ITT Technical Institute

PM468

Project Management Integration I

(Capstone Project)

Onsite Course

SYLLABUS

Credit hours: 4

Contact/Instructional hours: 50 (30 Theory Hours, 20 Lab Hours)

Prerequisite(s) and/or Corequisite(s):

Prerequisite: PM453 Project Risk Management or equivalent

Course Description:

Using the skills and knowledge from the program, Project Management Integration I is the first of a two-course series focused on the integration of the processes of the project management cycle. Through the use of case or problem analysis students integrate the principles from previous courses. Students will also initiate and plan their capstone project.

Syllabus: Project Management Integration I (Capstone Project)

Instructor:	_____
Office hours:	_____
Class hours:	_____

Major Instructional Areas

1. Integration of Initiating and Planning Process Groups
2. Activities in capstone initiation
3. Activities in capstone planning

Course Objectives

1. Respond to a request for proposal (RFP) based on the analysis of the provided specifications.
2. Create an effective project charter for the capstone project.
3. Create a comprehensive project plan for the capstone project by using the tools, templates, and processes recommended by the Project Management Institute (PMI).
4. Set project expectations for all team members to ensure that everyone has a common understanding of the project and their roles.
5. Present the project proposal for the capstone project to the project sponsor.
6. Apply PMBOK tools and techniques to process inputs and generate outputs in the form of various project management documents for the Initiating and Planning Process Groups.

SCANS Objectives

SCANS is an acronym for Secretary's Commission on Achieving Necessary Skills. The committee, created by the National Secretary of Labor in the early 1990s, created a list of skills and competencies that the committee feels are necessary for employees to function in a high-tech job market.

1. Analyze the given documents to derive implications.
2. Analyze information and communicate results in a written format.
3. Identify requirements to articulate clear and achievable objectives.
4. Demonstrate ability to recognize job tasks and delegate roles and responsibilities.
5. Interpret information and prepare various reports.
6. Plan to meet competing demands for quality, scope, time, and cost for a given situation.

Course Outline

Note: All graded activities, except the course project, are listed below in the pattern of <Unit Number>.<Assignment Number>. For example, Lab 2.1 refers to the 1st lab activity in Unit 2.

Unit	Activities
1—Introduction to the Capstone	• Content Covered: *Effective Project Management*:

Unit	Activities
	o Chapter 1, "What Is a Project?" o Chapter 2, "Understanding The Project Management Process Groups," pp. 27-47 • Labs: 1.1 • Analyses: 1.1
2—Project Definition	• Read from *Effective Project Management*: o Chapter 3, "How to Scope a Project," pp. 49-76 • Labs: 2.1 • Analyses: 2.1
3—Project Overview Statement	• Read from *Effective Project Management*: o Chapter 3, "How to Scope a Project," section titled "Writing an Effective Project Overview Statement," pp. 91-104 • Labs: 3.1 • Analyses: 3.1
4—Project Approval	• Read from *Effective Project Management*: o Chapter 3, "How to Scope a Project," section titled "Gaining Approval to Plan the Project," pp. 104-107 • Read from *Project Management: Case Studies*: o "MIS Project Management at First National Bank," pp. 56-69 • Labs: 4.1 • Analyses: 4.1
5—Project Planning	• Read from *Effective Project Management*: o Chapter 4, "How to Plan a Project," pp. 109-143 • Labs: 5.1 • Analyses: 5.1 • Course Project Part 1
6—Project Time, Cost, and Resources	• Read from *Effective Project Management*: o Chapter 4, "How to Plan a Project," section titled "Estimating," pp. 144-160 • Labs: 6.1 • Analyses: 6.1
7—Project Quality and Risk Management	• Read from *Effective Project Management*: o Chapter 4, "How to Plan a Project," section titled "Planning for Project Risk: The Risk Management Life Cycle," pp. 180-188 • Read from *Project Management: Case Studies*: o "Luxor Technologies," pp. 484-487 o "Acme Corporation," pp. 492-494 • Labs: 7.1 • Analyses: 7.1 • Course Project Part 2
8—Team Development and Project Proposal	• Read from *Effective Project Management*: o Chapter 4, "How to Plan a Project," section titled "Writing an Effective Project Proposal," pp. 188-190 o Chapter 5, "How to Launch a Project," section titled "Recruiting the Project Team," pp. 197-206 • Labs: 8.1 • Course Project Part 3
9—Planning for a Kick-Off Meeting	• Read from *Effective Project Management*: o Chapter 5, "How to Launch a Project," section titled "Conducting the Project Kick-Off Meeting," pp. 206-

