Syllabus

IST 209  Project Management Concepts  3
Course Number  Course Title  Credits

2  2  N/A  N/A  15
Class or  Laboratory  Clinical or Studio  Practicum,  Course Length
Lecture  Work Hours  Hours  Co-op, Internship  (15 week, 
Hours  

Not Applicable  Applicable  
Performance on an Examination/Demonstration  Alternate Delivery Methods
(Placement Score (if applicable); minimum CLEP score) (Online, Telecourse [give title of videos])

Required Materials:
ISBN 978-0-470-15250-8
Publisher  Wiley

Flash drive

Reference material

Publisher  PMI

Catalog Description:
IST 209: Project Management Concepts teaches students how to create strategies and
orchestrate carefully designed action plans to complete projects successfully, often
incorporating complex, dynamic and changing requirements. This course teaches
students how to manage technology, people, and change in order to achieve goals,
reach targets, and deliver the project on time within budget.

Prerequisites:  MAT 034  Corequisites:  ENG 101

Last Revised:  01/31/13

Course Coordinator (name, email, phone extension):
Assistant Professor Queen E. Okike
okikeq@mccc.edu
Extension  3464

Available Resources:  (Identify library resources relevant to the course, including books,
videos, journals, electronic databases, recommended websites.)

Learning Center Resources:  (Are there tutors for the discipline? Study groups?)
**Course Goals**

The student will be able to:

- Explain historical background on Project Management and its overall evolution
- Identify principles of Project management which covers ground-floor information such as basic skills, elements of project planning and reporting, and the makeup and issues surrounding good project teams
- Explain Project management Lifecycle which categorizes the project phases, explains each phase’s purpose and describes in finer detail the activities, deliverables, and resources for and intentions of each phase.
- Identify Project Management Techniques which provides information on a number of techniques and topics facing Project Managers today, such as types and use of methodologies, managing risks and problems, and specializations such as Software Quality Assurance, Configuration Management, and Crisis Management.
- Explore special topics in Project Management which includes topics such as Knowledge Management and the impact of the Internet on Project Management.

**COURSE CONTENT**

**MODULE 1: SESSIONS ONE AND TWO (Module 1; 2nd – 4th week)**

- Students should be able to identify the characteristics of a project and understand the definition of project management according *The Guide to the PMBOK*. Students should also understand organizational structures and know the differences between them.
- Chapter 1: What Is a Project?
  Students should be able to name and understand the purpose of each of the nine Project Management Knowledge Areas. Students should also be able to identify the individual processes that make up each knowledge area.

**MODULE 1: SESSION THREE**

- Prepares students to understand the initiation of a project. Students should be able to identify the needs or demands that bring about a project.
- Chapter 2: Project Charter and Preliminary Scope Statement
  - Determining project goals
  - Determining deliverables
  - Determining process outputs
  - Defining strategy
  - Identifying performance criteria
  - Producing formal documentation
2. Students should be able to explain the difference between project assumptions and constraints and the important role they play throughout the planning process. Students should also appreciate why assumptions and constraints should be documented.
   - Determining project goals
   - Determining deliverables
   - Determining process outputs
   - Defining strategy
   - Identifying performance criteria
   - Producing formal documentation

3. Students should be familiar with project selection methods. Project selection methods include constrained optimization methods and benefit measurement methods. Students should be able to describe the difference between the two and name the benefit measurement methods used most often for project selection. Students should also be able to utilize the benefit measurement methods to make project selection decisions.
   - Determining project goals
   - Determining deliverables
   - Determining process outputs
   - Defining strategy
   - Identifying performance criteria
   - Producing formal documentation

4. Students should understand project charters, the purpose for having a charter, the types of information included in a project charter, and the reasons for documenting the charter and obtaining sign off from the stakeholders.
   - Determining project goals
   - Determining deliverables
   - Determining process outputs
   - Defining strategy
   - Identifying performance criteria
   - Producing formal documentation
MODULE 1: SESSION FOUR

1. Students should be able to describe the primary purposes of the Scope Planning process which is creating a project scope statement. Students should understand the purpose of the scope statement and its purpose as a baseline for the project (and that the criteria outlined in the scope statement will be used to determine if the project was completed successfully). Requirements gathering and documentation are an important part of the Scope Planning process and requirements should be included in the scope statement as the requirements describe the characteristics of the deliverable.

