



Curriculum Development
Centers Program

Awardee of The Office of the National Coordinator for
Health Information Technology

Component 19: Introduction to Project Management

Instructor's Manual

Version 3.0/Spring 2012

Notes to Instructors

This Instructor's Manual is a resource for instructors using the Introduction to Project Management component. Each component is broken down into units, each of which will include the following elements:

- Learning objectives
- Suggested student readings, texts, reference links to supplement the narrated PowerPoint slides
- Lectures (voiceover PowerPoint in Flash format); PowerPoint slides (Microsoft PowerPoint format), lecture transcripts (Microsoft Word format); and audio files (MP3 format) for each lecture
- Self-assessment questions reflecting Unit Objectives with answer keys and/or expected outcomes
- Application Activities (e.g., discussion questions, assignments, projects) with instructor guidelines, answer keys and/or expected outcomes

Separate materials are provided with units 3, 5, and 7 so students can have hands-on project management experience. Additional project management templates and materials are available with unit 3. These materials can be utilized throughout this component.

This material provides students with both analysis of and hands-on application of project management tools and techniques to real-life health IT scenarios

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Component Overview

An understanding of project management tools and techniques that results in the ability to create and follow a project management plan.

Component Objectives

At the completion of this component, the student will be able to:

- Describe factors that are critical to project success.
- Develop a comprehensive project management plan.
- Define project scope that reflects stakeholder perspectives and project requirements.
- Prepare an effective work breakdown structure.
- Differentiate project life cycle models based on project characteristics.
- Develop estimates for project cost and schedule.
- Apply tools and techniques to manage project scope, time, and budget.
- Plan and implement effective communications with the project team and stakeholders.
- Differentiate roles of project team members.
- Select and apply appropriate tools and techniques for risk management, quality management, and change management.

Component Authors

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Gabrielle B Haskins, PMP

Gabrielle Haskins, PMP, has two Master Certificates from George Washington University, one in Information Technology Project Management, and one in Project Management, PMP certification from PMI 2009. In 2010 she was a lead faculty for the Health Information Technology project, at Lansing Community College and was responsible for adapting and creating the material for the workforce curriculum for the six roles from ONC/HHS, specifically preparing materials for the Implementation Project Manager and Technical Implementation Support Specialist.

Lecture Narration/Sound Engineer

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David Flass – Project Manager

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Likewise, the above also applies to the Curriculum Development Centers (including Columbia University, Duke University, Johns Hopkins University, Oregon Health & Science University, University of Alabama at Birmingham, and their affiliated entities).

Component 19/Unit 1

Unit Title

An Overview of Health IT Projects

Unit Description

Students will receive a broad overview of project management including some distinctive characteristics of health IT projects. This unit includes several real scenarios to illustrate the diversity of projects in health IT.

Unit Objectives

By the end of this unit the student will be able to:

1. Review the history of project management.
2. Define what a project is.
3. Define project management.
4. Identify reasons that more organizations are implementing HIT projects.
5. Identify key characteristics for project success and failure.
6. Describe the range and characteristics of health IT projects.

Unit Topics / Lecture Titles

- 1.1 – Health IT Scenarios
- 1.2 – What Is Project Management?
- 1.3 – Reasons for Projects
- 1.4 – Role of the Project Manager
- 1.5 – Reasons Success/Failure

Unit References

(All links accessible as of 1/1/2012)

Lecture 1a

1. *A User's Manual to the PMBOK® Guide*, Stackpole. Wiley:2010. Hoboken, NJ
2. Avova. Project Management. c2006-2011. Available from: http://www.avova.ie/services/project-management*
3. Health Care Projects: PMI Healthcare Special Interest Group <http://www.pmihealthcare.org/>
4. Houston S, Bove LA. Project management for healthcare informatics. Springer Science + Business Media, LLC; 2010

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5. Infoglow. Iterative & Incremental Software Development: A Brief History. c2007-2011. Available from: http://www.infoglow.com/index.php?p=res_briefe_history
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7. Knowledgerush. Project Management. c2009. Available from: http://www.knowledgerush.com/kr/encyclopedia/Project_management/*
8. Projects: Project Management Institute (PMI), and its *Guide to the Project Management Body of Knowledge (PMBOK® Guide)* , 4th Ed., 2008.
9. Schwalbe K. Information technology project management (with Microsoft Project 2007 CD-ROM). 6th ed.; 2009.
10. Whitten N. Neal Whitten's let's talk! more no-nonsense advice for project success. Management concepts; 2007.
11. Wiefing K. Scrappy project management, 12 predictable & avoidable pitfalls every project faces. 1st ed. Happy About; 2007.
12. Wikia. Engineering: Project Management. Available from: http://engineering.wikia.com/wiki/Project_management
13. Wikipedia. Project Management. c2011. Available from: http://en.wikipedia.org/wiki/Project_management
14. Wysocki, RK . Effective project management: traditional, agile, extreme. 5th Edition. New York: Wiley; 2009.

