

**ITT Technical Institute**  
**PM3225**  
**Project Management Tools and**  
**Techniques**  
**Onsite Course**

**SYLLABUS**

---

**Credit hours:** 4.5

**Contact/Instructional hours:** 56 (34 Theory Hours, 22 Lab Hours)

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

Prerequisite: PM3110 Introduction to Project Management or equivalent

**Course Description:**

This course introduces tools and techniques used in project management. Topics include defining project scope, identifying and tracking project risks, and evaluating, controlling and closing a project. Project management software is used to develop an integrated project plan and create a project work breakdown structure and schedule.

## **Where Does This Course Belong?**

---

This is a foundation course in the Project Management and Administration degree program. It is taught to help students prepare for problem-solving challenges throughout the curriculum as they relate to Project Management functions.

## **Course Summary**

---

### **Major Instructional Areas**

1. Project management problem assessment
2. Root cause analysis
3. Tools used in problem-solving
4. Fact-based decision-making

### **Course Objectives**

1. Develop a statement of a problem facing the project manager.
2. Use various methods to collect factual information to formulate underlying causes of problems.
3. Analyze problems based on root cause information.
4. Choose among various analysis tools for an effective method to resolve issues and solve problems related to project management challenges.
5. Decide on the best course of action based on trade-offs among alternatives.

## Learning Materials and References

### Required Resources

| Textbook Package   | New to this Course | Carried over from Previous Course(s) | Required for Subsequent Course(s) |
|--|--------------------|--------------------------------------|-----------------------------------|
| Andler, N. (2011). <i>Tools for project management: Workshops and consulting custom update edition</i> . (2 <sup>nd</sup> Ed.). Hoboken, NJ: John Wiley and Sons, Inc.   | ■                  |                                      | ■                                 |
| Project Management Institute (2013). <i>A guide to project management body of knowledge (PMBOK® Guide) (5th ed.)</i> . Newtown Square, PA: Project Management Institute, Inc.<br><br><b>Note:</b> To access "A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Fifth Edition", log on to ITT Tech Virtual Library, navigate to Books 24x7, and search with the keywords "PMBOK 5th edition". |                    | ■                                    | ■                                 |

### Recommended Resources

#### Books, Professional Journals

- PM Network: <http://www.pmi.org/Knowledge-Center/Publications-PM-Network.aspx>
- Project Management Journal: <http://www.pmi.org/Knowledge-Center/Publications-Project-Management-Journal.aspx>
- Project Manager Today: <http://www.pmtoday.co.uk/content/en/default.aspx>
- Project Magazine: <http://projectmagazine.com/>
- Projects At Work: <http://www.projectsatwork.com/>

#### Professional Associations

- American Society for the Advancement of Project Management  
<http://www.asapm.org/>
- International Association of Project and Program Management  
<http://www.iappm.org/>
- International Project Management Association  
<http://ipma.ch/>
- International Research Network on Organizing by Projects  
<http://www.irnop.org/>
- National Management Association  
<http://nma1.org/>
- Project Management Institute  
<http://www.pmi.org/>

ITT Tech Virtual Library (accessed via Student Portal)

#### Books > Books 24x7

- Adair, J. (2002). *Inspiring leadership: Learning from great leaders*. London: Thorogood Publishing.
- Baker, S. (2000). *Complete idiot's guide to project management*. Indianapolis, IN: Alpha Books.

