H. JOHN HEINZ III COLLEGE | CARNEGIE MELLON UNIVERSITY
PROJECT MANAGEMENT FALL 2021 – 94813 A1 / B1 / C1
COURSE SYLLABUS

INSTRUCTOR

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Office Hours: By Appointment

TEACHING ASSISTANTS

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TA Office Hours (Zoom): Will be posted on the Canvas Announcements page

COURSE DESCRIPTION

As organizations continue to look for ways to reduce costs, managers are often expected to oversee special projects in addition to their traditional responsibilities. When a project is too complex for one person to handle, the project manager is expected to lead a team of diverse employees to complete the assignment. This course will assist the project manager to break down a complex project into manageable segments, lead a diverse project team, and use effective tools to ensure that the project meets its deliverables and is completed within budget and on schedule. Over the course of the mini, students will complete a plan for an actual project, giving them valuable experience with the relevant tools and skills, including Microsoft Project software.

COURSE OBJECTIVES	HOW ASSESSED
Upon completion of this course, the student will be able to:	
• Implement the key steps involved in managing a project	• Assignments 1, 2, 3, 4, 5, 6, 7
• Organize the project into manageable components	• Assignments 1, 2, 3, 4, 5, 6, 7
• Successfully lead project teams and work with stakeholders	• Assignment 7 • Class Participation
• Use effective tools to oversee and monitor complex projects	• Assignments 1, 2, 3, 4, 5, 6, 7
• Develop project budgets and schedules	• Assignment 5
• Bring complex projects to successful completion	• Assignment 7
• Use Microsoft Project to create a project plan and monitor progress	• Assignment 6
• Develop a comprehensive project plan which is ready for implementation	• Assignment 7
• Analyze and apply lessons from other actual projects	• Class Participation

This document is divided into three components, each beginning on the following pages:
- Page 1: Course purpose, expectations, instructions, and grading
- Page 8: Course daily schedule
- Page 13: Assignment rubrics

COURSE STRUCTURE AND MODALITY
The modality for all three sections of this course is In Person Expectation (IPE). However, this is a "flipped" course format, and most lectures have been videotaped and are to be viewed asynchronously on Canvas prior to the date noted on the syllabus. Slides, which may be made available on Canvas, are not substitutes for the pre-recorded lectures and attending class.

Class sessions (in person at scheduled times) will be for discussion of concepts, cases, exercises, current events and providing examples of completed assignments.

COURSE ANNOUNCEMENTS AND DISCUSSION BOARD POSTS
Students are responsible for ensuring that they receive all notifications regarding the course. As such they need to go to Canvas / Account (Upper Left) / Notifications then select the checkmarks next to three areas: Announcement, Discussion and Discussion Post. There is also a Canvas app that provides notifications regarding the course.

CLASS ATTENDANCE
Attendance at classes is critical for successful completion of the course. Students will be expected to watch pre-recorded lectures and download relevant course materials from Canvas prior to class. The professor frequently provides verbal explanations, clarification and instructions regarding concepts, assignments, and course deliverables during class time. Examples of project plans may also be reviewed and discussed during class. It is assumed that students will attend every class in its entirety and take notes in order to ensure that they do not miss this essential part of the course. **Since students will be expected to view lectures outside of course time, there will be fewer required in-class sessions as noted on the syllabus.**

MICROSOFT PROJECT TUTORIAL
By the end of this course, students are expected to have acquired basic skills with Microsoft Project, a commonly used project management software product employed in many industries. A tutorial will be held either during class or asynchronously.

REQUIRED SOFTWARE
Students are required to either install or access via Heinz Virtual Lab two software programs for this class:
- Microsoft Visio 2019 (Assignment 4) and
- Microsoft Project Professional 2019 (Assignment 6)

Both Microsoft Project and Visio are free for CMU students. Instructions for accessing software using Heinz Virtual Lab can be found on the Heinz Computing Services website: https://www.heinz.cmu.edu/current-students/computing-services/virtual-labs. Instructions and links to download the software (if you have a PC) at https://www.cmu.edu/computing/software/all/msazure-dev-tools/index.html are available on Canvas under Modules. **Please be sure to read the detailed instructions on Canvas!** At the end of the drop/add period, I will be sending a list of non-Heinz students to Heinz Computing Services so that those students can gain access to the Heinz Virtual Lab. Please test these programs at the start of the Mini so that you have time to contact CMU Computing Services (it-help@cmu.edu) if you experience any problems.

ETHICAL STANDARDS
Students are expected to maintain the highest ethical standards with respect to plagiarism and cheating. Neither plagiarism nor cheating will be tolerated on any exercises, quizzes, exams or assignments. Students may collaborate with others only when expressly permitted by the instructor. Students who violate academic standards will at a minimum receive a failing grade for the assignment and may also receive a failing grade for the course. Such cases will be referred to the Associate Dean, who may decide to take further action.

REQUIRED READINGS
There is no required textbook for the class. Students are, however, required to read cases that will be discussed in class and are available on Canvas.