Lecture 1a Images

Slide 9: Flow chart of Process Areas. Image courtesy Wikipedia, Creative Commons. Available from: http://en.wikipedia.org/wiki/Project_life_cycle#Project_development_stages

Slide 12. 1 :Iterative Life Cycle. Craetive Commons Wikipedia: :User:Westerhoff. Available:

http://en.wikipedia.org/wiki/File:Iterative_development_model_V2.jpg

Slide 12.2 :Agile Life Cycle Creative Commons VersionOne, Inc. (and trimmed by User:Mdd). Available from: http://en.wikipedia.org/wiki/File:Agile_Software_Development_methodology.jpg

Lecture 1b

1. *A User's Manual to the PMBOK® Guide*, Stackpole. Wiley:2010. Hoboken, NJ
2. Avova. Project Management. c2006-2011. Available from: <http://www.avova.ie/services/project-management>

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3. Health Care Projects: PMI Healthcare Special Interest Group (<http://www.pmihealthcare.org/>*)
4. Houston S, Bove LA. Project management for healthcare informatics. Springer Science + Business Media, LLC; 2010
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6. Kerzner H. Project management: a systems approach to planning, scheduling, and controlling. 10th ed. Wiley; 2009.
7. KnowledgeRush. Project Management. c2009. Available from: http://www.knowledgerush.com/kr/encyclopedia/Project_management/*
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13. Wikipedia. Project Management. c2011. Available from: http://en.wikipedia.org/wiki/Project_management
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Student Application Activities

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Component 19/Unit 2

Unit Title

Project Life Cycles

Unit Description

This unit provides an overview of various project life cycles so that students can assess their appropriateness for use depending on characteristics of a project. Students examine processes, knowledge areas, and organizational influences that are critical to successful project management.

Unit Objectives

By the end of this unit the student will be able to:

1. Identify process groups and knowledge areas used in project management.
2. Differentiate linear, iterative, adaptive, and agile project life cycles.
3. Relate life cycle phases to reviews, milestones, and deliverables.
4. Compare various organizational structures as contexts for managing projects.

Unit Topics / Lecture Titles

- 2.1 – Project Management Elements
- 2.2 – Life Cycles
- 2.3 – Phases
- 2.4 – Organizations

Unit References

(All links accessible as of 1/1/2012)

Lecture 2a

1. Highsmith, JA. (2009) *Agile Project Management: creating innovative products*. 2nd ed; Boston: Pearson Education.
2. Houston S, Bove LA. (2010) *Project Management for Healthcare Informatics*. New York: Springer Science + Business Media, LLC.
3. Kerzner H. (2009) *Project Management: a Systems Approach to Planning, Scheduling, and Controlling*. 10th ed. Hoboken, NJ: Wiley.
4. Project Management Institute, *A Guide to the Project Management Body of Knowledge*. 4th ed (2008). Newtown Square, PA: PMI.

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5. Whitten N. Neal (2007). *Whitten's Let's Talk! More No-nonsense Advice for Project Success*. Vienna, VA.: Management Concepts Inc.
6. Wysocki, RK (2009). *Effective Project Management: traditional, agile, extreme*. 5th Edition. New York: Wiley.

Lecture 2a Images

Slide 9: Processes and Process Groups. Courtesy Johns Hopkins University Staff

Slide 14: Reference Models for Project Life Cycles. Courtesy Johns Hopkins University Staff

Lecture 2b

1. Highsmith, JA. (2009) *Agile Project Management: Creating innovative products*. 2nd ed; Boston: Pearson Education.
2. Houston S, Bove LA. (2010) *Project Management for Healthcare Informatics*. New York: Springer Science + Business Media, LLC.
3. Kerzner H. (2009) *Project Management: a Systems Approach to Planning, Scheduling, and Controlling*. 10th ed. Hoboken, NJ: Wiley.
4. Project Management Institute, *A Guide to the Project Management Body of Knowledge*. 4th ed (2008). Newtown Square, PA: PMI.
5. Whitten N. Neal (2007). *Whitten's Let's Talk! More No-nonsense Advice for Project Success*. Vienna, VA: Management Concepts Inc.
6. Wysocki, RK (2009). *Effective Project Management: traditional, agile, extreme*. 5th Edition. New York: Wiley.

Lecture 2b Images

Slide 5: Iterative Life Cycle Models. Image courtesy Johns Hopkins University Staff.

Slide 7: Iterative Life Cycle Model: Example 1. Courtesy of: Theron Feist

Slide 8: Iterative Life Cycle Model: Example 2. Courtesy of: Theron Feist

Slide 9: Iterative Life Cycle Model: Example 3. Courtesy of: Theron Feist

Lecture 2c

1. Highsmith, JA. (2009) *Agile Project Management: creating innovative products*. 2nd ed; Boston: Pearson Education.
2. Houston S, Bove LA. (2010) *Project Management for Healthcare Informatics*. New York: Springer Science + Business Media, LLC.
3. Kerzner H. (2009) *Project Management: a Systems Approach to Planning, Scheduling, and Controlling*. 10th ed. Hoboken, NJ: Wiley.

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4. Project Management Institute, *A Guide to the Project Management Body of Knowledge*. 4th ed (2008). Newtown Square, PA: PMI.
5. Whitten N. Neal (2007). *Whitten's Let's Talk! More No-nonsense Advice for Project Success*. Vienna, VA.: Management Concepts Inc.
6. Wysocki, RK .(2009). *Effective Project Management: traditional, agile, extreme*. 5th Edition. New York: Wiley.