Unit	Activities
	210; section titled "Establishing Team Operating Rules," pp. 211-224; and section titled "Managing Team Communications," pp. 229-235 • Labs: 9.1 • Analyses: 9.1
10—Kick-Off Meeting	• Labs: 10.1
11—Course Review and Presentation	• Course Project Part 4

Instructional Methods

This course provides an opportunity to integrate the principles learned from previous courses through project work. It involves initiating and planning for a course project, which will be a hands-on exercise with tangible deliverables. It must be approved by the Program Chair and instructor to assess the program's learning outcomes. You should select a project that you can plan, execute, and deliver within the span of the two courses in the capstone series.

The structure of Project Management Integration I (Capstone Project) will enable you to apply the knowledge and real-world function of the current tools, templates, and processes used to scope, plan, and launch a project. In this course, you will be provided with a scenario that you can use to analyze as the capstone project. Alternatively, you may choose and work on any real-life project.

The instructional strategies for the course include the following:

- The course begins with an introduction of the capstone project where you will be divided into teams and given an RFP to study and determine how to respond to given project needs. You will need to identify a business case to use and devise a strategy or an approach to follow for running the course project. You will also map the Process Groups of the course project to define the project management life cycle (PMLC) to be followed.
- In Units 1-4, you will apply the project management skills you gained from previous courses to analyze the given project and conduct requirements analysis, define the project scope, create a prototype, and conduct a feasibility study.
- The latter units will enable you to integrate processes defined in *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* that are necessary to complete a comprehensive project plan and proposal.
- Unit 9 will prepare you for the Project Kick-Off Meeting. It is a formal announcement that the project has been planned and approved for execution. In Unit 10, the actual Kick-Off Meeting will take place.
- This course mainly covers the fourth edition of *PMBOK® Guide*.
- The instructor for this course will perform the role of an advisor, a consultant, a project sponsor, or a stakeholder. In the case of a real-life project, the dedicated project sponsor and stakeholders of the respective company should agree upon their meeting schedules in advance. In this case, the instructor will act as a liaison between you and a project sponsor.
- Weekly in-class meetings will be conducted so that the instructor can provide all student teams consultation and guidance on the course project and discuss various implementation and problem-solving strategies. These meetings will be a form of status or progress meetings with the instructor. It is suggested that you maintain a record of the minutes of the weekly in-class meetings. Your instructor will share a template with you, which you can use to document the minutes of the meetings. Remember to save minutes of all meetings in your project notebooks.
- Lab exercises include hands-on assignments designed to reinforce the concepts covered in the respective units. Labs will involve the preparation of various project management documents for

the course project. You can submit lab assignments in collaboration with your team. During the lab work, you can conduct team meetings and collectively work on completing course project deliverables.

- The course contains analysis assignments designed to either reinforce the real-world usage and theory of processes and procedures of project management or give you the opportunity to work on course project deliverables. These assignments will be served as homework.

- The course project is a group assignment. It will involve preparing a project charter, a scope plan, a Work Breakdown Structure (WBS), and a comprehensive project plan and proposal for the capstone project. The course project is divided into four parts with deliverables in Units 5, 7, 8, and 11.You can work on the course project in a team of three to four members. It is suggested that there is a rotation of leaders within a team so that all members get an equal opportunity to lead the team.

