case Description (what happened?)
2. Case Investigation (what did they find? How did they find it?)
3. Recommendations (how will this problem be prevented in the future?)

**Case description** – the section describes the failure. This includes the context of the failure and why the failure matters.

**Case Investigation** – this section documents the failure analysis methods used in the case, including the tests that were performed and the outcomes of the tests. This section should include all information necessary to understanding the root cause.

**Recommendations** – this section explains the impact of the failure, identifies standards or practices which may have contributed to the failure, and makes recommendations for how to prevent the failure from happening again.

Any of the above sections may have sub-sections. For example, you may use subheadings for each type of test performed. You may also use lists, tables, and diagrams in your paper.

### Figure Requirements

* At least two images or figures must be used in this section paper. You may use more than two figures. Label and cite figures properly.
  + Use the Word “References” menu to insert captions.

## Additional Requirements

* A minimum of 6 high quality sources: academic, trade, and reference texts are acceptable.
  + Using low-quality sources will result in a **25% reduction in grade**.
* The final paper must have a title, Table of Contents, and References page.
  + If you do not use a title page, then include your name in the header with the page number.
  + Use the Word Style menu to create headings. This will allow you automatically generate a TOC using the References tool.
  + Failure to use the Style and References menu will result in a **10% reduction in grade**.

# Proposal Prospectus

## Writing and Submission Requirements

**Length**: 200 words, minimum

**Format**: Memo format -- use the class memo template

**Submission**:  Submit as a Word doc. Name the file using the last names of all group members and the name of the assignment (e.g.: Smith Wesson Colt Prospectus.doc).

## Assignment Prompt and Context

“A prospectus is a formal proposal of a research project developed to convince a reader (a professor or research committee, or later in life, a project coordinator, funding agency, or the like) that the research can be carried out and will yield worthwhile results.” ([Writing a Research Prospectus](https://www.wichita.edu/academics/fairmount_college_of_liberal_arts_and_sciences/english/deptenglish/WritingaResearchProspectus.php)). Writing a is a necessary first step in getting a project—as well as procrastination—properly planned.

## Instructions

Your prospectus should include the following parts.

A tentative title for the Project (title should be interesting but accurate)

* Write in title caps, following the word “Proposal” with a colon – ex: “Proposal: Campus Cloud Storage without the Storm”

A list of contributors (the members of the group, their titles/roles, and affiliations)

* Use a bulleted list
* Contributors are listed in alphabetical order

Project Rationale and Audience (This paragraph introduces the topic, the problem, and explains why it is important and who is affected.)

* Use the “A but B→C” problem statement structure (see below)
* Be concise –one paragraph, no more than 1/3 page
* Like any literature review, citations should be included – use IEEE style
* Conclude with the Research Statement

References

* Include at least **5 credible sources** (scholarly and high quality trade literature)
* use this word as heading for this section
* Use IEEE style

## “A but B” Problem Statement Structure

A problem statement is just what is sounds like—a statement that shows a conflict exists. The “A but B → C” structure is a classic approach that features two (or more) incompatible states co-existing. These incompatible states can be as mild as a gap in knowledge or as strong as an unethical or immoral act. In the workplace, the incompatible states are usually cast as a current situation and goal that are out of sync with one another, e.g. “Students must eat” + “Food must be affordable” + “Food must taste good” BUT “all food on campus is highly processed” + “options limited by meal plan” → “Healthy, tasty, affordable options must be created on campus”. Criteria for success can also be included – what minimum change must happen for outcome to be acceptable? What limits are in place? What benefits accrue from solving the problem? A well-developed problem statement includes the people or variables affected by the problem, too.

The Problem Statement must be evidence-based, too. It is not sufficient to have an opinion because a proposal can only be accepted if the writers can show that a problem exists, and that a solution doesn’t already exist. The proposal writers need to examine the literature for 1) support for the components of the problem itself; 2) evidence that some solution may exist, but needs to be implemented differently for the current situation or that the solution doesn’t exist at all.

For the food example started above, the problem statement (with in-text citations included) could be written as:

Students eat 88% of their meals on campus [1], meaning that all of the benefits of food—nutrition [2], social [3], environmental [4]—must also be available on campus. A survey of options at XU based on meal plan specifications and observation show that of all 27 places to eat on campus, 24 are franchise-based food and 3 are cafeteria style. Examining menus shows that nearly all food is processed, frozen, and none can truly be called vegetarian [5]. Further, the cost of food to students is hidden behind corporate-university deals [6] that are implied by the meal plans but lack transparency. XU students need food options that include more fresh food, greater variety of choices, and more socially interesting spots in which to dine with friends.

In addition to the problem statement, end the prospectus with a research statement covering the most likely process you will use. Here’s an example, continuing from the previous:

Team XUEats will search the business literature for information about university-food franchise deals, the health nutrition literature for ideal food habits for young adults, and survey students about their food habits and the kind of environments they would prefer to dine in.