Lecture 2c Images

Slide 3: Example of a Life Cycle Model: Courtesy of: Theron Feist

Slide 11: Examples of Deliverables and Management Reviews in a Project Life Cycle. Courtesy of: Theron Feist

Lecture 2d

1. Houston S, Bove LA. (2010) *Project Management for Healthcare Informatics*. New York: Springer Science + Business Media, LLC.
2. Kerzner H. (2009) *Project Management: a Systems Approach to Planning, Scheduling, and Controlling*. 10th ed. Hoboken, NJ: Wiley.
3. Project Management Institute, *A Guide to the Project Management Body of Knowledge*. 4th ed (2008). Newtown Square, PA: PMI.
4. Whitten N. Neal (2007). *Whitten's Let's Talk! More No-nonsense Advice for Project Success*. Vienna, VA.: Management Concepts Inc.
5. Wysocki, RK .(2009). *Effective Project Management: traditional, agile, extreme*. 5th Edition. New York: Wiley.

Lecture 2d Images

Slide 7. "Project Management in a Project-Based Organization." Image courtesy Johns Hopkins University School of Nursing

Slide 8. "Project Management in a Matrix Organization." Image courtesy Johns Hopkins University School of Nursing

Slide 9. "Project Management in a Project-Based Organization." Courtesy of: Theron Feist

Student Application Activities

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Component 19/Unit 3

Unit Title

Project Selection and Initiation

Unit Description

Students learn what is necessary to get projects off to a strong start. Critical activities are to prepare a project charter and to identify and engage the project stakeholders.

Unit Objectives

By the end of this unit the student will be able to:

1. Identify the key elements of a project environment and HIT landscape.
2. Outline the needs for projects, how and why they are selected and initiated.
3. Construct a project charter.
4. Identify project stakeholders.
5. Generate a stakeholder register.

Unit Topics / Lecture Titles

3.1 – Project Initiation

3.2 – Project Charter

3.3 – Stakeholders & Stakeholder Register

Unit References

(All links accessible as of 1/1/2012)

Lecture 3a

1. Health Information Technology Curriculum, Component 2: The Culture of Health Care (2012) Office of the National Coordinator for Health Information Technology. Available from:
<http://www.onc-ntdc.org>
2. Houston S, Bove LA. (2010) Project Management for Healthcare Informatics. New York: Springer Science + Business Media, LLC.
3. Kerzner H. (2009) Project Management: a Systems Approach to Planning, Scheduling, and Controlling. 10th ed. Hoboken, NJ: Wiley.
4. Project Management Institute, A Guide to the Project Management Body of Knowledge. 4th ed (2008). Newtown Square, PA: PMI.

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5. Scwalbe K. (2009) Information technology project management (with Microsoft Project 2007 CD-ROM). 6th ed.; Boston: Cengage Learning.
6. Stackpole C. (2009). A Project Manager's Book of Forms: A Companion to the PMBOK Guide. Hoboken, N.J: Wiley;
7. Whitten N. Neal (2007).Whitten's Let's Talk! More No-nonsense Advice for Project Success. Vienna, VA: Management Concepts Inc.
8. Wysocki, RK .(2009).Effective Project Management: traditional, agile, extreme. 5th Edition. New York: Wiley.

Lecture 3a Images

Slide 12. View of the Future of healthcare. Image courtesy of the US Department of Health and Human Services.

Slide 15. SWOT Analysis. Creative Commons: Wikipedia. Available from: http://en.wikipedia.org/wiki/SWOT_analysis

Lecture 3b

1. Houston S, Bove LA. (2010) *Project Management for Healthcare Informatics*. New York: Springer Science + Business Media, LLC.
2. Kerzner H. (2009) *Project Management: a Systems Approach to Planning, Scheduling, and Controlling*. 10th ed. Hoboken, NJ: Wiley.
3. Project Management Institute, *A Guide to the Project Management Body of Knowledge*. 4th ed (2008).Newtown Square, PA: PMI.
4. Scwalbe K. (2009) Information technology project management (with Microsoft Project 2007 CD-ROM). 6th ed.; Boston: Cengage Learning.
5. Stackpole C. (2009). A Project Manager's Book of Forms: A Companion to the PMBOK Guide. Hoboken, N.J: Wiley;
6. Whitten N. Neal (2007).Whitten's Let's Talk! More No-nonsense Advice for Project Success. Vienna, VA: Management Concepts Inc.
7. Wysocki, RK .(2009).Effective Project Management: traditional, agile, extreme. 5th Edition. New York: Wiley.

Lecture 3b Images

Slide 12. View of the Future of healthcare. Image courtesy of the US Department of Health and Human Services.

Slide 15. SWOT Analysis. Creative Commons: Wikipedia. Available from: http://en.wikipedia.org/wiki/SWOT_analysis

*Indicates this link is no longer functional.

Lecture 3c

1. Agar. Culture: Can You Take It Anywhere? Invited Lecture Presented at the Gevirtz Graduate School of Education, Houston S, Bove LA. (2010) *Project Management for Healthcare Informatics*. New York: Springer Science + Business Media, LLC.
2. Kerzner H. (2009) *Project Management: A Systems Approach to Planning, Scheduling, and Controlling*. 10th ed. Hoboken, NJ:Wiley.
3. Project Management Institute, *A Guide to the Project Management Body of Knowledge*. 4th ed (2008).Newtown Square, PA: PMI.
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5. Stackpole C. (2009). A Project Manager's Book of Forms: A Companion to the PMBOK Guide. Hoboken, N.J.:Wiley;
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7. Wysocki, RK (2009). *Effective Project Management: Traditional, agile, extreme*. 5th Edition. New York: Wiley.