- Your participation in the course project will be graded at both individual and team level. For each course project part, you will receive a certain percentage of the grade on the basis of peer-review feedbacks and the rest of the percentage will be evaluated on the basis of completion of team deliverables. This will ensure that all students actively participate in project tasks. Your instructor will share a peer-evaluation form with you in Unit 1. Remember to fill and submit a copy of the form with each course project part deliverable.

- Unit 11 concludes with a graded presentation by each project team where the team presents its project proposal and plan to the project sponsor and the instructor.

- It is important that you save all labs, analyses, and course project deliverables and all meeting agendas and minutes of the meetings in printed form as well as electronically. This is because you are required to e-mail all electronically saved deliverables and documents to your instructor. Having an electronic copy will enable you to update the deliverables. At the same time, it will enable your instructor to capture all electronic documentation completed in the course and submit it to the campus dean or program chair, who will then archive and issue it to the instructor of the successor course, Project Management Integration II (Capstone Project).

Instructional Materials and References

Student Textbook Package
- Wysocki, Robert K. *Effective Project Management*. 5th ed. Indianapolis, IN: Wiley Publishing, Inc., 2009.
- Kerzner, Harold. *Project Management: Case Studies*. 3rd ed. Hoboken, NJ: John Wiley & Sons, Inc., 2009.

Other Required Resources

In addition to the student textbook package, the following is also required in this course:

Project Management Institute, Inc. *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*. 4th ed. Newtown Square, PA: PMI Publications, 2008.

This book is normally issued with the following course: Introduction to Project Management. If students have not registered for that course, the book will be issued in this course.

Equipment and Tools

- Microsoft Project 2007

References

ITT Tech Virtual Library

Log on to the ITT Tech Virtual Library at http://www.library.itt-tech.edu/ to access online books, journals, and other reference resources selected to support ITT Tech curricula.

<u>Books</u>

You may click "Books" or use the "Search" function on the home page to find the following books.

Books24x7

- DeCarlo, Doug. *eXtreme Project Management: Using Leadership, Principles, and Tools to Deliver Value in the Face of Volatility*. San Francisco, CA: Jossey-Bass, 2004.
- Morris, Rick A., and Brette McWhorter Sember. *Project Management That Works: Real-World Advice on Communicating, Problem-Solving, and Everything Else You Need to Know to Get the Job Done*. NY: AMACOM, 2008.
- Portny, Stanley E. *Project Management For Dummies*. 2nd ed. Hoboken, NJ: John Wiley & Sons, 2007.
- Saladis, Frank P., and Harold Kerzner. *Bringing the PMBOK® Guide to Life: A Companion for the Practicing Project Manager*. Hoboken, NJ: John Wiley & Sons, 2009.
- Turner, J. Rodney. *The Handbook of Project-Based Management: Leading Strategic Change in Organizations*. 3rd ed. The McGraw-Hill Companies, Inc., 2009.

<u>Reference</u>

You may click "Reference" or use the "Search" function on the home page to find the following reference resources.

Project Management

- allPM
- Microsoft Project
- Primavera Systems
- Project Management Institute

<u>School Of Study</u>

You may click "School Of Study" or use the "Search" function on the home page to find the following resources.

School of Business> Recommended Links

- Project Magazine
- Projects@Work

School of Business> Professional Organizations

- American Society for the Advancement of Project Management
- International Association of Project & Program Managers
- International Project Management Association
- International Research Network on Organizing by Projects
- National Management Association

Other References

The following resources may be found **outside** of the ITT Tech Virtual Library, whether online or in hard copy.

Web sites

- 4PM: This Web site provides training and tutorials on project management. It also contains articles on project management and some career advice from project managers around the world.
  http://www.4pm.com/ (accessed November 30, 2009).
- gantthead.com: This Web site is an online community for information technology (IT) project managers.
  http://www.gantthead.com/ (accessed November 30, 2009).
- Microsoft Office Online: This Web site provides many project management artifact templates.
  http://office.microsoft.com/en-us/templates/CT012261931033.aspx?ofcresset=1 (accessed November 30, 2009).

All links to Web references outside of the ITT Tech Virtual Library are always subject to change without prior notice.