Many students prefer to supplement class lectures with readings, so the following books are recommended, but are not available in the CMU bookstore:
- Pinto, Jeffrey K., **Project Management, Achieving Competitive Advantage** (5nd Edition), Prentice Hall 2019 I ISBN-10: 0136065619 I ISBN-13: 978-0136065616
- Project Management Institute, **A Project Management Body of Knowledge (PMBOK Guide)** (7th Edition)
- Mantel, Samuel J., Jack R. Meredith, Scott M. Shafer, Margaret M. Sutton, **Project Management in Practice** (7th Edition), Wiley 2020

OFFICE HOURS AND QUESTIONS REGARDING THE ASSIGNMENTS
The teaching assistants (TAs) will hold weekly office hour sessions throughout the mini for students to ask questions about the assignments.

All other questions regarding the course or assignments should be posted to the Canvas discussion board. In this way, all students will be able to review answers to other questions. All students are required to monitor the discussion board on a frequent basis to ensure that they have up to date information since the board is also used to post clarifications regarding the assignments. It is suggested that each student subscribe to each of the seven threads to be notified of posts. The instructor and the TAs will be checking the discussion board Monday-Friday 9AM to 8PM EST and occasionally on weekends**.** Please note that questions received via e-mail or phone, and last minute questions regarding an assignment will not be answered. Personal questions regarding the course should be directed to the instructor.

USE OF ELECTRONIC DEVICES
Laptops, tablets, cell phones and other electronic devices are not permitted in class. There are two reasons for this:
- Research on learning shows that unexpected noises and movement automatically divert and capture people's attention, which means you are affecting everyone's learning experience if your cell phone, laptop, etc. makes noise or is visually distracting during class.
- The use of electronic devices in past sections of Project Management has demonstrated that they are too distracting for students and can have an adverse effect on class performance.

There may be specific days when students will be working on assignments during class sessions, and there will be advance notice that laptops would be permitted on those days.

RECORDING OF CLASS SESSIONS
No student may record or tape any classroom activity without the express written consent of the instructor. If a student believes that he/she is disabled and needs to record or tape classroom activities, he/she should contact the Office of Equal Opportunity Services, Disability Resources to request an appropriate accommodation.

SPECIAL REQUIREMENTS RELATING TO COVID-19
For Our In Person Course:
In order to attend class in person, I expect that you will abide by all behaviors indicated in **The Tartan's Responsibility**, including any timely updates based on the current conditions. In terms of specific expectations for in-person students, this includes wearing a facial covering throughout class if mandated by the university. If you do not wear a facial covering to class, I will ask you to put one on (and if you do not have one with you, you will need to procure one). If you do not comply, please remember that you will be subject to student conduct proceedings, up to and including removal from CMU. Accordingly, I will be obliged to take other measures for the safety of the whole class.

If We Need to Go Fully Remote
If the class needs to go fully remote, you will receive an email from me and an announcement will be published on our course website on Canvas. If this happens, I will create Zoom links which will be available on Canvas. Please make sure that your Internet connection and equipment are set up to use Zoom and able to share audio and video during class meetings. (See this page from Computing Resources for information on the technology you are likely to need.) Let me know at synnott@cmu.edu if there is a gap in your technology set-up as soon as possible, and we can see about finding solutions. If we do need to use Zoom, students are expected to have their cameras on during class.

COURSE PERFORMANCE EVALUATION
Student performance will be evaluated based on performance in two categories, Project Plan Assignments and Class Participation:

1. **Project Plan Assignments**
    Students will be asked to complete a comprehensive project plan incorporating lectures, class discussions, cases, and Microsoft Project software. Since this is the primary deliverable of the class, it is weighted the most heavily. The project plan is broken into seven assignments, worth 90% of the student grade.

    Project Selection: Select a group project that has been completed and on which you worked in some capacity, and develop a Project Plan for that project.   (This is *not* a group assignment.) Refer to sample documents on Canvas for templates of many of the required components for your Project Plan, in addition to examples given in class. Examples of appropriate projects include:
    *   a group assignment at school,
    *   a group project at work,
    *   planning an event
    *   developing a program or training, etc.

    The project needs to have a minimum of 10 tasks (preferably more) and should have duration of at least two weeks. No two students can select the same project, so please check with other team members to ensure that they aren't planning to use the same project for their assignments.

It is highly recommended that you go to office hours after the first class to speak with a TA about the appropriateness of your project for the course.

Assignment Grading Methodology: Each assignment of the Project Plan will be graded according to the rubrics which are included in the second part of this document, "Project Plan Assignments." The rubrics for each assignment outline what meets and does not meet requirements, and are used for Canvas grading. Be sure to follow the rubrics in the syllabus and make sure you complete the necessary components, then you can view the Canvas rubrics to see point distribution. All templates presented in class must be followed.