## Other Requirements

* A minimum of 5 high quality sources: academic, trade, and reference texts are acceptable.
  + Using low-quality sources will result in a **25% reduction in grade**.

# Progress Memo

## Writing and Submission Requirements

**Length**: 300 words, minimum

**Format**: Memo format -- use the class memo template

**Submission**:  Submit as a Word doc. Name the file using the last names of all group members and the name of the assignment (e.g.: Smith Wesson Colt Progress Memo.doc).

## Assignment Prompt and Context

Reports of various kinds dominate the lives of engineers. On big projects, there are usually 3 different kinds of reports: an initial problem analysis, progress reports, and a final document when the project is finished.

For ENC 3246's Proposal Project, you began with a prospectus and will finish with a formal proposal. In the middle, there needs to be a **progress report**. In the summer version of the class, we write a progress memo rather than a full-fledged progress report. The PWG will collaborate on the first 4 sections of the Memo, but write the 5th section individually. Each member will submit his/her Progress Memo individually, **though the first 4 sections should be shared among all group members**. The memo should have the following parts:

1. Purpose
2. Status Summary
3. Work Completed
4. Work to be Completed
5. Assessment of Group

Like all reports, Progress reports (or memos) have "[boilerplate](https://en.wikipedia.org/wiki/Boilerplate_(text))" text -- formulaic portions that repeat from report to report, and that all members of the team are expected to use. Thus, use the language in the descriptions below to write your memo. In addition, use each section label as a subheading in the memo.

## Instructions

Your Memo should include the following parts.

Purpose

* This section begins with the phrase "The purpose of this memo is to report progress on + (name of proposal project)", e.g. "the purpose of this memo is to report progress on All Gator Engineer's proposed solar scooter transportation project".
* The second sentence lists the names of the group members in alphabetical order, e.g. "Members of the team are AA, BB, CC".
* The third sentence begins "We received an RFP from (requesting agency) on (date)".
* The fourth sentence begins "In response, our group is proposing X (your proposal idea) in response to Y (your problem statement as a single statement" -- e.g. "In response, our group is proposing to build solar powered scooter stations across the UF campus to expedite travel between distant campus locations".

Summary Statement

* The first sentence begins "We received an RFP from (requesting agency) on (date)".
* The second part repeats your problem statement from the prospectus.
  + You may copy/paste this
  + Make corrections as needed to your original
* The third section makes a summary statement of overall progress on the project. This should include problems that have been encountered.

Work Completed

* This section should be a numbered list of tasks, the dates the tasks were completed, and initials of group members who completed the tasks.
  + Example:   2) May 4, 2017 -- Completed literature search for information on scooter costs -- AA, BB, CC.

 Work to be Completed

* This section should be a numbered list of tasks for the remaining work, the schedule for completion, and initials of group members assigned these tasks.
  + Example:   2) May 12, 2017 -- Write Executive Summary -- AA, CC.

 Assessment of Group

This section is to be completed individually. Once the previous parts are drafted, share with the group. Then, each team member will complete the Progress Memo and submit individually.

* Report **briefly** on contributions of each member, including yourself. You may use the group evaluation categories: Prepared, Timely, Courteous, Task-Oriented.
* Give brief overall assessment on how well group is functioning.
* If there are problems, be specific -- this is the point at which management (i.e., your instructor and writing coach) can help address issues before it becomes too much to handle.

# Proposal Project: Research Report

## Writing and Submission Requirements

**Length**:     1200 words

**Format**:      IEEE manuscript form -- do not need to use double columns; double space; 12 ft TNR font or 11 pt Calibri

**Submission**: Submit to Canvas as a Word file (.doc, .docx). Please name the file using your first + last name and the name of the assignment (e.g.: Allie Gator Research Report.doc).

## Assignment Prompt and Context

Formal research reports and analytical reports are produced in academia and in many professions. They range in length from very short (800 words) to quite long (6000 or more words). Typically, these reports include an introduction, a methodology, an empirical research or data section, a discussion of the facts, and a conclusion with recommendations. For this assignment, the report must be based on empirical research the group conducts and will follow the formal guidelines presented in the text. For this assignment, you will conduct all work as a group, ***except for writing the final version of the research paper***. Each member will write his/her own report.

Proposal Working Groups will develop and investigate a specific research question targeting some aspect of your proposal. Your report should examine the existing scholarly literature on the subject, collect original data, present findings, and draw conclusions that answer or help to answer the question. The process of conducting empirical research includes these steps:

1. Develop a research question relevant to proposal project.
2. Explain how the existing literature on the subject relates to your study.
3. Design a methodology by which you can answer the question.
4. Collect data using that methodology.
5. Present the outcomes of data collection (e.g. results).
6. Analyze data, establish the answer to your question, and examine its ramifications.