PM468 COURSE SNAPSHOT

Grading Category	Grade Book Category Weight (% of course total)	Unit(s)	Activity/Graded Deliverables	Grade Allocation (% of course total)	Measuring Rubric*
A. Project Part 1	15%	5	Submission of Word document with supporting documentation	5%	A-1-1 PMBOK Nine Areas
				5%	A-2-1 PMBOK 5 Process Groups
				5%	A-8-1 Critical Thinking
				5%	B-1-1 PMBOK Nine Areas

B. Project Part 2	15%	7	Submission of Word document with supporting documentation	5%	B-2-1 PMBOK 5 Process Groups
				5%	B-8-1 Critical Thinking
C. Project Part 3	15%	8	Submission of Word document with supporting documentation	5%	C-1-1 PMBOK Nine Areas
				5%	C-2-1 PMBOK 5 Process Groups
				5%	C-8-1 Critical Thinking
D. Project Part 4	20%	11	Submission of Word document with supporting documentation & project proposal presentation	5%	D-1-1 PMBOK Nine Areas
				5%	2-1 PMBOK 5 Process Groups
				5%	D-4-1 Communication
				5%	D-8-1 Critical Thinking
E. Analyses	15%	1-7, 9	Submission of Word document - email and hard copy	Units 1-4 analyses @ 1.87% each	E-3-1 Documentation (0.63%)
					E-4-1 Communication (0.62%)
					E-8-1 Critical Thinking (0.62%)
				Units 5-7, 9 analyses @ 1.88% each	E-3-1 Documentation (0.64%)
					E-4-1 Communication (0.62%)
				15%	E-8-1 Critical Thinking (0.62%)
F. Labs	20%	1-10	Submission of Word document - email and hard copy	10 labs @ 2% each	F-3-1 Documentation (0.6%)
					F-4-1 Communication (0.6%)
				20%	F-8-1 Critical Thinking (0.8%)
Total	100%			100%	

COURSE GRADING RUBRIC
PM468–Project Management Integration I

Campus: _____

Faculty Name: _____

Student Name: _____

<u>Directions:</u> Please assign a percentage grade on the   line for each subcategory.

A. Project Part I (15% of total grade)

Unit 5—Submission of Word document with supporting   documentation

_____ *A-1-1 PMBOK Nine Areas:*
- 90-100%: Students show a complete understanding of all designated areas of a project.   These areas are well integrated in the plan and it is clear that the student has a detailed scope for all elements.
- 80-89%: Students uses all of the designated areas as a plan to bring the important elements into their project. The areas are appropriately defined.
- 70-79%: Students uses most of the designated areas of concentration. Some areas are not well represented in their final work.
- 60-69%: Student uses some of the designated areas of concentration. Several areas are missing in their work.
- Below 60%: Student makes little or no use of the nine designated areas. The project plan is an ad hoc compilation of subjective groups of activities.

_____ *A-2-1 PMBOK 5 Process Groups:*
- 90-100%: Student uses the process groups as interactive activities and anchors project deliverables within each process.
- 80-89%: Student uses the process groups to scope the project deliverables and recognizes the interactive nature of the process groups.
- 70-79%: Student uses the process groups to establish the timeline of the project and details them appropriately. There may be some misunderstanding of the application tools to employ.
- 60-69%: Student leaves out steps in the formal project plan that indicates a lack of process knowledge. Some steps are "taken for granted" and not documented.
- Below 60%: Student does not use the five process groups to establish the timeline of the project. Project steps are chosen with an unstructured approach.

_____ *A-8-1 Critical Thinking:*
- 90-100%: Students uses decision tools that were taught in the program for all decisions that require them. Student chooses between several methods and chooses the best one for any problem.