Each assignment is worth 100 points and required components will be graded as follows:
- Meets Requirements: The assignment meets the basic requirements in all areas outlined on the rubric
- Does Not Meet Requirements: The assignment doesn't meet basic requirements, is incorrect or is incomplete.
- Exceeds Requirements: Those assignments which go over and above requirements will receive higher scores. Students will need to show initiative in finding ways to exceed requirements; they are not provided in the rubrics. Some assignments do not lend themselves to exceeding requirements, but since final grades are curved, students are not penalized for those assignments. Examples of ways that exceed requirements include but are not limited to:
    - in-depth analysis, exceptional writing, and other demonstration of additional effort
    - thoroughness and comprehensive descriptions
    - inclusion of additional project plan components which are covered in class, or which the student researches on his or her own time

Additional detail, analysis and components which require the most <u>effort</u> will receive the most credit. Note that any additional components or analyses need to be <u>accurate and complete</u> to receive credit. Also, they should be provided at the time that they are relevant to the assignment (for example, comprehensive budget calculations and explanations should be provided when the budget is due).

Note that actual project plans submitted by former students are sometimes used in class and TA office hours as examples, but since such plans were submitted in prior semesters, they do not necessarily meet current assignment instructions. <u>Always refer to the assignment instructions in the syllabus for current semester requirements</u>.

Project Submission Instructions:
1. For all assignments, please save your files with your *last name in the title* (for example, "SmithProjectPlan1.pdf").
2. If you make any assumptions in the development of any part of your project plan, please put those assumptions in writing in a Word or PDF document and submit the document with your assignment.
3. <u>For Assignment 6 Only</u>: For this Microsoft Project (MSP) assignment, submit the entire Microsoft Project file to Canvas by the deadline outlined on the syllabus, and name the MSP file with your last name in the title ("SmithMSProject.msp").

Late Assignments:
Points will be taken off for late and incomplete submissions. A *late* assignment is one that is not submitted by the due date at **6:00pm**, evidenced by the Canvas time stamp. An *incomplete* assignment is missing key components.

Students should notify the instructor if they intend to submit their assignment late, but point deductions will still occur. **No late assignments will be accepted after Friday at 6:00pm** (for Assignment 1 only it is Saturday at 6:00pm).

Point deductions:
- **10 points (Late):** Assignment was late but all requirements and versions were submitted before Friday at 6:00pm.
- **(Incomplete)**: An assignment component is absent on Friday at 6:00pm and will be scored based on what is submitted.
- **100 points (Missing):** Nothing is submitted before Friday 6:00pm.

2. **Class Participation**
   There are two components to the class participation score: Attendance and Participation.

   Attendance plays a critical role in course performance, and it is taken at the start of class. Students are permitted one absence during the mini, which can be used for illness, travel, a job interview or other reason. Additional absences will result in a lower score.

   Students are expected to consistently participate in class discussions throughout the mini. It is also evidenced by coming to class prepared to discuss assigned cases or current events. The instructor will assess participation throughout the course as follows:
   a. Low: Does not or rarely participates
   b. Medium: Participates on a moderate level
   c. High: Actively and appropriately participates

   Experience has shown that the class participation score can often increase or decrease a student's final course grade.

3. **Overall Course Performance**
   Performance will be evaluated according to the following weights:

1.	Assignment 1	5%
2.	Assignment 2	10%
3.	Assignment 3	15%
4.	Assignment 4	15%
5.	Assignment 5	15%
6.	Assignment 6	15%
7.	Assignment 7	15%
8.	Class Participation	10%

   Total (graded on a curve)   100%

Final grades are based on a curve and are assigned based on your *relative* performance in comparison to classmates' performance. The Heinz College faculty has endorsed guidelines for assigning grades, stating that the mean grade in an elective course should be approximately 3.5 (B+ / A-).

4. **Corrections to Previously Submitted Assignments:**

Assignment 7 Consolidated Plan: Students are required to make revisions and corrections to previous assignments and incorporate them into the consolidated version for Assignment 7. Such corrections are necessary in order to meet the requirements for the final assignment and will not qualify for extra points or result in a re-grade of previous assignments.

PROJECT MANAGEMENT 94-813 SCHEDULE

Pre-recorded lectures and required readings are to be reviewed <u>before</u> the date listed on the syllabus. Additional readings may be required prior to classes where current events are discussed. The instructor will notify students in advance of such classes.

Tuesday August 31, 2021

<u>Topics</u>
- Course Overview – students will need to read the syllabus before next class.
- Introduction to Project Management

<u>Pre-Recorded Lectures</u>
- Course Overview
- Project Management Overview
- The Triple Constraint
- Project Selection (for assignments)

Students are required to do the following two things:

1. Acknowledge on Canvas that they have read the syllabus and understand the course requirements. The Syllabus Attestation can be found under Modules.

2. Ensure that they receive all notifications regarding the course. As such they must go to **Canvas / Account (Upper Left) / Notifications then select the checkmarks next to three areas: Announcement, Discussion and Discussion Post**.