Additional Handouts:

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comp19_unit3_project_charter.doc
comp19_unit3_stakeholder_register.doc
comp19_unit3_change_request_template.doc
comp19_unit3_lessons_learned.doc
comp19_unit3_project_initiation_worksheet.doc
comp19_unit3_project_status_update.doc
comp19_unit3_risk_response_plan.doc
comp19_unit3_risk_management plan.doc
comp19_unit3_statement_of_work.doc
comp19_unit3_SWOT.doc

Student Application Activities

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Component 19/Unit 4

Unit Title

Project Planning Overview

Unit Description

In this unit, students will learn how to effectively plan projects and to develop a project management plan. Several key documentation components will be introduced.

Unit Objectives

By the end of this unit the student will be able to:

1. Identify the importance and purpose of effective planning.
2. Identify and describe each component of the project management plan.
3. Define and prepare project planning documents.

Unit Topics / Lecture Titles

- 4.1 – Project Management
- 4.2 – Project Management Processes and Groups
- 4.3 – Planning a Project
- 4.4 – Project Planning Processes

Unit References

(All links accessible as of 1/1/2012)

Lecture 4a

1. Health Information and Management System Society. Chicago, IL. 2010. Available from: <http://www.himss.org>
2. Highsmith JA. (2009). *Agile Project Management: Creating Innovative Products*. 2nd ed.; Boston: Addison-Wesley.
3. HITECH Answers. 2010. Available from: <http://hitechanswers.net/>
4. Houston S, Bove LA. (2010) *Project Management for Healthcare Informatics*. New York: Springer Science + Business Media, LLC.
5. Kerzner H. (2009) *Project Management: a Systems Approach to Planning, Scheduling, and Controlling*. 10th ed. Hoboken, NJ: Wiley. mHealth Initiative. Boston, MA. 2009. Available from: <http://www.mobih.org/>*
6. Project Management Institute, *A Guide to the Project Management Body of Knowledge*. 4th ed (2008). Newtown Square, PA: PMI.

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7. Scwalbe K. (2009) *Information Technology Project Management* (with Microsoft Project 2007 CD-ROM). 6th ed.; Boston: Cengage Learning.
8. Stackpole C. (2009). *A Project Manager's Book of Forms: A Companion to the PMBOK Guide*. Hoboken, NJ Wiley.
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10. Wiefeling K. (2007) *Scrappy Project Management: The 12 Predictable and Avoidable Pitfalls Every Project Faces* 1st ed. Happy About;
11. Wysocki, RK .(2009).*Effective Project Management: traditional, agile, extreme*. 5th Edition. New York: Wiley.

Lecture 4a Tables, Charts, Figures

Table 4.1. Knowledge Areas. Courtesy of Theron Feist.

Table 4.2. Project Planning Process. Courtesy of Theron Feist.

Table 4.3 Project Scope Statement. Courtesy of Theron Feist.

Lecture 4a Images

Slide 3: An Overview of Project management detailing Projects, Operations and Programs. Courtesy of Theron Feist

Slide 5: Project Planning. Courtesy of Theron Feist.

Slide 9: The Hindenberg. Creative Commons: Wikipedia. Available from: http://en.wikipedia.org/wiki/Hindenburg_disaster

Lecture 4b

1. Health Information and Management System Society. Chicago, IL. 2010. Available from: <http://www.himss.org>
2. Highsmith JA. (2009). *Agile Project Management: Creating Innovative Products*. 2nd ed.; Boston: Addison-Wesley.
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10. Wiefeling K. (2007) *Scrappy Project Management: The 12 Predictable and Avoidable Pitfalls Every Project Faces* 1st ed. Happy About;
11. Wysocki, RK .(2009).*Effective Project Management: traditional, agile, extreme*. 5th Edition. New York: Wiley.

Lecture 4b Tables, Charts, Figures

Table 4.4. Responsibility Matrix. Courtesy of Theron Feist.

Table 4.5 Risk Register. Courtesy of Theron Feist.

Lecture 4b Images

Slide 4: Work Breakdown Structure. Courtesy of Theron Feist.

Slide 6: Activity Sequencing, Courtesy of Theron Feist.

Student Application Activities

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Component 19/Unit 5

Unit Title Managing Project Scope

Unit Description

This unit addresses a critical determinant of project success: defining and managing the scope of the project. Students learn the importance of eliciting stakeholder requirements and developing effective work breakdown structures.

Unit Objectives

By the end of this unit the student will be able to:

1. Analyze scope to develop the project scope statement.
2. Elicit stakeholder requirements for the project.
3. Create a Work Breakdown Structure (WBS).