- Bordas, J. (2007). *Salsa, soul, and spirit: Leadership for a multicultural age*. San Francisco, CA: Berrett-Koehler Publishers.
- Dotlich, D. L., Cairo, P. C., & Rhinesmith, S. H. (2006). *Head, heart & guts: How the world's best companies develop complete leaders*. San Francisco CA: Jossey-Bass.
- Hutson, H., & Perry, B. (2006). *Putting hope to work: Five principles to activate your organization's most powerful resource*. Santa Barbara, CA: Greenwood Press.
- Kendrick, T. (2004). *The project management tool kit: 100 tips and techniques for getting the job done right*. New York NY: AMACOM.
- Prentice, S. (2007). *Cool down: Getting further by going slower*. Hoboken, NJ: John Wiley & Sons.
- Rothwell, W. J. (2005). *Effective succession planning: Ensuring leadership continuity and building talent from within (3rd ed.)*. New York, NY: AMACOM.
- Selby, J., & Netanel, A. (2008). *Executive genius: How to build a high-awareness company*. Pompton Plains, NJ: Career Press.

#### Books > Ebrary

- Aldisert, L. M. (2002). *Valuing people: How human capital can be your strongest asset*. Chicago, IL: Dearborn Trade, A Kaplan Professional Company.
- Bal, V. (2008). *Managing leadership stress*. Greensboro, NC: Center for Creative Leadership.
- Cagle, R. B. (2004). *Your successful project management career*. New York, NY: AMACOM.
- Center for Creative Leadership. (2007). *Leading dispersed teams*. Greensboro, NC: Center for Creative Leadership.
- Deal, J. J. (2007). *Developing cultural adaptability: How to work across differences*. Greensboro, NC: Center for Creative Leadership.
- Goldsmith, M., Segil, L., & Belasco, J. (2002). *Partnering: The new face of leadership*. New York, NY: AMACOM.
- Heerkens, G. *Project management*. New York, NY: McGraw-Hill Trade.
- Kanaga, K. (2007). *How to launch a team: Start right for success*. Greensboro, NC: Center for Creative Leadership.
- Kanaga, K. (2007). *Maintaining team performance*. Greensboro, NC: Center for Creative Leadership.
- Kendrick, T. (2004). *Project management tool kit: 100 tips and techniques for getting the job done right*. New York, NY: AMACOM.
- Kliem, R. L. (2004). *Leading high performance projects*. Boca Raton, FL: J. Ross Publishing, Inc.
- Klann, G. (2007). *Building your team's morale, pride and spirit*. Greensboro, NC: Center for Creative Leadership.
- Lewis, J. P. (2003). *Project manager's pocket survival guide*. New York, NJ: McGraw-Hill Trade.
- Popejoy, B. (2007). *Managing conflict with direct reports*. Greensboro, NC: Center for Creative Leadership.
- Richman, L. L. (2002). *Project management step-by-step*. New York, NY: AMACOM.
- Rosen, A. (2004). *Effective IT project management: Using teams to get projects completed on time and under budget*. New York, NY: AMACOM.
- Scharlatt, H. (2008). *Selling your ideas to your organization*. Greensboro, NC: Center for Creative Leadership.
- Sheard, A.G., & Kakabadse, A. P. (2004). *A process perspective on leadership and team development*. Bingley, UK: Emerald Group Publishing Ltd.

#### Other References

- ProjectManagement.com:  
<http://www.projectmanagement.com/>  
 An online community for project managers offering processes, templates, examples, and tips

#### Information Search

Use the following keywords to search for additional online resources that may be used for supporting your work on the course assignments:

- Project Management
- Problem Solving
- SMART goals
- Decision Tree
- SWOT Analysis
- Project Management Tools

**NOTE:** All links are subject to change without prior notice.

## Course Plan

---

### Suggested Learning Approach

In this course, you will be studying individually and within a group of your peers. As you work on the course deliverables, you are encouraged to share ideas with your peers and instructor, work collaboratively on projects and team assignments, raise critical questions, and provide constructive feedback.