- 80-89%: Student makes use of decision-making tools that were taught throughout the program. Most choices reflect a methodical problem-solving approach to problem solutions.   Methods are mostly used appropriately.
- 70-79%: Student has an understanding of evaluative techniques and occasionally uses some to draw conclusions. Depth of understanding is weak and frequency of use in this area is limited to one or two.
- 60-69%: Student does not demonstrate a complete understanding of decision-making in a complex environment. Some analysis tools are used, but they may be deployed incorrectly, or conclusions based on the techniques may be incorrect.
- Below 60%: Student has not indicated an ability to do critical thinking or make complex decisions. Student seems to be grasping at any solution that comes their way, rather than actually think, at all.

B. Project Part 2 (15% of total grade)

Unit 7–Submission of Word document with supporting   documentation

_____ *B-1-1 PMBOK Nine Areas:*
- 90-100%: Students show a complete understanding of all designated areas of a project.   These areas are well integrated in the plan and it is clear that the student has a detailed scope for all elements.
- 80-89%: Students uses all of the designated areas as a plan to bring the important elements into their project. The areas are appropriately defined.
- 70-79%: Students uses most of the designated areas of concentration. Some areas are not well represented in their final work.
- 60-69%: Student uses some of the designated areas of concentration. Several areas are missing in their work.
- Below 60%: Student makes little or no use of the nine designated areas. The project plan is an ad hoc compilation of subjective groups of activities.

_____ *B-2-1 PMBOK 5 Process Groups:*
- 90-100%: Student uses the process groups as interactive activities and anchors project deliverables within each process.

- 80-89%: Student uses the process groups to scope the project deliverables and recognizes the interactive nature of the process groups.
- 70-79%: Student uses the process groups to establish the timeline of the project and details them appropriately. There may be some misunderstanding of the application tools to employ.
- 60-69%: Student leaves out steps in the formal project plan that indicates a lack of process knowledge. Some steps are "taken for granted" and not documented.
- Below 60%: Student does not use the five process groups to establish the timeline of the project. Project steps are chosen with an unstructured approach.

_____ *B-8-1 Critical Thinking:*

- 90-100%: Students uses decision tools that were taught in the program for all decisions that require them. Student chooses between several methods and chooses the best one for any problem.
- 80-89%: Student makes use of decision-making tools that were taught throughout the program. Most choices reflect a methodical problem-solving approach to problem solutions. Methods are mostly used appropriately.
- 70-79%: Student has an understanding of evaluative techniques and occasionally uses some to draw conclusions. Depth of understanding is weak and frequency of use in this area is limited to one or two.
- 60-69%: Student does not demonstrate a complete understanding of decision-making in a complex environment. Some analysis tools are used, but they may be deployed incorrectly, or conclusions based on the techniques may be incorrect.
- Below 60%: Student has not indicated an ability to do critical thinking or make complex decisions. Student seems to be grasping at any solution that comes their way, rather than actually think, at all.

C. **Project Part 3 (15% of total grade)**

   Unit 8—Submission of Word document with supporting documentation

   _____ *C-1-1 PMBOK Nine Areas:*

- 90-100%: Students show a complete understanding of all designated areas of a project. These areas are well

integrated in the plan and it is clear that the student has a detailed scope for all elements.

- **80-89%:** Students uses all of the designated areas as a plan to bring the important elements into their project. The areas are appropriately defined.
- **70-79%:** Students uses most of the designated areas of concentration. Some areas are not well represented in their final work.
- **60-69%:** Student uses some of the designated areas of concentration. Several areas are missing in their work.
- **Below 60%:** Student makes little or no use of the nine designated areas. The project plan is an ad hoc compilation of subjective groups of activities.

_____ *C-2-1 PMBOK 5 Process Groups:*

- **90-100%:** Student uses the process groups as interactive activities and anchors project deliverables within each process.
- **80-89%:** Student uses the process groups to scope the project deliverables and recognizes the interactive nature of the process groups.
- **70-79%:** Student uses the process groups to establish the timeline of the project and details them appropriately. There may be some misunderstanding of the application tools to employ.
- **60-69%:** Student leaves out steps in the formal project plan that indicates a lack of process knowledge. Some steps are "taken for granted" and not documented.
- **Below 60%:** Student does not use the five process groups to establish the timeline of the project. Project steps are chosen with an unstructured approach.