Unit Topics / Lecture Titles

- 5.1 – Project Scope
- 5.2 – Stakeholder Requirements
- 5.3 – Work Breakdown Structure

Unit References

(All links accessible as of 1/1/2012)

Lecture 5a

1. Fowler M. UML distilled: a brief guide to the standard object modeling language, 3rd ed.; 2003.
2. Highsmith JA. Agile project management: creating innovative products. 2nd ed.; 2009.
3. Houston S, Bove LA. Project management for healthcare informatics. Springer Science + Business Media, LLC; 2010.
4. Kerzner H. Project management: a systems approach to planning, scheduling, and controlling. 10th ed. Wiley; 2009
5. Project Management Institute, A guide to the project management body of knowledge. 4th ed. Newtown Square, PA: PMI; 2008.
6. SNOMED CT (Systematized Nomenclature of Medicine--Clinical Terms) is a comprehensive clinical terminology, originally created by the College of American Pathologists (CAP) and, as of April 2007, owned, maintained, and distributed by the [International Health Terminology Standards Development Organisation](#) (IHTSDO), a

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http://www.nlm.nih.gov/research/umls/Snomed/snomed_main.html

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Lecture 5b

1. Fowler M. UML distilled: a brief guide to the standard object modeling language, 3rd ed.; 2003.
2. Highsmith JA. Agile project management: creating innovative products. 2nd ed.; 2009.
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Lecture 5c

1. Fowler M. UML distilled: a brief guide to the standard object modeling language, 3rd ed.; 2003.
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6. Stackpole C. A project manager's book of forms: a companion to the PMBOK guide. Wiley; 2009: a companion to the PMBOK guide. Wiley; 2009

*Indicates this link is no longer functional.

7. Whitten N. Neal Whitten's let's talk! more no-nonsense advice for project success. Management concepts; 2007

Lecture 5c Images

Slide 10. Work Breakdown Structure of Aircraft System. Image extracted from Systems Engineering Fundamentals. Defense Acquisition University Press, 2001. Available from: http://en.wikipedia.org/wiki/File:Work_Breakdown_Structure_of_Aircraft_System.jpg

Additional Handouts

comp19_unit5_project_application.doc
comp19_unit5_scope_statement_template.doc
comp19_unit5_WBS.doc
comp19_unit5_WBS_template.doc

Student Application Activities

comp19_unit5_activity.doc
comp19_unit5_activity_key.doc
comp19_unit5_self_assess.doc
comp19_unit5_self_assess_key.doc

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Component 19/Unit 6

Unit Title

Managing Project Time, Cost, and Procurements

Unit Description

In this unit, students will gain an understanding of how to manage project schedules and spending. The unit will cover broad topics such as purchasing, procurement, cost estimation and scheduling.

Unit Objectives

By the end of this unit the student will be able to:

1. Define project management time activities.
2. Define project cost management activities.
3. Define project procurement activities.

Unit Topics / Lecture Titles

- 6.1 – Define activities and project schedule
- 6.2 – Develop estimates for project cost and budget
- 6.3 – Evaluate make or buy decisions
- 6.4 – Develop a procurement plan

Unit References

(All links accessible as of 1/1/2012)

1. Fleming Q, Koppelman J. (2006) Earned Value Project Management. 3rd ed. Newtown Square, Pennsylvania: Project Management Institute (PMI).
2. Fleming Q. (2003) Project procurement management: contracting, subcontracting, teaming. 1st ed. FMC Press; 2003.
3. Houston S, Bove LA. (2010) Project Management for Healthcare Informatics. New York: Springer Science + Business Media, LLC.
4. Kerzner H. (2009) Project Management: a Systems Approach to Planning, Scheduling, and Controlling. 10th ed. Hoboken, NJ: Wiley.
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Lecture 6a Charts, Tables, and Figures

Table 6.1. Project Activities by Process Groups. Courtesy of Theron Feist.

Table 6.2 Time Management Outputs and Processes. Courtesy of Theron Feist.

Lecture 6a Images

Slide 4: Process Group Sequence. Courtesy of Theron Feist.

Slide 7: Collect Process Requirements. Courtesy of Theron Feist.

Slide 8: Define the Scope Process. Courtesy of Theron Feist.

Slide 9: Create the WBS Process. Courtesy of Theron Feist.

Slide 10: Work Breakdown Structure (WBS). Courtesy of Theron Feist.

Slide 11: Work Breakdown Structure. Courtesy of Theron Feist.

Slide 12: Define Activities Process. Courtesy of Theron Feist.

Slide 13: Developing Schedule. Courtesy of Theron Feist.

Slide 16: Henri Gantt. Creative commons: Wikipedia. Available from:

http://en.wikipedia.org/wiki/File:Henri_Gantt.jpg

Lecture 6b

1. Fleming Q, Koppelman J. Earned value project management. 3rd ed. PMI; 2006.
2. Fleming Q. Project procurement management: contracting, subcontracting, teaming. 1st ed. FMC Press; 2003.
3. Houston S, Bove LA. Project management for healthcare informatics. Springer Science + Business Media, LLC; 2010.
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Lecture 6b Charts, Tables, and Figures

Table 6.3. Student Exercise. Courtesy of Theron Feist.

Table 6.4 Three Project Cost Management Processes. Courtesy of Theron Feist.

Table 6.5 Project Management Procurement Processes. Courtesy of Theron Feist.

Table 6.6 Courtesy of Theron Feist.

Student Application Activities

comp19_unit6_activity.doc

comp19_unit6_activity_key.doc

comp19_unit6_self_assess.doc

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Component 19/Unit 7

Unit Title Managing Project Risk

Unit Description

A key to successful health IT projects is the pro-active management of risks: beginning with the preparation of a risk management plan. Risk management will be a continuing activity throughout the project, to identify risks and to plan and implement risk responses.