Thursday September 2, 2021

<u>Topic</u>
- Scope Management

<u>Pre-Recorded Lectures</u>
- Scope Management
- Scope Statement
- Project Management Roles

Friday September 3, 2021 – NOTE: This is the only assignment that is due on a Friday. All others are due on Thursdays.

<u>ASSIGNMENT 1 DUE on Canvas</u>: 1 page executive summary of project plan

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Tuesday September 7, 2021

Topics
- Scope Management, continued

Pre-Recorded Lectures
- Stakeholder Analysis
- Work Breakdown Structure

Thursday September 9, 2021

Topic
- Duration Estimates for the Work Breakdown Structure
- The Project Lifecycle
- Lifecycle Effects

Pre-Recorded Lectures
- Duration Estimates
- Project Lifecycle

Thursday September 9, 2021

ASSIGNMENT 2 DUE on Canvas: Scope Statement: justification, description, deliverables, known exclusions and objectives

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Tuesday September 14, 2021

Topic
- Time Management
- Critical Path Method

Pre-Recorded Lectures
- Time Management

Thursday September 16, 2021 – NO CLASS, but students are required to watch pre-recorded lectures

Topics
- Time and Critical Path, continued
- Managing Projects in Different Organizational Structures
- The Change Control System

Pre-Recorded Lectures
- Time and Critical Path, continued
- Organizational Structures
- Change Control System

Thursday September 16, 2021

ASSIGNMENT 3 DUE on Canvas: Stakeholder Analysis and Work Breakdown Structure

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Tuesday September 21, 2021

Topics
- Class Discussion of Code Red Case
- Team Leadership

Reading
- Case: Code Red (on Canvas)

Pre-Recorded Lectures
- Leading the Team

Thursday September 23, 2021 – NO CLASS, but students are required to watch pre-recorded lectures

Topics
- Cost Management
- Quality Management

Pre-Recorded Lectures
- Estimating Costs
- The Activity Based Budget
- Quality Management

Thursday September 23, 2021

ASSIGNMENT 4 DUE on Canvas: Network Diagram with highlighted Critical Path

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Tuesday September 28, 2021

Topics
- Class Discussion of Petersen Events Center Case
- Fast Track Projects

Reading
- Case: Petersen Events Center Case (on Canvas)

Thursday September 30, 2021 – Bring Laptops to Class

Topic
- Microsoft Project (MSP) - download software or access via Heinz Virtual Lab before class

Reading
- Microsoft Project Tutorial document (will be available on Canvas and a paper copy will be distributed in class to follow along with tutorial)

Thursday September 30, 2021

ASSIGNMENT 5 DUE on Canvas: Budget and Quality Management Plan

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Tuesday October 5, 2021 - Bring Laptops and Microsoft Project Tutorial document to class

Topic
- Microsoft Project Tutorial (continued)

Thursday October 7, 2021 – NO CLASS, but students are required to watch pre-recorded lectures

Topics
- Risk Management
- Agile Project Management

Pre-Recorded Lectures
- Risk Management
- Agile Project Management

Thursday October 7, 2021

ASSIGNMENT 6 DUE on Canvas: Microsoft Project Assignment

Tuesday October 12, 2021 – LAST DAY OF CLASS

Topics
- Course Wrap-Up
- Leadership Attributes of Effective Project Managers
- Course Evaluations

Pre-Recorded Lectures (Optional)
- PMP and CAPM Certification
- Program Management Office

Thursday October 14, 2021

ASSIGNMENT 7 DUE on Canvas: Consolidated Project Plan, Lessons Learned, Risk Management Plan

Take care of yourself. *This course's workload is divided into manageable weekly segments. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress.*

All of us benefit from support during times of struggle. You are not alone. There are many helpful resources available on campus and an important part of the college experience is learning how to ask for help. Asking for support sooner rather than later is often helpful.

If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. Counseling and Psychological Services (CaPS) is here to help: call 412-268-2922 and visit their website at http://www.cmu.edu/counseling/. Consider reaching out to a friend, faculty or family member you trust for help getting connected to the support that can help.

If you or someone you know is feeling suicidal or in danger of self-harm, call someone immediately, day or night: **CaPS: 412-268-2922 or Re:solve Crisis Network: 888-796-8226**

If the situation is life threatening, call the police: **On campus: 412-268-2323 or off campus: 911.** *If you have questions about this or your coursework, please let me know.*