_____ *C-8-1 Critical Thinking:*

- **90-100%:** Students uses decision tools that were taught in the program for all decisions that require them. Student chooses between several methods and chooses the best one for any problem.
- **80-89%:** Student makes use of decision-making tools that were taught throughout the program. Most choices reflect a methodical problem-solving approach to problem solutions.   Methods are mostly used appropriately.
- **70-79%:** Student has an understanding of evaluative techniques and occasionally uses some to draw conclusions. Depth of understanding is weak and frequency of use in this area is limited to one or two.

- 60-69%: Student does not demonstrate a complete understanding of decision-making in a complex environment. Some analysis tools are used, but they may be deployed incorrectly, or conclusions based on the techniques may be incorrect.
- Below 60%: Student has not indicated an ability to do critical thinking or make complex decisions. Student seems to be grasping at any solution that comes their way, rather than actually think, at all.

D. Project Demonstration (15% of total grade)

Unit 11–Submission of Word document with supporting   documentation & project proposal presentation

_____ D-1-1 PMBOK Nine Areas:
- 90-100%: Students show a complete understanding of all designated areas of a project.   These areas are well integrated in the plan and it is clear that the student has a detailed scope for all elements.
- 80-89%: Students uses all of the designated areas as a plan to bring the important elements into their project. The areas are appropriately defined.
- 70-79%: Students uses most of the designated areas of concentration. Some areas are not well represented in their final work.
- 60-69%: Student uses some of the designated areas of concentration. Several areas are missing in their work.
- Below 60%: Student makes little or no use of the nine designated areas. The project plan is an ad hoc compilation of subjective groups of activities.

_____ D-2-1 PMBOK 5 Process Groups:
- 90-100%: Student uses the process groups as interactive activities and anchors project deliverables within each process.
- 80-89%: Student uses the process groups to scope the project deliverables and recognizes the interactive nature of the process groups.
- 70-79%: Student uses the process groups to establish the timeline of the project and details them appropriately. There may be some misunderstanding of the application tools to employ.

- 60-69%: Student leaves out steps in the formal project plan that indicates a lack of process knowledge. Some steps are "taken for granted" and not documented.
- Below 60%: Student does not use the five process groups to establish the timeline of the project. Project steps are chosen with an unstructured approach.

_____ *D-4-1 Communication:*

- 90-100%: Student uses communication mechanisms in a way that enriches the professionalism of the project. Student brings fact-based information to the project team to assimilate quickly, and for project stakeholders to comprehend the project status easily.
- 80-89%: Student applies communication methods to bring clarity to the project status and results in most process and performance categories.
- 70-79%: Student has an understanding of communication mechanisms and uses them to convey project status in several ways. There may be some gaps in the effectiveness of the methods, but they generally convey appropriate information.
- 60-69%: Student does not use communication instruments in a formal way and in some cases does not provide enough information to assess project.
- Below 60%: Student has not indicated they are aware of formal methods of communicating project status. They provide few, if any charts or graphs to summarize the results or timeline and schedule status of a project.

_____ D *-8-1 Critical Thinking:*

- 90-100%: Students uses decision tools that were taught in the program for all decisions that require them. Student chooses between several methods and chooses the best one for any problem.
- 80-89%: Student makes use of decision-making tools that were taught throughout the program. Most choices reflect a methodical problem-solving approach to problem solutions.   Methods are mostly used appropriately.
- 70-79%: Student has an understanding of evaluative techniques and occasionally uses some to draw conclusions. Depth of understanding is weak and frequency of use in this area is limited to one or two.
- 60-69%: Student does not demonstrate a complete understanding of decision-making in a complex environment. Some analysis tools are used, but they may

be deployed incorrectly, or conclusions based on the techniques may be incorrect.

- <u>Below 60%:</u> Student has not indicated an ability to do critical thinking or make complex decisions. Student seems to be grasping at any solution that comes their way, rather than actually think, at all.

E. Analysis (15% of total grade)

Units 1 to 7, 9—Submission of Word document – email and hard copy

The rubrics below are used to grade three components of each analysis document.

