ENGR 1322 SWJTU
Lecture Assignment #2
Due before 8:00am on Thursday, October 22, 2020

Submission Method: Upload your three pdf files to the ***Lecture Assignment #2*** dropbox on Canvas. Please be careful to upload your files to the correct dropbox. Make sure your name is included in each file.

Note: It is possible to earn 30 points on this assignment, while the gradebook value of this assignment will be 25 points. Any points you earn above 25 will count as extra-credit toward your overall course grade.

Late work is not accepted.

Problem #1: Decision Matrix (10 pts.)

Imagine that you have just landed your first engineering job and have relocated to Chicago, IL. You are trying to determine how you will commute to and from your place of employment in downtown. You have decided to live five miles outside of the city in order to reduce your housing costs. Pick five (5) available and practical transportation methods (e.g. train/subway, skateboard, ferry, walking, automobile) that you could use for commuting on a daily basis. Using a decision matrix, evaluate each transportation option based on five different criteria of your choosing (e.g. time, reliability, cost, susceptibility to traffic or weather). Using a 0 to 4 scale, with 4 being the best, calculate which transportation option will be most suitable for you.

a) Identify five (5) transportation methods suitable for your commuting scenario.
b) Identify five (5) reasonable evaluation criteria.
c) Build your matrix and fill it in.
d) Write a short paragraph explaining your choices and the result of your analysis. (If you created your decision matrix in Excel, you can just insert a text box below your matrix to contain this paragraph.)

Note: You may want to conduct some research on Chicago, including weather, traffic, and different transportation methods.

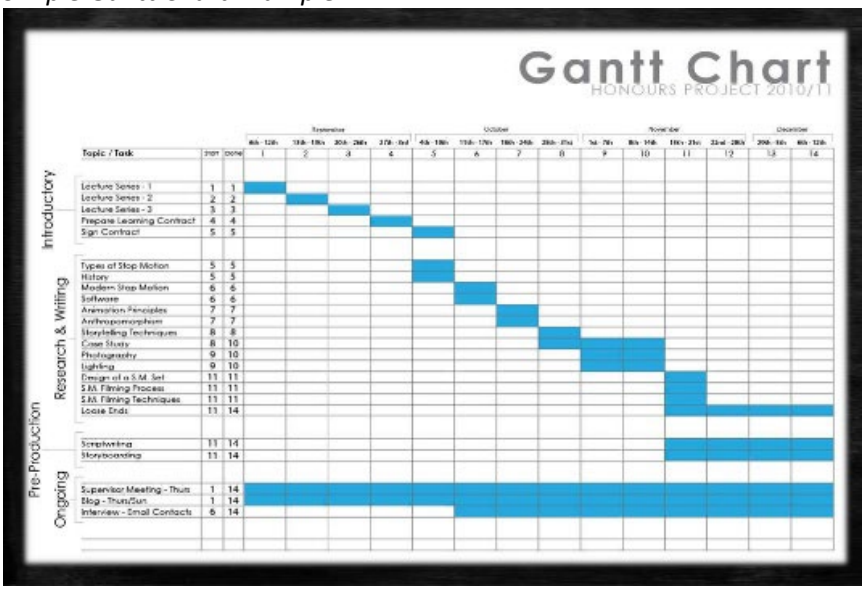
Format: Create your chart in the spreadsheet software of your choice and save to .pdf.
File Name: [Your Last Name] HW#2 Decision Matrix.pdf

Problem #2: Gantt Chart (10 pts.)

Imagine that you are planning a surprise birthday party for a friend or family member. Develop a simple Gantt Chart to represent all of the activities associated with the party planning process. Assume you have 30 days to complete the entire process. Consider activities like identifying a date and venue, planning a menu, decorating, etc. Your Gantt Chart should include all activities (no less than 10 and no more than 20), planned start days and durations, and a graphic representation of the activity timing. Use days as your time period (e.g. Day 1, 2, 3). Activities should be organized in chronological order by start date. ***Microsoft Excel*** has a nifty project planner template. You may use this template or create your own. Searching for Gantt Charts on the internet will provide you with plenty of examples.

Format: Create your chart in the spreadsheet software of your choice and save to .pdf.
File Name: [Your Last Name] HW#2 Gantt Chart.pdf

Simple Gantt Chart Example



Problem #3: PERT Chart (10 pts.)

Develop a PERT Chart to detail your party planning process from Problem #2. Include activity titles and durations and **identify the critical path**. You may have several different pathway branches. The point of this exercise is to practice identifying the process activities and their interdependency, including which items can occur concurrently and how items may stack up to form a critical path. Either ***Microsoft Word*** or ***PowerPoint*** would be suitable for developing this chart. Searching for PERT charts on the internet will provide you with plenty of examples.

Format: Create your chart in the software of your choice and save to .pdf.
File Name: [Your Last Name] HW#2 PERT Chart.pdf