## Instructions

These steps correspond to the parts of the research report, which should appear in your paper:

* Front Material: Title, Table of Contents/Table of Figures, Abstract
* Body of Paper
* Introduction
* Methodology
* Results (or Data)
* Discussion
* Conclusion (optional)
* End Material
* Appendix (if necessary)
* References

In brief, the introduction should establish the question or hypothesis and discuss the context of your work in a literature review. The methodology should precisely and accurately describe the manner by which you gather data that will answer your research question. The results section should display your data logically and clearly, using graphics where appropriate. The Discussion section establishes how the new data fits with existing data, emphasizing logical relationships, discussing the limitations of the study, and defining areas for further research. If a Conclusion is also written, then the conclusion provides a “big picture” statement on how the research might broadly impact the research field, engineering design, or engineering practice.

## Other Requirements

Your report must include a title, an abstract, Table of Contents (generated automatically using Word), references, and whatever appendices are needed to support your work. These elements of the report are not counted for the word requirement.

### Research Report Style Guide

* Use appropriate subheadings (Introduction/Methods/Results/Discussion)
* use page numbers – place in **header**
* double space the whole paper except for the References
* use 1” margins and 12 pt serif font, such as Times New Roman
* **left-justify only**!
* a title is required, but a title page is not.
  + If you do not use a title page, then include your name in the header
* Format in-text citations and references correctly using **IEEE style**!
* Do not state opinions as facts – do not state opinions at all.
* There is **NO** second person (you/your/you're) allowed in science writing – every use of “you” will result in a 2% deduction on the paper.
  + use first person (I/our) sparingly
* Refer to a source paper using only the author/s last name/s (no titles, e.g. “Dr”); do NOT use the name of the journal or title of the article
  + Do not make references to gender.
  + There are **no quotes** allowed in the paper.
* You can only cite what you’ve actually read for the paper – if the article you’re reading refers to somebody else’s work, that’s okay – you cite where *you* got the information. If the information is quite precise – a result or major conclusion – then use a construct like “Johnson (2007) cites Abrams (2003) as finding….”

# The Proposal Project

## Writing and Submission Requirements

**Length**:   1500 words per person

**Format**:   IEEE manuscript form (double columns not necessary)

**Submission**:  Submit to Canvas as a Word file (.doc,.docx). Name the file using the group members’ last names and the name of the assignment with no spaces (e.g.: Smith Wesson Proposal.doc).

## Assignment Prompt and Context

In professional fields, a proposal is a document that argues for the funding of a particular project or attempts to win a contract to develop or build a product. Though the requirements can be described in different ways, the global structure of proposals is virtually always the same: Problem🡪 Solution. You must first define a significant problem and then explain a feasible solution.  Another very important requirement is that you establish the significance of the problem and the benefits associated with the solution. Some funding agencies, in fact, require a separate “significance” section.

This assignment takes the form of an “RFP” or Request for Proposals by the University of Florida. Your task is to form a working group and craft a proposal that will win one of these grants. Your group should have a clear and identifiable identity (name, logo, or group slogan) with which to brand your proposal, and this identity should reference your professional skills.

The proposal should illustrate a clear understanding of the agencies’ needs, a clear focus on benefits, honest and supportable claims, appropriate detail, and a realistic budget. The page design must be accessible, the supplements should be tailored for the different audiences that will read the document, and all sources and contributors should be properly cited.

## The Request for Proposal

The University of Florida Office of Sponsored Research

US Department of Commerce

US Department of Energy

The University of Florida has received a significant new grant from a joint US Department of Commerce and US Department of Energy task force created to stimulate new research opportunities for emerging technologies. These newly created grants stipulate that project proposals, not to be less than $500,000 and not more than $10,000,000, will be awarded to projects which are innovative responses to some of the economic, environmental, and social problems facing America today. Proposals which “significantly improve the quality of life for individual American citizens at home, at work, or at school, or directly and immediately improve the quality and competitiveness of American industry within the global marketplace” will be given top priority.

The Office of Sponsored Research is now actively soliciting proposals from all interested firms in North Central Florida. An awards committee, in conjunction with donor agencies, will prioritize applications and decide which local proposals get funding for this fiscal year.

The proposal should illustrate a clear understanding of the agencies’ needs, a clear focus on benefits, honest and supportable claims, appropriate detail, and a realistic budget. The page design must be accessible, the supplements should be tailored for the different audiences that will read the document, and all sources and contributors should be properly cited. Proposals should have all of the elements listed above.