Unit Objectives

By the end of this unit the student will be able to:

1. Assess project risks.
2. Plan project responses.
3. Prepare and maintain a risk register.
4. Develop and execute a risk management plan.

Unit Topics / Lecture Titles

- 7.1 – Managing Project Risk
- 7.2 – Risk Management Processes
- 7.3 – Risk Management Plan

Unit References

(All links accessible as of 1/1/2012)

Lecture 7a

1. Health Information and Management System Society. Chicago, IL. 2010. Available from: www.himss.org
2. Houston S, Bove LA. Project management for healthcare informatics. Springer Science + Business Media, LLC; 2010.
3. Kerzner H. Project management: a systems approach to planning, scheduling, and controlling. 10th ed. Wiley; 2009
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6. Stackpole C. A User's Manual to the PMBOK Guide. Wiley; 2010.
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Lecture 7a Charts, Tables, and Figures

Table 7.1 Outputs from Processes. Table courtesy of Johns Hopkins School of Nursing Staff.

Lecture 7a Images

Slide 4: Knowledge Areas, Image courtesy Theron Feist, Johns Hopkins School of Nursing Staff

Lecture 7b

Health Information and Management System Society. Chicago, IL. 2010.
Available from: www.himss.org

1. Houston S, Bove LA. Project management for healthcare informatics. Springer Science + Business Media, LLC; 2010.
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5. Project Management Institute, Healthcare Speaks, Newsletter of the Special Interest Group on Healthcare. Available from: <http://www.pmihealthcare.org>*
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9. Wysocki, RK . Effective project management: traditional, agile, extreme. 5th Edition. New York: Wiley; 2009.

Lecture 7b Tables, Charts, and Figures

Table 7.2 An example of a risk register. Courtesy of: Johns Hopkins School of Nursing Staff.

Table 7.3 Simple qualitative analysis. Courtesy of Johns Hopkins School of Nursing Staff.

*Indicates this link is no longer functional.

Lecture 7b Image

Slide 8. Risk Register. Courtesy of: Johns Hopkins School of Nursing Staff.

Unit Suggested Readings

1. Examples of Forms and Documents -- e.g., Risk Register: Stackpole C. A project manager's book of forms: a companion to the PMBOK guide. Wiley; 2009: a companion to the PMBOK guide. Wiley; 2009.
2. Managing Project Risk: Chapter 11 in [Schwalbe](#) K. Information technology project management (with Microsoft Project 2007 CD-ROM). 6th ed.; 2009.
3. Managing Risk by selection of life-cycle model: Wysocki, RK . Effective project management: traditional, agile, extreme. 5th Edition. New York: Wiley; 2009.

Additional Handouts:

comp19_unit7_project_application.doc
comp19_unit7_project_risk_management.doc
comp19_unit7_risk_register_template.xls
comp19_unit7_brainstorming_template.doc

Student Application Activities

comp19_unit7_activity.doc
comp19_unit7_activity_key.doc
comp19_unit7_self_assess.doc
comp19_unit7_self_assess_key.doc

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Component 19/Unit 8

Unit Title

Team Management and Communications

Unit Description

Whatever role you play on a project team, it is essential to understand basic concepts of team management and communications. This unit covers key elements of managing and communicating in a team, including the development of an HR and communications plan.

Unit Objectives

By the end of this unit the student will be able to:

1. Identify and describe roles of project team members.
2. Develop the human resources plan.
3. Acquire, develop, manage, and lead the project team.
4. Identify project communications responsibilities.
5. Develop a communications plan.

Unit Topics / Lecture Titles

8.1 – HR Management Process

8.2 – Project Communications

Unit References

(All links accessible as of 1/1/2012)

1. Conflict Management Strategies and Styles. 2000-2001. Available from: <http://home.snu.edu/~hculbert/conflict.html>*
2. Hersey P, Blanchard K. H. (1969). Management of Organizational Behavior – Utilizing Human Resources. New Jersey/Prentice Hall.
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11. TAP University. Develop Human Resource Plan Process. (2009). Available from: <http://tapuniversity.com/2009/03/24/develop-human-resource-plan-process/>
12. Tutor Gig. Management Styles. (2008). Available from: http://www.tutorgig.com/ed/Management_styles
13. Wysocki, RK . (2009) Effective project management: traditional, agile, extreme. 5th Edition. New York: Wiley; 2009.

Lecture 8a Tables, Charts, and Figures

Table 8.1. Resource Calendar. Courtesy of: Theron Feist.

Table 8.2. Role Requirements. Courtesy of: Theron Feist.

Table 8.3. Responsibility Matrix. Courtesy of: Theron Feist.

Table 8.4. Responsibility Matrix (2). Courtesy of; Theron Feist.

Lecture 8a Images

Slide 7. HR Management Processes. Courtesy of: Theron Feist.

Slide 14. Organizational Charts. Courtesy of; Theron Feist.