Use the following advice to receive maximum learning benefits from your participation in this course:

| DO  | DON'T  |
|---|--|
| <ul style="list-style-type: none"> <li>▪ Do take a proactive learning approach</li> <li>▪ Do share your thoughts on critical issues and potential problem solutions</li> <li>▪ Do plan your course work in advance</li> <li>▪ Do explore a variety of learning resources in addition to the textbook</li> <li>▪ Do offer relevant examples from your experience</li> <li>▪ Do make an effort to understand different points of view</li> <li>▪ Do connect concepts explored in this course to real-life professional situations and your own experiences</li> </ul> | <ul style="list-style-type: none"> <li>▪ Don't assume there is only one correct answer to a question</li> <li>▪ Don't be afraid to share your perspective on the issues analyzed in the course</li> <li>▪ Don't be negative about the points of view that are different from yours</li> <li>▪ Don't underestimate the impact of collaboration on your learning</li> <li>▪ Don't limit your course experience to reading the textbook</li> <li>▪ Don't postpone your work on the course deliverables – work on small assignment components every day</li> </ul> |

## Course Outline

### ***Unit 1: Introduction to Project Management Problems***

Upon completion of this unit, the students are expected to:

- Define a project and project management
- List the 5 phases in the project lifecycle
- Describe the types of problems and obstacles that often arise during a project
- Identify where in the project lifecycle problems tend to occur
- Explain why problems tend to occur
- Describe the tools designed to prevent problems
- Explain how tools work to prevent problems
- Discuss the role of the project team in identifying possible problems

| READING ASSIGNMENT                      | GRADED ACTIVITIES / DELIVERABLES |  |   |
|---|----------------------------------|--|---|
|   | Grading Category                 | Activity/Deliverable Title                                   | Grade Allocation (% of all graded work) |
| Andler, Chapter 1; Chapter 2, pp. 26–31 | Assignment                       | Unit 1. Assignment 1. Identifying a Real Project in the News | 3%                                      |
|   | Exercise                         | Unit 1. Exercise 1. Identifying Real Issues                  | 4%                                      |
| PMBOK, Chapters 1-3                     |                                  |  |   |

### ***Unit 2: Introduction to Problem-Solving Tools and Techniques: Approach & Application***

Upon completion of this unit, the students are expected to:

- Identify the warning signs and symptoms of certain problems
- Define the risks problems pose to a project
- Identify the steps in the problem-solving process
- Analyze approaches to apply to a problem
- Evaluate the importance of stakeholder value in the problem-solving process

| READING ASSIGNMENT                               | GRADED ACTIVITIES / DELIVERABLES |  |   |
|--|----------------------------------|--|---|
|  | Grading Category                 | Activity/Deliverable Title                   | Grade Allocation (% of all graded work) |
| Andler, Chapter 2, pp. 32–46<br>PMBOK Chapter 13 | Exercise                         | Unit 2. Exercise 1. Problem-Solving Approach | 4%                                      |
|  | Project                          | Unit 2. Project Part 1. Project Topic        | 3%                                      |
|  | Quiz                             | Unit 2. Quiz 1                               | 2%                                      |

**Unit 3: The Problem-Solving Process: Diagnosing the Problem (Part 1)**

Upon completion of this unit, the students are expected to:

- Define the situation of the problem
- Differentiate the root cause, symptoms, and effects of the problem
- Apply the Problem Tree tool to a problem
- Apply the IS – IS NOT tool to a problem
- Apply the Stakeholder Analysis tool to a problem

| READING ASSIGNMENT               | GRADED ACTIVITIES / DELIVERABLES |  |  |
|----------------------------------|----------------------------------|--|--|
|                                  | Grading Category                 | Activity/Deliverable Title                                     | Grade Allocation<br>(% of all graded work) |
| Andler, Chapter 3,<br>pp. 47–104 | Assignment                       | Unit 3. Assignment 1. Understanding a Real Project in the News | 3%   |
|                                  |                                  | Unit 3. Assignment 2. Specific Tools                           | 3%   |

**Unit 4: The Problem-Solving Process: Diagnosing the Problem (Part 2)**

Upon completion of this unit, the students are expected to:

- Apply information gathering techniques to collect relevant information
- Apply intuitive creativity techniques to gather information
- Process, consolidate and communicate information about a problem
- Apply the Pareto tool to a problem

| READING ASSIGNMENT                | GRADED ACTIVITIES / DELIVERABLES |                                   |  |
|-----------------------------------|----------------------------------|-----------------------------------|--|
|                                   | Grading Category                 | Activity/Deliverable Title        | Grade Allocation<br>(% of all graded work) |
| Andler, Chapter 3,<br>pp. 105–164 | Exercise                         | Unit 4. Exercise 1. Tool Analysis | 4%   |
|                                   | Assignment                       | Unit 4. Assignment 1. Pareto Tool | 3%   |
|                                   | Project                          | Unit 4. Project Part 2. Resources | 3%   |

**Unit 5: The Problem-Solving Process: Setting Goals and Objectives**

Upon completion of this unit, the students are expected to:

- Describe the steps and criteria involved in setting goals and objectives
- Explain the requirements and characteristics of an effective goal statement
- Compare and contrast the various goal-setting tools
- Apply the Charter tool to a problem

| READING ASSIGNMENT | GRADED ACTIVITIES / DELIVERABLES |  |  |
|--------------------|----------------------------------|--|--|
|                    | Grading Category                 | Activity/Deliverable Title                     | Grade Allocation<br>(% of all graded work) |
| Andler, Chapter 4  | Exercise                         | Unit 5. Exercise 1. SMART Goals and Objectives | 4%   |
|                    | Assignment                       | Unit 5. Assignment 1. Charter Tool             | 3%   |
|                    | Quiz                             | Unit 5. Quiz 2                                 | 2%   |



**Unit 6: The Problem-Solving Process: Analyzing Causes and Possible Solutions (Part 1)**

Upon completion of this unit, the students are expected to:

- Compare challenges of the past with current challenges
- Identify the components of successful analysis
- Explain the elements of organizational analysis in the context of organization design and development
- Compare and contrast organizational analysis tools
- Explain the elements of technical analysis in the context of systems, business processes, data relationships and technology
- Compare and contrast technical analysis tools
- Apply the Process Analysis tool to a problem

| READING ASSIGNMENT             | GRADED ACTIVITIES / DELIVERABLES |  |   |
|--------------------------------|----------------------------------|--|---|
|                                | Grading Category                 | Activity/Deliverable Title               | Grade Allocation (% of all graded work) |
| Andler, Chapter 5, pp. 185–220 | Assignment                       | Unit 6. Assignment 1. Process Analysis   | 3%                                      |
|                                | Exercise                         | Unit 6. Exercise 1. Situations and Tools | 4%                                      |

**Unit 7: The Problem-Solving Process: Analyzing Causes and Possible Solutions (Part 2)**

Upon completion of this unit, the students are expected to:

- Explain the elements of strategic analysis
- Compare and contrast strategic analysis tools
- Apply a strategic analysis tool to a problem
- Apply a strategic development tool to a problem
- Select the best tool to be applied to a problem

| READING ASSIGNMENT             | GRADED ACTIVITIES / DELIVERABLES |  |   |
|--------------------------------|----------------------------------|--|---|
|                                | Grading Category                 | Activity/Deliverable Title                                     | Grade Allocation (% of all graded work) |
| Andler, Chapter 5, pp. 221–275 | Exercise                         | Unit 7. Exercise 1. SWOT Analysis                              | 4%                                      |
|                                | Assignment                       | Unit 7. Assignment 1. Strategic Analysis and Development Tools | 3%                                      |

**Unit 8: The Problem-Solving Process: Deciding on the Best Solution for the Problem (Part 1)**

Upon completion of this unit, the students are expected to:

- Explain the decision-making process
- Analyze possible options for a specific problem
- Assess the pros and cons of each option
- Choose the best solution to a problem
- Apply the decision tree tool to a problem
- Apply the argument balance tool to a problem

| READING ASSIGNMENT                | GRADED ACTIVITIES / DELIVERABLES |   |  |
|-----------------------------------|----------------------------------|---|--|
|                                   | Grading Category                 | Activity/Deliverable Title                  | Grade Allocation<br>(% of all graded work) |
| Andler, Chapter 6,<br>pp. 276–292 | Exercise                         | Unit 8. Exercise 1. Pros and Cons           | 4%   |
|                                   | Assignment                       | Unit 8. Assignment 1. Decision Tree Tool    | 3%   |
|                                   |                                  | Unit 8. Assignment 2. Argument Balance Tool | 3%   |
|                                   | Quiz                             | Unit 8. Quiz 3                              | 2%   |

**Unit 9: The Problem-solving Process: Deciding on the Best Solution for the Problem (Part 2)**

Upon completion of this unit, the students are expected to:

- Distinguish between the different decision-making tools
- Choose a specific decision-making tool for a situation
- Apply the Cartesian Coordinates Tool to a problem
- Apply the Prioritization Matrices Tool to a problem

| READING ASSIGNMENT                | GRADED ACTIVITIES / DELIVERABLES |   |  |
|-----------------------------------|----------------------------------|---|--|
|                                   | Grading Category                 | Activity/Deliverable Title                    | Grade Allocation<br>(% of all graded work) |
| Andler, Chapter 6,<br>pp. 293–309 | Assignment                       | Unit 9. Assignment 1. Cartesian Coordinates   | 3%   |
|                                   |                                  | Unit 9. Assignment 2. Prioritization Matrices | 3%   |
|                                   | Exercise                         | Unit 9. Exercise 1. Decision-Making Tool      | 4%   |
|                                   | Project                          | Unit 9. Project Part 3. Draft Research Paper  | 3%   |

**Unit 10: Project Management Tools**

Upon completion of this unit, the students are expected to:

- Assess project management tools used to initiate projects
- Assess project management tools used to plan projects
- Assess project management tools used to implement and monitor projects
- Assess project management tools used to close projects
- Evaluate peer presentations of projects

| READING ASSIGNMENT | GRADED ACTIVITIES / DELIVERABLES |   |  |
|--------------------|----------------------------------|---|--|
|                    | Grading Category                 | Activity/Deliverable Title                                    | Grade Allocation<br>(% of all graded work) |
| Andler, Chapter 7  | Exercise                         | Unit 10. Exercise 1. Booz Ball Evaluation Tool                | 4%   |
|                    | Project                          | Unit 10. Project Part 4. Short Presentations and Peer Reviews | 3%   |

**Unit 11: Course Review and Final Examination**

| READING ASSIGNMENT                           | GRADED ACTIVITIES / DELIVERABLES |   |  |
|--|----------------------------------|---|--|
|  | Grading Category                 | Activity/Deliverable Title                                  | Grade Allocation<br>(% of all graded work) |
| Andler, Chapters 8-9; Review of all chapters | Project                          | Unit 11. Project Part 5. Final Research Paper (e-Portfolio) | 3%   |
|  | Exam                             | Unit 11. Final Exam   | 10%  |

## Evaluation and Grading

---

**Evaluation Criteria**

The graded assignments will be evaluated using the following weighted categories:

| Category     | Weight      |
|--------------|-------------|
| Assignment   | 33%         |
| Exercise     | 36%         |
| Project      | 15%         |
| Quiz         | 6%          |
| Exam         | 10%         |
| <b>TOTAL</b> | <b>100%</b> |

**Grade Conversion**

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

| Grade | Percentage | Credit |
|-------|------------|--------|
| 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    |

## Academic Integrity

---

All students must comply with the policies that regulate all forms of academic dishonesty, or academic misconduct, including plagiarism, self-plagiarism, fabrication, deception, cheating, and sabotage. For more information on the academic honesty policies, refer to the Student Handbook and the Course Catalog.

*(End of Syllabus)*