## Instructions

**Step One**: Read the RFP – note details about what the RFP is looking for (first paragraph!)

**Step Two**: Meet group members – brainstorm ideas that fulfill the RFP

**Step Three**: Write a prospectus that makes the motivation for your proposed project clear

**Step Four**: Begin collecting data necessary for the research report section of the proposal

**Step Five**: Submit a progress memo to your supervisor (instructor)

**Step Six**:  Submit your proposal

### Elements of the Technical Proposal

**1. Letter of Transmittal (not more than one page):** This is the final letter to the Office of Contracts and Grants. It is the cover letter for your Proposal. An opening paragraph will advise that the proposal is attached. Middle paragraphs will recall the elements of the problem, research, and plan. A final paragraph will express confidence that the project has merit and deserves consideration for funding. Include a contact number.

**2. Title Page:** Include title, name and address of the foundation, your name, and the date. A graphic might be used. This page needs attention to design as well as content.

**3. Executive Summary (not more than two pages):** An executive summary is typically written for a non-academic audience--a busy senior executive, or the donor perhaps, who cannot take time to read an entire proposal but wants to know the general ideas from many proposals. In about a tenth of the size of the whole report, the summary defines the problem, outlines the key elements of the plan, and closes with a statement expressing confidence that with funding this proposal will yield significant benefits. It must be written in the third person without citations. Number this page as lower case Roman numeral two (ii).

**4. Table of Contents:** This page lists all sections and subsections of your paper along with the starting pages. Attend to formatting as well as content. Continue numbering with Roman numerals.

**5. Table of Figures and Tables:** List each figure along with its title. Show the page where the figure appears. Format should be consistent with the Table of Contents.

**6. Problem Statement or Task:** In this section you are introducing the problem and attempting to make a persuasive argument for the seriousness of the issue. Primary research information is essential in this section, and this must be used in conjunction with standards, formulae, or principles used in your field to establish norms for problems such as the one which is the subject for this paper. A visual aid is also needed. The opening page of this section begins the use of Arabic numerals.

**7. Background and Research:** Research helps the proposal establish authority. Examining the research relating to the topic and the ways the problem has been dealt with in the past creates the foundation for the proposed plan of action. In technical or non-academic proposals, this review is incorporated into both the problem statement and the solution and tends to be a bit shorter than reviews in academic proposals.  Use scholarly and professional sources rather than popular ones.

**8. Solution or Technical Plan:** This is the section where the details of the plan are presented. Organization of the section will depend on the nature of the plan and the number of elements. The plan must logically follow from the literature review. Bulleted or numbered lists can be useful for organizing the plan components. In this section, try to explain what needs to be done and how to go accomplishing them. Include visuals to help illustrate the plan.

**9. Budget and Schedule:** Be as detailed as possible. Strive for realistic figures. Items in the budget must be directly related to aspects of the Technical Plan. In some cases, it might be necessary to include budget justification statements for specific items.

**10. Evaluation Plan:** Explain how the plan's success will be evaluated and how that evaluation will be reported to the funding agency (typically in the form of progress reports). Also try for a strong persuasive statement to convince the foundation that this plan deserves funding.

**11. References:** Include at least eight sources (twenty wouldn’t be out of the ordinary). The list should only include scholarly and professional sources. Remember that the overall persuasiveness of the proposal depends upon the strength of the authorities researched to help establish the logic for the plan.

**12. Visual Aids: tables, graphs, drawings, etc. (integrated into the text):** At least four visuals must be included in the paper, though many topics require more to clearly develop the Technical Plan section.

**13. Appendix (if necessary; often not required):** Visuals that are too large to integrate into the text might be placed in an appendix. Copies of questionnaires or other documentation relating to the primary research should be placed in an appendix.

## Other Requirements

Your report must include a title, an abstract, Table of Contents (generated automatically using Word), references, and whatever appendices are needed to support your work. These elements of the report are not counted for the word requirement.

### Proposal Style Guide

* Use appropriate subheadings (see above)
* use page numbers – place in **header**
* double space the whole paper except for the Letter of Transmittal, Executive Summary, and References
* use 1” margins and 12 pt serif font, such as Times New Roman OR 11 pt sans serif font, such as Calibri
* **left-justify only**!
* Format in-text citations and references correctly using **IEEE style**!
* Do not state opinions as facts. Persuade the audience using evidence and logic.
* There is **NO** second person (you/your/you're) allowed in science writing – every use of “you” will result in a 2% deduction on the paper.
  + use first person (I/our) sparingly
* Refer to a source paper using only the author/s last name/s (no titles, e.g. “Dr”); do NOT use the name of the journal or title of the article
  + Do not make references to gender.
  + There are **no quotes** allowed in the paper.
* You can only cite what you’ve actually read for the paper – if the article you’re reading refers to somebody else’s work, that’s okay – you cite where *you* got the information. If the information is quite precise – a result or major conclusion – then use a construct like “Johnson (2007) cites Abrams (2003) as finding….”