Unit 1: _____ E-3-1 Documentation _____ E-4-1 Communication _____ E-8-1 Critical Thinking

Unit 2: _____ E-3-1 Documentation _____ E-4-1 Communication _____ E-8-1 Critical Thinking

Unit 3: _____ E-3-1 Documentation _____ E-4-1 Communication _____ E-8-1 Critical Thinking

Unit 4: _____ E-3-1 Documentation _____ E-4-1 Communication _____ E-8-1 Critical Thinking

Unit 5: _____ E-3-1 Documentation _____ E-4-1 Communication _____ E-8-1 Critical Thinking

Unit 6: _____ E-3-1 Documentation _____ E-4-1 Communication _____ E-8-1 Critical Thinking

Unit 7: _____ E-3-1 Documentation _____ E-4-1 Communication _____ E-8-1 Critical Thinking

Unit 9: _____ E-3-1 Documentation _____ E-4-1 Communication _____ E-8-1 Critical Thinking

E-3-1 Documentation

- <u>90-100%:</u> Student presents documentation that is compelling and concise in displaying project performance and the project schedule. It is apparent the project has been managed by using documentation tools.
- <u>80-89%:</u> Student provides documentation that is fact-based in communicating activities and results. It is linked to many of the important elements of the project and presents information that is clear and useful.
- <u>70-79%:</u> Student recognizes need for formal documentation, but there are some gaps in their use.

Appropriate forms are used for those applications considered.

- <u>60-69%:</u> Student takes a dim view of formal documentation, and, while using documents in the project, they are usually not those taught in the program.
- <u>Below 60%:</u> Student does not use forms that were taught in the program. Documentation is not evident in the project materials, and where it exists, it usually does not address the intent of formal project management.

E-4-1 Communication:

- <u>90-100%:</u> Student uses communication mechanisms in a way that enriches the professionalism of the project. Student brings fact-based information to the project team to assimilate quickly, and for project stakeholders to comprehend the project status easily.
- <u>80-89%:</u> Student applies communication methods to bring clarity to the project status and results in most process and performance categories.
- <u>70-79%:</u> Student has an understanding of communication mechanisms and uses them to convey project status in several ways. There may be some gaps in the effectiveness of the methods, but they generally convey appropriate information.
- <u>60-69%:</u> Student does not use communication instruments in a formal way and in some cases does not provide enough information to assess project.
- <u>Below 60%:</u> Student has not indicated they are aware of formal methods of communicating project status. They provide few, if any charts or graphs to summarize the results or timeline and schedule status of a project.

E-*8-1 Critical Thinking*:

- <u>90-100%:</u> Students uses decision tools that were taught in the program for all decisions that require them. Student chooses between several methods and chooses the best one for any problem.
- <u>80-89%:</u> Student makes use of decision-making tools that were taught throughout the program. Most choices reflect a methodical problem-solving approach to problem solutions.   Methods are mostly used appropriately.
- <u>70-79%:</u> Student has an understanding of evaluative techniques and occasionally uses some to draw conclusions. Depth of understanding is weak and frequency of use in this area is limited to one or two.

- 60-69%: Student does not demonstrate a complete understanding of decision-making in a complex environment. Some analysis tools are used, but they may be deployed incorrectly, or conclusions based on the techniques may be incorrect.
- Below 60%: Student has not indicated an ability to do critical thinking or make complex decisions. Student seems to be grasping at any solution that comes their way, rather than actually think, at all.

F. Labs (20% of total grade)

Units 1 to 10—Submission of Word document - email and hard copy

The rubrics below are used to grade three components of each lab report.