ASSIGNMENT RUBRICS

ASSIGNMENT 1 – Executive Summary

Does Not Meet Requirements	Meets Requirements	Exceeds Requirements
The assignment does not answer the <u>why</u>, <u>what</u>, and <u>how</u> of the project.	The section clearly and briefly answers <u>why</u> you're doing the project, <u>what</u> it entails, and <u>how</u> it will be carried out.	In addition to meeting all assignment requirements, the document also:
The paper exceeds 1 page in length.	The goal is clarity of writing, so the paper does not exceed 1 page in length.	
Paper is written in an unprofessional voice, i.e. written in first person, uses slang, contains typos, etc.	The executive summary is written in a professional, voice which is appropriate for the workplace, i.e. it is written in the third person with no slang and no typos, etc.	Includes exceptional writing. Includes clear use of terms and concepts.
Project is written in past tense, instead of being forward-looking.	The entire project plan is written as if the project is in its early planning stages. The document tense is forward looking; It is not written in the past tense.	Includes the use of definitions and explanations where appropriate.
Overall document is hard to follow.	Overall document is well-written and easy to follow.	
An executive would stop reading the document.	An executive would read the entire document without stopping.	
Assignment submission instructions were not followed.	Assignment submission instructions were followed.	
Assignment was not submitted on time	Assignment was submitted on time.	
The date on the assignment reflects the current date instead of the project date.	The date on the assignment reflects the actual project date, not the current date.	

ASSIGNMENT 2 – Scope Statement

Does Not Meet Requirements	Meets Requirements	Exceeds Requirements
The assignment does not contain all required Scope Statement components.	The assignment contains all required Scope Statement components, all properly constructed, clearly written, and completed.	In addition to meeting all assignment requirements, the document:
Scope Statement does not include Justification and Description.	The Scope Statement includes Justification and Description.	Includes exceptional writing.
The Justification and/or Description are identical to the executive summary (no more than one sentence can be repeated for each).	Language in the Justification and Description is not identical to the Executive Summary.	Includes clear use of terms, with explanations where appropriate.
Scope Statement includes fewer than 3 deliverables.	Minimum of 3 deliverables are included in the Scope Statement. a) When determining whether something is a deliverable, note that a deliverable has at least three tasks (work packages) contributing to its completion. b) Deliverables are nouns, and tasks are action verbs.	Includes additional relevant information. Additional deliverables, exclusions and objectives do not qualify unless they contain extraordinary detail and effort.
Scope Statement includes fewer than 3 Known Exclusions.	Minimum of 3 Known Exclusions are included in the Scope Statement.	
Scope Statement includes fewer than 2 measurable financial objectives and/or fewer than 3 schedule objectives.	Scope Statement includes the following measurable objectives: a) Financial Objectives (minimum of 2; must include dollar amounts). Note that an itemized budget does not constitute financial objectives. b) Schedule Objectives (minimum of 3; must include milestones and specific dates). Note that schedule objectives are key milestones on the project, not dated tasks.	
Objectives do not include correct language or are submitted in table form.	All financial objectives must be written as: • For expenses: "X will not exceed $Y" • For revenue: "X will be no less than $Y" substituting Y for specific dollar (or other currency) amounts. Schedule objectives must be written as "X will occur no later than Y date" substituting Y for specific calendar dates.	

Assignment 2 rubric is continued on the next page

Assignment uses unprofessional language or first person.	Assignment uses professional language, i.e. no first person nor slang.	
Scope Statement does not include a list of project team members by name and position, or does not have a minimum of 5 team members.	A list of members of the project organization and their roles and names, including the project manager, team members and sponsor. The project contains a minimum of 5 team members.	
Scope Statement includes grammatical mistakes, a lack of professionalism, or layout issues.	Scope Statement is well-written with no grammatical mistakes or layout issues. All acronyms must be redefined even if they were defined in the executive summary.	
Assignment submission instructions were not followed.	Assignment submission instructions were followed.	
Assignment was not submitted on time.	Assignment was submitted on time.	
The date on the assignment reflects the current date instead of the project date.	The date on the assignment reflects the actual project date, not the current date.	

ASSIGNMENT 3 – Stakeholder Analysis and Work Breakdown Structure (WBS)

Does Not Meet Requirements	Meets Requirements	Exceeds Requirements
Stakeholder Analysis does not include all required components, and/or is not presented in the format covered in class. Key components of the plan are copied and pasted, reflecting a lack of thoughtful consideration of the needs of individual stakeholders.	The Stakeholder Analysis includes all required components and is presented in the format covered in class. The required components for each stakeholder include: 1. name, 2. role in project or organization, 3. contribution to project (can take many forms including providing an active role in the overall project or a task, answering questions, providing input, relaying concerns, etc.) 4. level of influence 5. communication plan (note that primary stakeholders are usually communicated with more frequently than secondary). No primary stakeholder should be communicated with just once during the project. Remember that you should not simply copy and paste the same communication method and frequency into each cell for each stakeholder. 6. person responsible for communication (should be listed as a single name, and not a position in the organization). If in the rare event that you have two people listed there, it should be clearly explained why you have more than one, who has primary responsibility and how the communication will be divided among the two. Note that this is rare.	In addition to meeting all assignment requirements, the document: Incorporates significant extra effort on the Stakeholder Analysis, such as including extra columns, components, or descriptions. Incorporates significant extra effort and detail on the WBS. Additional stakeholders, deliverables and tasks do not qualify unless they contain extraordinary detail and effort.
Any of the required components are blank or say "N/A, not applicable, or as needed."	None of the required components of the Stakeholder Analysis should be blank or say "N/A, not applicable, or as needed."	
Stakeholder Analysis includes fewer than 10 stakeholders, and/or not all stakeholders listed are people.	The Stakeholder Analysis includes at least 10 stakeholders. That number does not include the project manager nor team members, but it does include the project <u>sponsor</u>. All stakeholders must be people (in other words, organizations cannot be stakeholders – for example, CMU is not a stakeholder, but CMU faculty could be a stakeholder group).	

