* **Project Description**

This Project is intended to provide you the opportunity to apply knowledge from the course in solving a real world problem.  The primary focus of the Project is on the first phase of problem solving, which is Problem Definition.

Consider the following phases of **solving a real world problem:**

* + Identify the problem
  + Define the problem
  + Develop possible solutions
  + Evaluate the possible solutions and choose
  + Plan and implement the solution
  + Monitor situation and follow-up with corrective actions

The Project will focus on the Problem Definition and will

* + Consist of a research paper using solid research and analysis techniques
  + Use at least three academic references for a real world project
    - Academic references are journal articles from academic journals or books written by academic authors
    - Other references can be used as well, including magazine articles, websites, newspaper articles, etc.
  + Be formatted according to APA guidelines
  + Have a topic that is within the field of Engineering Management
    - You should focus on a specific, practical issue  (from work, life, societal, global, etc.) affecting an individual or group

**The primary emphasis of the paper is to define the problem and then discuss how it might be solved**

* + **NOTE:  It is not necessary to solve the problem, just discuss how**

**A Real World problem:**

Before you can solve the problem, you must first define it.  This consists of steps 1 and 2 from above. These will include:

* + The problem definition needs to
    - Provide background of the situation
      * What has been happening
      * What are some symptoms or how has this problem come to your attention
    - Provide a statement of the problem gap
      * Current situation or status
      * Desired situation, or goal state
    - Provide evidence and data about the current situation
    - Be clear about how the achievement of the goal will be determined
  + The paper should also discuss steps 3 – 6, based on knowledge from Engineering Management:
    - You should recommend how you will generate solutions and evaluate them
    - How you will plan and implement the solution
    - How you will follow-up and make corrective action
    - You do not need to do steps 3 – 6, just make recommendations for how they will be done.

**The basic outline of the paper should be:**

* + Introduction:  A few introductory sentences providing a brief outline of the overall paper.
  + Background:  What is the situation and how the opportunity was identified.
  + Problem Statement:  Discuss the problem based on the descriptions provided above.
  + Recommendations:  How you will proceed to the final step.
  + References:  You must cite each references in the text of your paper using APA format.

**SOME EXAMPLES of REAL WORLD PROJECTS:**

* + Reducing inventory at work and generating a cost savings
  + Improving the flow of paperwork and reducing errors
  + Developing a lean manufacturing process improvement
  + Reducing waiting time in a queue at work
  + Analyzing a new machine in terms of process capacity and cost improvement
  + Develop a schedule for personnel in your work group (or for somebody else)
  + Improving the flow of customers at a fast food restaurant, bank, grocery store (might be a challenge to get data)

**Paper Schedule:**  At the end of each week (Sunday, Midnight for weeks 1 - 3 and Saturday for week 4)

* + Week 1 – Project topic:  This should be one or two paragraphs about the topic including problem definition, background and some info about the current situation and the goal.
  + Week 2 – Outline and Methodology:  Include a basic outline with some details fleshed out. In addition, provide methodology of how the problem is solved, and reasons for selecting the methodology.
  + Week 3 – Draft paper:  Submit a draft paper containing results and conclusions.
  + Week 4 - Final Paper:  Thorough and complete to convey your point and limited to a maximum of 10 type written pages.  The format of the paper needs to follow APA format.
* ****[**Week One - Project Topic**](https://nu.blackboard.com/webapps/assignment/uploadAssignment?content_id=_10081543_1&course_id=_132590_1&group_id=&mode=cpview)

**Not Graded:** Use the link above to submit this weeks project assignment.  (DUE: Sunday, Midnight)

* + **Week 1 – Project topic:  This should be one or two paragraphs about the topic including problem definition, background and some info about the current situation and the goal.**
  + Week 2 – Outline and Methodology:  Include a basic outline with some details fleshed out. In addition, provide methodology of how the problem is solved, and reasons for selecting the methodology.
  + Week 3 – Draft paper:  Submit a draft paper containing results and conclusions.
  + Week 4 - Final Paper:  Thorough and complete to convey your point and limited to a maximum of 10 type written pages.  The format of the paper needs to follow APA format.
* ****[**Week Two - Outline and Methodology**](https://nu.blackboard.com/webapps/assignment/uploadAssignment?content_id=_10081544_1&course_id=_132590_1&group_id=&mode=cpview)

**Not Graded:**  Use the link above to submit this weeks project assignment.  (DUE: Sunday, Midnight)

* + Week 1 – Project topic:  This should be one or two paragraphs about the topic including problem definition, background and some info about the current situation and the goal.
  + **Week 2 – Outline and Methodology:  Include a basic outline with some details fleshed out. In addition, provide methodology of how the problem is solved, and reasons for selecting the methodology.**
  + Week 3 – Draft paper:  Submit a draft paper containing results and conclusions.
  + Week 4 - Final Paper:  Thorough and complete to convey your point and limited to a maximum of 10 type written pages.  The format of the paper needs to follow APA format.
* ****[**Week Three - Draft Paper**](https://nu.blackboard.com/webapps/assignment/uploadAssignment?content_id=_10081545_1&course_id=_132590_1&group_id=&mode=cpview)

**Not Graded:**  Use the link above to submit this weeks project assignment.  (DUE: Sunday, Midnight)

* + Week 1 – Project topic:  This should be one or two paragraphs about the topic including problem definition, background and some info about the current situation and the goal.
  + Week 2 – Outline and Methodology:  Include a basic outline with some details fleshed out. In addition, provide methodology of how the problem is solved, and reasons for selecting the methodology.
  + **Week 3 – Draft paper:  Submit a draft paper containing results and conclusions.**
  + Week 4 - Final Paper:  Thorough and complete to convey your point and limited to a maximum of 10 type written pages.  The format of the paper needs to follow APA format.
* ****[**Week Four - Final Paper**](https://nu.blackboard.com/webapps/assignment/uploadAssignment?content_id=_10081546_1&course_id=_132590_1&group_id=&mode=cpview)

**GRADED:**   Use the link above to submit this weeks project assignment.  (DUE:  SATURDAY, Midnight)

* + Week 1 – Project topic:  This should be one or two paragraphs about the topic including problem definition, background and some info about the current situation and the goal.
  + Week 2 – Outline and Methodology:  Include a basic outline with some details fleshed out. In addition, provide methodology of how the problem is solved, and reasons for selecting the methodology.
  + Week 3 – Draft paper:  Submit a draft paper containing results and conclusions.
  + **Week 4 - Final Paper:  Thorough and complete to convey your point and limited to a maximum of 10 type written pages.  The format of the paper needs to follow APA format.**