Unit 1: _____ F-3-1 Documentation _____ F-4-1 Communication _____ F-8-1 Critical Thinking

Unit 2: _____ F-3-1 Documentation _____ F-4-1 Communication _____ F-8-1 Critical Thinking

Unit 3: _____ F-3-1 Documentation _____ F-4-1 Communication _____ F-8-1 Critical Thinking

Unit 4: _____ F-3-1 Documentation _____ F-4-1 Communication _____ F-8-1 Critical Thinking

Unit 5: _____ F-3-1 Documentation _____ F-4-1 Communication _____ F-8-1 Critical Thinking

Unit 6: _____ F-3-1 Documentation _____ F-4-1 Communication _____ F-8-1 Critical Thinking

Unit 7: _____ F-3-1 Documentation _____ F-4-1 Communication _____ F-8-1 Critical Thinking

Unit 8: _____ F-3-1 Documentation _____ F-4-1 Communication _____ F-8-1 Critical Thinking

Unit 9: _____ F-3-1 Documentation _____ F-4-1 Communication _____ F-8-1 Critical Thinking

Unit 10: _____ F-3-1 Documentation _____ F-4-1 Communication _____ F-8-1 Critical Thinking

_____ F *-3-1 Documentation*

- <u>90-100%:</u> Student presents documentation that is compelling and concise in displaying project performance and the project schedule. It is apparent the project has been managed by using documentation tools.
- <u>80-89%:</u> Student provides documentation that is fact-based in communicating activities and results. It is linked to many of the important elements of the project and presents information that is clear and useful.
- <u>70-79%:</u> Student recognizes need for formal documentation, but there are some gaps in their use. Appropriate forms are used for those applications considered.
- <u>60-69%:</u> Student takes a dim view of formal documentation, and, while using documents in the project, they are usually not those taught in the program.
- <u>Below 60%:</u> Student does not use forms that were taught in the program. Documentation is not evident in the project materials, and where it exists, it usually does not address the intent of formal project management.

_____ *F-4-1 Communication:*

- <u>90-100%:</u> Student uses communication mechanisms in a way that enriches the professionalism of the project. Student brings fact-based information to the project team to assimilate quickly, and for project stakeholders to comprehend the project status easily.
- <u>80-89%:</u> Student applies communication methods to bring clarity to the project status and results in most process and performance categories.
- <u>70-79%:</u> Student has an understanding of communication mechanisms and uses them to convey project status in several ways. There may be some gaps in the effectiveness of the methods, but they generally convey appropriate information.
- <u>60-69%:</u> Student does not use communication instruments in a formal way and in some cases does not provide enough information to assess project.
- <u>Below 60%:</u> Student has not indicated they are aware of formal methods of communicating project status. They provide few, if any charts or graphs to summarize the results or timeline and schedule status of a project.

_____ *F -8-1 Critical Thinking:*

- <u>90-100%:</u> Students uses decision tools that were taught in the program for all decisions that require them. Student

chooses between several methods and chooses the best one for any problem.

- 80-89%: Student makes use of decision-making tools that were taught throughout the program. Most choices reflect a methodical problem-solving approach to problem solutions.   Methods are mostly used appropriately.
- 70-79%: Student has an understanding of evaluative techniques and occasionally uses some to draw conclusions. Depth of understanding is weak and frequency of use in this area is limited to one or two.
- 60-69%: Student does not demonstrate a complete understanding of decision-making in a complex environment. Some analysis tools are used, but they may be deployed incorrectly, or conclusions based on the techniques may be incorrect.
- Below 60%: Student has not indicated an ability to do critical thinking or make complex decisions. Student seems to be grasping at any solution that comes their way, rather than actually think, at all.

Course Evaluation and Grading

Evaluation Criteria Table

The final grades will be based on the following categories:

CATEGORY	WEIGHT
Labs	20%
Analyses	15%
Course Project Part 1	15%
Course Project Part 2	15%
Course Project Part 3	15%
Course Project Part 4	20%
Total	**100%**

Note: Students are responsible for abiding by the Plagiarism Policy.

Grade Conversion Table

The final grades will be calculated from the percentages earned in the course, as follows:

A	90–100%	4.0
B+	85–89%	3.5
B	80–84%	3.0
C+	75–79%	2.5
C	70–74%	2.0
D+	65–69%	1.5
D	60–64%	1.0
F	<60%	0.0