WBS is not completed in format presented in class.	The Work Breakdown Structure (WBS) is complete and in the format presented in class.	
WBS has fewer than 3 deliverables and/or fewer than 10 tasks, task names, codes, and durations.	WBS includes: 1. at least 3 deliverables (Deliverables are nouns) 2. each deliverable has at least 3 supporting tasks 3. at least 10 tasks total, 4. task names are verbs, 5. WBS codes (The numeric code format needs to follow that presented in class: 1.1.1, etc.) For the purpose of this class, do not include tasks relating to the creation of project tools such as the budget, risk management plan, schedule, etc.	
WBS durations are less than one day, and/or presented in partial days.	Task durations on the WBS are at least one complete day. Task durations are presented in whole days with no partial days.	
WBS durations are in multiples of 5, 7 or another number.	WBS durations are varied and not in multiples of 5, 7, or another number.	
WBS numeric code format does not follow format presented in class.	WBS numeric code follows the format presented in class.	
Assignment submission instructions were not followed.	Assignment submission instructions were followed.	
Assignment was not submitted on time.	Assignment was submitted on time.	
The date on the assignment reflects the current date instead of the project date.	The date on the assignment reflects the actual project date, not the current date.	
Assignment contains grammatical errors or formatting issues.	Assignment is free of grammatical errors and formatting issues.	

ASSIGNMENT 4: Network Diagram

Does Not Meet Requirements	Meets Requirements	Exceeds Requirements
Network Diagram is not complete and/or Critical Path is not highlighted.	The Network Diagram is complete and accurate and highlights the Critical Path.	In addition to meeting all assignment requirements, the document:
Tasks/codes on the WBS do not match the Network Diagram.	All tasks, names and codes from your WBS are included in your network diagram. If a task name needs to be shortened to fit the network diagram boxes that is fine – just make sure the shortened version is clear.	Includes a key with descriptions, and not just abbreviations.
Network Diagram includes deliverables.	There are no deliverables on the network diagram.	
The network diagram is predominantly linear, with nearly every task on the critical path because tasks do not occur simultaneously.	The network diagram has several tasks occurring simultaneously, evidence that different members of the team are working on different tasks at the same time. As a result, the path is not linear and there are tasks which are not on the critical path.	Is clear and easy to follow despite project complexity.
Task dependencies are not clearly drawn, or arrows are not correct. Arrows go vertically rather than horizontally, or they do not leave the back and enter the front of tasks.	Task dependencies are clearly drawn with correct arrows, in the right direction, only finish-to-start relationships, etc. All arrows should go horizontally, not vertically, and they only leave the back and enter the front of tasks.	Correctly incorporates the use of buffer tasks and/or milestones. Note that buffers and milestones must be appropriate to the project and correctly labeled (for example, "Buffer: Waiting for Proposals" for a buffer and "Meeting with Sponsor" for a milestone)
The network diagram is incorrectly calculated, or not calculated by hand.	The network diagram is calculated correctly and manually in Visio or Excel (not using Microsoft Project).	
The critical path is inaccurate and/or not highlighted.	The critical path is accurate and highlighted, and if milestones and buffer tasks are on the critical path, they too are highlighted.	
The network diagram ends in more than one task, or ends in something other than a task (such as a milestone). Tasks are not listed chronologically.	The entire network diagram ends in one single task. Tasks are listed chronologically, and the final task is the last one in the diagram. It does not end in a milestone.	
Not all tasks are connected.	All tasks are connected and only the final task has no subsequent task.	

Network diagram is not developed in Visio or Excel.	The network diagram is developed in Microsoft Visio, Excel, or other electronic format (Visio is preferred).	
No nodes indicating where pages align, or they do not line up correctly.	Nodes indicating where pages align are included and easy to follow. Nodes are included where there are page breaks and line up with the arrows that connect the pages. Nodes should be introduced alphabetically and should be in sequential order.	
Corrected WBS is not submitted with the assignment.	Your Work Breakdown Structure has been submitted with this assignment. It has been corrected if advised to do so by the TA.	
The font is not legible (too small)	The font is legible.	
Assignment submission instructions were not followed.	Assignment submission instructions were followed.	
Assignment was not submitted on time.	Assignment was submitted on time.	
The date on the assignment reflects the current date instead of the project date.	The date on the assignment reflects the actual project date, not the current date.	

ASSIGNMENT 5: Project Budget and Quality Management Plan (QMP)

Note: You must submit your WBS with this assignment. Any necessary corrections should be made prior to the submission of this week's assignment.