Lecture 8b

1. Conflict Management Strategies and Styles. 2000-2001. Available from: <http://home.snu.edu/~hculbert/conflict.html> *
2. Hersey P, Blanchard K. H. (1969). *Management of Organizational Behavior – Utilizing Human Resources*. New Jersey/Prentice Hall.
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6. Project Management Knowledge: The Ultimate Resource for Project Management. (2007-2010). Available from: <http://project-management-knowledge.com/definitions/p/project-communications-management/>
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8. Scwalbe K. (2009) *Information technology project management* (with Microsoft Project 2007 CD-ROM). 6th ed.; Boston: Cenage Learning.
9. Stackpole C.(2010) *A User's Manual to the PMBOK Guide*. Wiley.
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Lecture 8b Images

Slide 11: Stages of Team Development. Courtesy of: Theron Feist.

Slide 15: Managing the Project Team. Image courtesy Johns Hopkins School of Nursing Staff.

Lecture 8c

1. Conflict Management Strategies and Styles. 2000-2001. Available from: <http://home.snu.edu/~hculbert/conflict.html>*
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4. Project Management Institute, *A Guide to the Project Management Body of Knowledge*. 4th ed (2008). Newtown Square, PA: PMI.
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 13. Wysocki, RK . (2009) *Effective project management: traditional, agile, extreme*. 5th Edition. New York: Wiley; 2009

Lecture 8c Tables, Charts, and Figures

Table 8.5. Stakeholder Registry. Courtesy of: Theron Feist.

Unit Suggested Readings

1. Team Management: Chapter 9 in Project Management Institute, A guide to the project management body of knowledge. 4th ed. Newtown Square, PA: PMI; 2008
2. Communication: Chapter 10 Project Management Institute, A guide to the project management body of knowledge. 4th ed. Newtown Square, PA: PMI; 2008

Student Application Activities

comp19_unit8_activity.doc
comp19_unit8_activity_key.doc
comp19_unit8_self_assess.doc
comp19_unit8_self_assess_key.doc

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Component 19/Unit 9

Unit Title

Project Monitoring and Control

Unit Description

Project managers use monitoring and control tools and techniques to assess plans and deliverables, evaluate progress against plans, manage change requests, and review all project activities. It is critically important to keep the project within scope, budget, and schedule to meet stakeholder expectations.

Unit Objectives

By the end of this unit the student will be able to:

1. Direct project execution.
2. Track, review, and report project progress and performance.
3. Monitor and control project baselines.
4. Manage stakeholder expectations and change requests.

Unit Topics / Lecture Titles

9.1 – Direct and Manage Project Execution

9.2 – Track Project Performance

9.3 – Monitor and Control Project Work

9.4 – Manage Change

Unit References

(All links accessible as of 1/1/2012)

1. Bennatan, E. M. On Time Within Budget: Software Project Management Practices and Techniques, 3rd Edition. New York: John Wiley & Sons; 2000.
2. Fleming, Q. W., and Koppelman, J. M. Earned Value Project Management, 3rd Edition, Newtown Square, PA: PMI; 2006
3. Health Information and Management System Society. Chicago, IL. 2010. Available from: www.himss.org
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10. Venkataraman, R. R., and Pinto, J. K. *Cost and Value Management*. New York: John Wiley & Sons; 2008.

Lecture 9a Charts, Tables and Figures

Table 9.1 . Monitoring and Controlling Processes. Courtesy Johns Hopkins School of Nursing Staff.

Lecture 9a Images

Slide 3: Monitoring and Control in project Management. Courtesy of Johns Hopkins School of Nursing Staff.

Slide 6: Managing Project Constraints. Creative Commons: John M. Kennedy T. Available from:

http://en.wikipedia.org/wiki/File:The_triad_constraints.jpg

Slide 10: Track Progress with a Gantt Chart. Courtesy of Johns Hopkins School of Nursing Staff.

Lecture 9b

1. Bennatan, E. M. (2000). *On Time Within Budget: Software Project Management Practices and Techniques.*, 3rd Edition. New York: John Wiley & Sons.
2. Fleming, Q. W., and Koppelman, J. M. (2006). *Earned Value Project Management*, 3rd Edition, Newtown Square, PA: PMI.
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8. Project Management Institute (2005)., *Practice Standard for Earned Value Management*. Newtown Square, PA: PMI..
9. Schwalbe K. (2009). *Information technology project management* (with Microsoft Project 2007 CD-ROM). 6th ed.
10. Venkataraman, R. R., and Pinto, J. K. (2008). *Cost and Value Management*. New York: John Wiley & Sons.

Unit Suggested Readings

1. Monitoring Cost and Schedule: Chapter 11 in Bennatan, E. M. *On Time Within Budget: Software Project Management Practices and Techniques*, 3rd Edition. New York: John Wiley & Sons; 2000.
2. Monitoring Project Risk: Chapter 11 in [Schwalbe K.](#) *Information technology project management* (with Microsoft Project 2007 CD-ROM). 6th ed.; 2009.
3. Controlling Cost and Quality: Venkataraman, R. R., and Pinto, J. K. *Cost and Value Management*. New York: John Wiley & Sons; 2008.
4. Project Execution and Control: Chapter 11 in Nicholas, J. M., and Steyn, H. *Project Management for Business, Engineering, and Technology*, 3rd Edition, Oxford, UK: Butterworth-Heinemann, 2008.
5. Gantt Charts: Chapter 6 in Nicholas, J. M., and Steyn, H. *Project Management for Business, Engineering, and Technology*, 3rd Edition, Oxford, UK: Butterworth-Heinemann, 2008.