- Chapter 3: Developing the Project Scope Statement
- Refine project
- Establish project controls
- Develop project plan

MODULE 2: SESSION ONE  (Module 2: 5th - 8th week)

1. Students should be able to explain that the Scope Definition process is where project deliverables are broken down into smaller components. This process is called decomposition. Students should understand how a WBS is constructed, the meanings of the different levels, and that the work package level is the lowest level of a WBS. Students should also understand the importance and purpose of the Communications Planning process.

- Chapter 4: Creating the WBS and Communicating the Plan
- Refine project
- Create WBS
- Establish project controls
- Develop project plan

2. Students should explain what a quality policy is and why it’s important. They should be able to discuss the differences in the cost of quality theories as proposed by Crosby, Juran, Deming, and the Kaizen Approach. Students need to know the quality management plan documents, the quality actions associated with WBS activities and the purpose of the plan. They should know that benefit/cost analysis, benchmarking, flowcharting, and design of experiments are all tools and techniques used to define the quality management plan. They should be able to define each of these tools and techniques as well. Students should understand the definition of the cost of quality and name the three types of costs associated with the cost of quality.
MCCC Course Outline

- Refine project
- Create WBS
- Establish project controls
- Develop project plan

MODULE 2: SESSION TWO

1. Students should be able to discuss the Risk Management Planning and Risk Identification processes. Students should understand that the risk management plan is created during the Risk Management Planning session. They should explain the purpose of the risk management plan, what’s included in this document, and that the risk management plan is incorporated into the project plan at the end of the Planning process. Students should be able to define the Risk Identification process and know that not only are risks identified and documented during this process but the characteristics of the identified risks are also documented here.

- Chapter 5: Risk Planning
- Establish project controls
- Develop project plan
- Obtain plan approval

2. Students should examine the Qualitative Risk Analysis, Quantitative Risk Analysis, and Risk Response Planning processes. Students should understand the purpose of the Qualitative Risk Analysis process, what probability scales are and how they’re expressed. Students should be able to create, describe and use a risk impacts scale and a probability impact risk matrix. They should also understand how the overall risk ranking for the project is determined. Students should understand that Quantitative Risk Analysis involves evaluating the impacts of risk and quantifying the risk exposure of the project. This involves using the following tools and techniques: Interviewing, sensitivity analysis, decision tree analysis, and simulation. Students should understand what each of these tools do. Students should be able to calculate and read a decision tree using earned value and risk probability. Students should explain the output called probabilistic analysis of the project and what it produces. Students should be able to determine which types of risks need risk response plans and why. They should understand the strategies used during the Risk Response Planning process to help develop responses. They should know what information is documented in the risk response plan and understand the difference between residual risk and secondary risk.

- Establish project controls
- Develop project plan
- Obtain plan approval
MODULE 2: SESSION THREE

1. Students should be able to explain the purpose of the Plan Purchases and Acquisitions, Plan Contracting, and Human Resource Planning processes at the conclusion of this session. Students should understand that Plan Purchases and Acquisitions involve determining and planning for resources that will come from outside the organization. They should be able to relay the reasons for using make-or-buy analysis. Students should tell the differences in contract types and the advantages and disadvantages to buyers and sellers of the various contract types. Human Resources Planning documents the roles and responsibilities of project team members (or groups of resources) and their reporting relationships.

- Chapter 6: Resource Planning
- Develop resource management plan
- Establish project controls
- Develop project plan

2. Students should explain the Activity Sequencing process. Students should be able to describe the purpose of the Activity Sequencing process, name and describe the three dependencies (mandatory, discretionary, and external), and name and understand the four diagramming methods. Students should tell the four logical relationships, the diagramming technique that relies on them, and how to construct a PDM.

- Develop resource management plan
- Establish project controls
- Develop project plan

MODULE 3: SESSION ONE  (Module 3: 9th -12th week)

- Students should describe the Activity Resource Estimating and Activity Duration Estimating processes. Students should be able to name the tools and techniques of the Activity Duration Estimating process and understand the differences between them.

- Chapter 7: Creating the Project Schedule and Budget
- Refine time and cost estimates
- Establish project controls
- Develop project plan
- Obtain plan approval
2. Students should understand the purpose of the Schedule Development process and the impact that the other Planning processes have on this process. They should understand the difference between leads and lags and be able to name the two primary outputs of this process. Students should understand how to calculate CPM and be able to determine the project’s critical path.