Does Not Meet Requirements	Meets Requirements	Exceeds Requirements
The Project Budget is incomplete and/or calculated incorrectly.	The Project Budget is complete, calculated correctly, accurate and is easy to understand. It follows the template presented in class and contains the following: 1. An Activity Based Budget which includes labor and material costs that are clearly labeled and itemized at the top of the budget. 2. Overhead (fixed) costs. Overhead costs do not vary based on project duration and are typically assigned to the entire project, not just one task. The overhead costs are clearly labeled and itemized at the top of the budget. 3. The total project budget which also includes overhead costs.	In addition to meeting all assignment requirements: Budget contains extra detail. This may include adding any additional relevant information. Budget contains extra clarity. This may include adding context, explanations, or definitions where appropriate. Budget includes extra analysis, calculations, graphs, tables, or analytical charts. Contingency funds, revenue, and other categories (if applicable) should be listed after total project cost at the end of your budget. These amounts are not included in the
Groups are used with groups of fewer than 10 people, and/or for groups that do not have the same number of hours, hourly rate, and responsibilities.	Groups can be listed together on the budget if the group has 10 or more people, and they all have the same number of hours, hourly rate, and responsibilities. This is a rare occurrence and cannot be done for team members or group sizes less than 10.	
Budget is not completed in Excel and/or does not utilize formulas.	The Budget is completed and submitted in Excel, with use of formulas.	
Budget includes fewer than 2 material costs and/or fewer than 2 overhead costs.	At least 2 material costs and 2 overhead costs are included in the budget.	
Material and overhead costs are not clearly itemized at the top of the budget. Material costs do not have	Material and overhead costs are clearly labeled and itemized at the top of the budget. The calculations for material costs are shown, and the work package (WBS) codes showing where they are expensed are clearly delineated.	

corresponding WBS codes.		total project cost.
Labor hours are not whole numbers	Labor hours are depicted as whole numbers	QMP includes extra clarity. This may include adding context, explanations, or definitions where appropriate.
The budget is not realistic.	The budget is realistic.	
Includes calculation errors.	All calculations are correct.	
Duration exactly matches effort on the budget – effort was not taken to carefully determine hourly effort for each task.	Duration does not match effort on the budget.	QMP includes extra effort, such as adding an extra _relevant_ column.
Equivalent dollar amounts are not calculated for otherwise "free" materials.	Time and materials on the project which are otherwise "free" are quantified with an equivalent dollar amount. For example, for a student or volunteer project, an equivalent hourly rate is assigned for each student's or volunteer's time. For example, if you have a non-profit board member volunteering their time, you might value their time at $50 an hour. For a student project, you might value each student's time at $20 an hour. An equivalent dollar value is provided for other costs which you may not have been responsible for such as room rental, equipment purchases, etc. For those projects without overhead costs, an equivalent value is also placed on things that you would have been responsible for had this been a professional project. This will definitely result in a higher project budget than you actually had. Be sure to note in your project assumptions that you did this.	Additional quality measures do not qualify unless they contain extraordinary detail and effort.
QMP includes fewer than two quality objectives.	The Quality Management Plan contains a minimum of 2 _measurable_ quality objectives. Measurable objectives must not be a restatement of financial or scheduling objectives.	
Quality objectives are not measurable.	In order for a quality objective to be measurable, it **must include a specific number**. For example, instead of simply saying you will measure attendance at an event, you must have a numeric goal, such as "At least 100 people in attendance."	
QMP does not follow follows template and includes all	Your plan for managing and controlling project quality follows the template provided and includes all of the following:	

necessary components.	1. <u>What</u> specifically you will measure (e.g. your quality objectives), <u>and</u> the numeric goal 2. <u>Why</u> you are measuring them (why they're important to your project) 3. <u>How</u> each objective will be measured. This is a description of what you will do throughout the course of the project to ensure that your quality objectives will be met at the end, and 4. <u>How</u> frequently each objective will be measured (This must be measured at least twice, not including the baseline, but ideally at regular intervals throughout the project)	
WBS not submitted.	Your Work Breakdown Schedule is submitted with this assignment.	
The Budget and QMP are not professional or not formatted clearly.	The Budget and QMP are professional and formatted clearly, following the template.	
Assignment submission instructions were not followed.	Assignment submission instructions were followed.	
Assignment was not submitted on time.	Assignment was submitted on time.	
The date on the assignment reflects the current date instead of the project date.	The date on the assignment reflects the actual project date, not the current date.	