- Refine time and cost estimates
- Establish project controls
- Develop project plan
- Obtain plan approval

3. Students should be able to state the difference between PERT and CPM. Students should be able to calculate expected value (PERT time) and be able to calculate total project duration using the PERT technique.

- Refine time and cost estimates
- Establish project controls
- Develop project plan
- Obtain plan approval

4. Students should be able to describe the difference between crashing and fast tracking. They should know what resource leveling heuristics does and how it’s used. Students should understand the advantages and disadvantages of using project management software. Project schedules should be approved and signed off by the stakeholders. Students should understand the importance of this concept. They should know the ways project schedules can be displayed graphically and they should understand the purpose of the schedule management plan.

- Refine time and cost estimates
- Establish project controls
- Develop project plan

5. At the end of this session, students should be able to describe the Cost Estimating and Cost Budgeting processes and know what elements are included in the project budget. They should understand the purpose of the cost baseline and how it’s displayed. Students should understand that the project plan is used throughout the Executing and Monitoring and Controlling processes as a guideline to track and measure project performance and to make future project decisions. They should understand what makes up a project plan (the kinds of information and documents included in the project plan). Students should understand the difference between the project plan and performance measurements.

- Refine time and cost estimates
- Establish project controls
MCCC Course Outline

- Develop project plan
- Obtain plan approval

**MODULE 3: SESSION TWO**

1. Students should explain the Direct and Manage Project Execution process, the work authorization system, and the purpose of status review meetings. Students should be able to describe the purpose of the Acquire Project Team and Develop Project Team processes, name the four stages of team development, and describe the benefits of effective teams are. Students should also understand reward and recognition systems.

- Chapter 8: Developing the Project Team
- Committing resources
- Implementing resources
- Manage progress
- Communicating progress

2. Students should understand the premise of the motivational theories presented in the Develop Project Team process and their primary points. Students should be able to name the different types of power and the outputs of the Team Development process.

- Committing resources
- Implementing resources
- Manage progress
- Communicating progress

3. By the end of this session, students should understand the elements of communication, what senders and receivers are responsible for, and the forms of communications and their advantages. Students should know how to calculate the lines communication and should know the techniques one can use to improve listening skills. Students should know and understand the five conflict resolution techniques. Students should also know what the purpose of the Information Distribution process is and be able to describe the difference between information retrieval systems and information distribution methods.

- Committing resources
- Implementing resources
- Manage progress
- Communicating progress
 MODULE 3: SESSION THREE

1. Students should be able to explain the elements and forms of communication, including good listening skills. Students should be able to discuss conflict resolution techniques and know that Project Managers use the confrontation, or problem solving, technique most often. Students should understand the Information Distribution process and be able to describe the difference between information retrieval systems and information distribution systems.

- Chapter 8: Developing the Project Team
  - Commit Resources
  - Implement Resources
  - Manage Progress
  - Communicate Progress

 MODULE 3: SESSION FOUR

1. By the end of this session, students should understand the Request Seller Responses and Select Seller processes. Students should understand the life cycle of a contract. They should be able to recognize fait accompli, when it’s typically used, and how it’s used. Students should also understand the different techniques used to choose one vendor over another.

- Chapter 9: Measuring and Controlling Project Performance
  - Manage progress
  - Implement quality assurance procedures

1. Students should have a solid understanding of the Contract Administration and Quality Assurance processes by the end of this session. They should be able to describe the role the project manager plays in contract administration when they themselves administer the contract and when a contract administrator is responsible for managing the contract. They should know the tools and techniques of the Contract Administration process. Students should understand the purpose of the Quality Assurance process, what quality audits measure, and that quality improvements are implemented as a result of quality audits via change requests or taking corrective action.

- Manage progress
- Implement quality assurance procedures
MCCC Course Outline

MODULE 4: SESSION ONE  (Module 4: 13th – 14th week)

1. Students will learn the purpose for Integrated Change Control, Schedule Control, and Risk Monitoring and Control processes. They should be able to describe a change control system, a configuration change board, and understand the purpose for taking corrective action and documenting lessons learned. Students should understand what scope change entails and what other parts of the project it impacts. Students should be able to describe the inputs to the Schedule Control process and describe revisions. Students should understand the purpose for the Risk Monitoring and Control process and that risk monitoring should occur throughout the life of the project. Students should be able to discuss the tools and techniques of this process. They should also know the definition of workarounds and that the risk response plan will require updates as risks are monitored and corrective action is taken.

- Chapter 10: Monitoring and Controlling Change
- Measure performance
- Reassess control plans
- Respond to risk trigger events
- Monitor project activity

2. Students will learn the Cost Control process. Students should be able to identify how Cost Control problems come about and that budget updates require changes to the cost baseline. Students should understand and be able to perform all of the earned value calculations. They should also know that performance measurements are the output of this process that contains the results of the earned value calculations.

- Measure performance
- Reassess control plans
- Respond to risk trigger events
- Monitor project activity

MODULE 4: SESSION TWO

1. Students should be able to describe the tools and techniques used in the Quality Control process. They should understand the impacts of rework and know that processes in control should not be adjusted.

- Chapter 11: Controlling Work Results and Closing Out the Project
- Measure performance
- Refine control limits
• Take corrective action  
• Evaluate effectiveness of corrective action  
• Ensure plan compliance  
• Monitor project activity  

2. Students should know the purposes of the Scope Verification and Scope Control processes by the end of this session.  
• Measure performance  
• Refine control limits  
• Take corrective action  
• Evaluate effectiveness of corrective action  
• Ensure plan compliance  
• Monitor project activity  

3. Students should be able to discuss the importance of project closure and formal acceptance during the closing processes. They should understand the four types of project endings, the Contract Closure process and the purpose for procurement audits. Students should know the purpose for the Close Project process and the importance of documenting lessons learned. Releasing team members is not an official closing process output but students should understand the importance of communication during this process.  
• Measure performance  
• Refine control limits  
• Take corrective action  
• Evaluate effectiveness of corrective action  
• Ensure plan compliance  
• Monitor project activity  

**MODULE 4: SESSION THREE**  
• Students should be able to explain the Professional Responsibility area of project management. They should understand that as certified project managers, PMI requires they adhere to the *Project Management Professional Code of Professional Conduct*. They should understand the areas covered in this code including personal integrity, conflict of interest, applying project management and industry knowledge, and respecting confidential company information and data. They should also understand the need for balancing competing stakeholder needs. Students should understand the role of training when dealing with cultural
differences they might encounter among team members or when visiting other countries.

- Chapter 12: Professional Responsibility
- Ensure integrity
- Contributing to knowledge base
- Apply professional knowledge
- Balancing stakeholder interests
- Respecting differences

**Evaluation of Student Learning**

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Average of weekly homework assignments</td>
<td>(10% per module) 40%</td>
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<td>Discussions postings</td>
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<td>Four Units of Tests:</td>
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<td>Module 1</td>
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<tr>
<td>Final Examination</td>
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**Grade Policy**

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<th>Nominal %</th>
<th>QPA quality point value</th>
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<td>A</td>
<td>Superior Achievement</td>
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<td>A-</td>
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<td>90-92</td>
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<td>B+</td>
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<td>87-89</td>
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<tr>
<td>B</td>
<td>Above Average Achievement</td>
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<tr>
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<td>C+</td>
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<td>C</td>
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Audit:
If you audit the course, you will receive an “X” grade—this cannot be changed to a letter grade at a later date.

Withdrawal Course Requirements:
To receive a W grade for any course, a student must consult with the course instructor or an appropriate division representative and then withdraw officially before two-thirds of the course has been completed by submitting a withdrawal form to the Office of Student Records. Withdrawal after this point results in a grade other than W (usually F). At any time before two-thirds of the course has been completed, the instructor may also withdraw with a W grade any student who has been absent excessively. A student thus withdrawn will not be entitled to any refund of tuition or fees. The student may appeal this action.

Integrity Statement
A student who knowingly represents work of others as his/her own, uses or obtains unauthorized assistance in the execution of any academic work, or gives fraudulent assistance to another student is guilty of cheating. The penalty for violating the honor code is severe. (See Student Handbook.) Any student violating the honor code is subject to receive a failing grade for the course and will be reported to the Office of Student Affairs. If a student is unclear about whether a particular situation may constitute an honor code violation, the student should meet with the instructor to discuss the situation.

It is permissible to assist classmates in general discussions of computing techniques; general advice and interaction are encouraged. Each person, however, must develop his or her own solutions to the assigned homework and laboratory exercises. Students may not "work together" on graded assignments. Such collaboration constitutes cheating, unless it is a group assignment. A student may not use or copy (by any means) another's work (or portions of it) and represent it as his/her own.