ASSIGNMENT 6: Microsoft Project

Does Not Meet Requirements	Meets Requirements	Exceeds Requirements
Task and schedule information is not correctly entered into Microsoft Project and/or MSP does not follow tutorial.	All task and schedule information from your previous assignments are correctly entered into Microsoft Project (MSP) following the steps covered in the tutorial: 1. There are dependencies between tasks 2. Deliverables are listed as summary tasks and have no dependencies attached to them. 3. There are only Finish-Start (FS) tasks, no SS or other task dependencies. 4. All tasks are fixed duration and auto-scheduled. 5. Project Summary task is present 6. Project Start Date is in the past	In addition to meeting all assignment requirements, document: Includes additional complexity. Demonstrates use of additional MSP features. Includes additional functions such as, but not limited to earned value analysis in MSP and/or Excel. Note that the student would need to study how to perform these functions on his or her own since this is not a required component. Note: if you elect to perform additional functions or calculations in MSP for extra credit, you <u>must</u> submit two separate MSP files to Canvas, one that meets
Budget information is not correctly entered into Microsoft Project and/or budget does not follow steps in the tutorial.	Your budget information is correctly entered into Microsoft Project following the steps covered in the tutorial: 1. Labor and material resources are correctly assigned to tasks. No resources are assigned to deliverables. 2. There is a cost and fixed cost column. 3. Overhead costs are allocated to the entire project Only use work and material resources. Do not use cost resources, even for travel.	
MSP plan does not match budget, schedule, and/or critical path.	Your MSP plan matches the budget, schedule, and critical path which you submitted in previous assignments. Note that this is <u>very</u> heavily weighted in this assignment!	
WBS codes do not match, or are assigned to milestones and buffer tasks.	Your MSP plan matches the WBS codes which you submitted in previous assignments. There are no codes associated with milestones or buffer tasks.	
Over-allocation of resources are present.	There is no over-allocation of resources.	
The Fixed Cost Column and Cost Column are missing from the Gantt Chart View.	There must be a Fixed Cost Column and a Cost Column in the Gantt Chart View.	
There are resources assigned to milestones, buffer tasks or deliverables.	Milestones, buffer tasks, and deliverables are included in MSP but do not have resources assigned to them.	

Assignment 6 rubric is continued on next page

Three documents have not been corrected, and/or WBS, budget, and/or Network Diagram not submitted electronically.	The following three documents have been corrected (if you received feedback from the TA) and are submitted electronically with this assignment: 　1.　Work Breakdown Schedule (in PDF) 　2.　Budget (Must be submitted in Excel) 　3.　Network Diagram (in PDF – make sure page breaks make it easy to follow)	requirements and a second file with the extra credit (note the difference in the file name).
Assignment submission instructions were not followed.	Assignment submission instructions were followed.	
Assignment was not submitted on time.	Assignment was submitted on time.	
The date on the assignment reflects the current date instead of the project date.	The date on the assignment reflects the actual project date, not the current date.	

ASSIGNMENT 7: Entire Project Plan (Assignments 1-5), Risk Management Plan, and Assessment/Lessons Learned

Does Not Meet Requirements	Meets Requirements	Exceeds Requirements
The final plan is incomplete or missing the required project components.	The following project components are completed and included in your final plan: 1. Risk management plan 2. Assessment/Lessons learned 3. The entire project plan, including a list of corrections	
Risk Management Plan does not include all components identified in class.	The risk management plan includes all components identified in class in the risk log. No fields should be left blank or labelled "N/A"	
Fewer than 5 risks included.	A minimum of 5 risks are included in the risk management plan.	
Risk responses are not proactive.	Risk responses in the risk management plan are how you decide to respond to the risk before it happens, not after it occurs. The risks are clear and detailed.	
Assessment / Lessons Learned does not include a detailed description of what you learned about your project, your team, and yourself.	Assessment/Lessons Learned includes a detailed description (at least 1 page) of what you learned about your project, your team and yourself through this course. Description <u>explicitly</u> identifies the tools/discussions that were learned. Description <u>specifies</u> how tools/discussions could have been applied to the project.	
Assessment/Lessons Learned does not incorporate class discussions and tools covered in class, and/or it does not give specific examples regarding your project.	Assessment/Lessons Learned incorporates class discussions and tools we covered in class – which tools and methods did you find helpful and why? Specifically, it is descriptive and gives specific examples regarding your project, not just about the tools' usefulness in project management in general.	
Aspects of Project Plan are missing.	The **entire** project plan is submitted, including all sections from Assignments 1 through 5, the risk management plan and assessment / lessons learned.	
Plan is not organized professionally, does not include a table of contents with page numbers or is	The entire plan is organized professionally as you would if you were submitting it to a project sponsor. The plan includes a table of contents with page numbers and is professionally presented.	

not professionally presented.		
Plan is not submitted as one PDF.	The plan is submitted as one PDF document with consistent formatting (except the Network Diagram which can be submitted as a separate file).	
List of Corrections is absent.	A list of corrections made to previous assignment is included with your consolidated project plan.	
Assignment submission instructions were not followed.	Assignment submission instructions were followed.	
Assignment was not submitted on time.	Assignment was submitted on time.	
The date on the assignment reflects the current date instead of the project date.	The date on the assignment reflects the actual project date, not the current date.	

Note:

Student project plans may be shared with future classes as examples, but they will <u>not</u> be made available for downloading or copying. If a student does not wish to have his or her plan shared, he or she should notify the instructor by email.

End of Syllabus Document