Student Application Activities

comp19_unit9_activity.doc
 comp19_unit9_activity_key.doc
 comp19_unit9_self_assess.doc
 comp19_unit9_self_assess_key.doc

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Component 19/Unit 10

Unit Title Quality Management

Unit Description

Quality is an elusive but essential component and consideration in any project. This unit will cover quality management planning and key characteristics of quality assurance and its impact on project management.

Unit Objectives

By the end of this unit the student will be able to:

1. Develop a quality management plan.
2. Perform quality assurance
3. Apply quality control techniques.

Unit Topics / Lecture Titles

- 10.1 – Total Quality Management Theory
- 10.2 – Quality Culture
- 10.3 – Quality Tools
- 10.4 – Quality Management Plan

Unit References

(All links accessible as of 1/1/2012)

Lecture 10a

1. Bennett-Staub A. Helping Residents Cope with a Patient Suicide. (2011). American Psychiatric Association. Available from: <http://www.psych.org/Departments/EDU/ResidentMIT/orgsandterms.aspx>
2. Deming W. (2000) The new economics: for industry, government, education. 2nd ed. Boston: MIT Press.
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8. Juran J. (1992). Juran on Quality by Design. New York: Simon & Schuster.
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12. Scribd. Line Balancing What is it? Available from: <http://www.scribd.com/doc/39457836/linebal>
13. Scribd. Seven Tools of Quality Control. Available from: <http://www.scribd.com/doc/24650872/Seven-Tools-of-Quality-Control>
14. Wikipedia. PDCA. Available from: <http://en.wikipedia.org/wiki/PDCA>
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Lecture 10a Charts, Tables, Figures

Table 10.1. Pareto Principle. Creative Commons: MetaComet. [Wikimedia.com](http://en.wikipedia.org/wiki/File:Pareto.PNG). Available from: <http://en.wikipedia.org/wiki/File:Pareto.PNG>

Lecture 10a Images

Slide 8: The Deming Cycle. Creative Commons, Wikimedia. Available from: http://en.wikipedia.org/wiki/Demming_cycle#cite_note-0

Slide 17: Total Quality and ISO 9000 Series. Wikimedia by Alkazzi. Available from:

http://en.wikipedia.org/wiki/File:Evolution_of_ISO_9000_series.png

Lecture 10b

1. Bennett-Staub A. Helping Residents Cope with a Patient Suicide. American Psychiatric Association. c2011. Available from: <http://www.psych.org/Departments/EDU/ResidentMIT/orgsandterms.aspx>
2. Deming W. The new economics: for industry, government, education. 2nd ed. 2000. MIT Press.
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18. Wikipedia. Six Sigma. Available from: http://en.wikipedia.org/wiki/Six_Sigma
19. Wikipedia. Statistical process control. Available from: http://en.wikipedia.org/wiki/Statistical_process_control
20. Wysocki, RK . Effective project management: traditional, agile, extreme. 5th Edition. New York: Wiley; 2009.

Lecture 10b Charts, Tables, Figures

10.2. Quality Control. Adapted from DoIT Project Management Advisor by Theron Feist. Available from:

<http://www.pma.doit.wisc.edu/plan/3-2/what.html>

10.3. Quality Assurance. Adapted from DoIT Project Management Advisor by Theron Feist. Available from:

<http://www.pma.doit.wisc.edu/plan/3-2/what.html>

*Indicates this link is no longer functional.

10.4 Quality team roles and responsibilities. Quality Assurance. Adapted from DoIT Project Management Advisor by Theron Feist. Available from: <http://www.pma.doit.wisc.edu/plan/3-2/what.html>

10.5. Quality Tools. Adapted from DoIT Project Management Advisor by Theron Feist. Available from: <http://www.pma.doit.wisc.edu/plan/3-2/what.html>

10.6. Problem Reporting Plan. Adapted from DoIT Project Management Advisor by Theron Feist. Available from: <http://www.pma.doit.wisc.edu/plan/3-2/what.html>

Lecture 10b Images

Slide 4: Quality Management Tools. Created with Wordle. Available online at: <http://www.wordle.net/create>

Slide 5.1: A typical flowchart. creative Commons Derek Holden. Available from: http://commons.wikimedia.org/wiki/File:EMR_process_flow.jpg

Slide 5.2: A typical Flowchart outlining the process of CPR Creative Commons Jmatt1122. Available from: http://commons.wikimedia.org/wiki/File:CPR_Flow.jpg

Slide 7: Ishikawa fishbone-type cause-and-effect diagram. Creative Commons: FabianLange. Available from:

http://commons.wikimedia.org/wiki/File:Ishikawa_Fishbone_Diagram.svg

Slide 8: A surgical Safety Checklist. Courtesy of: World Health Organization (WHO). Available from:

<http://www.who.int/patientsafety/safesurgery/en/index.html>

Slide 10: Statistical Process Control. http://commons.wikimedia.org/wiki/File:Rule_3_Western_electric_control_chart.svg*

Slide 11: Pareto Chart. Creative Commons: Metacomet. Available from: <http://en.wikipedia.org/wiki/File:Pareto.PNG>

Slide 22: Advancing Quality Circle. Courtesy of: Theron Feist.

Unit Suggested Readings

1. Managing Quality: Chapter 8 in Project Management Institute, A guide to the project management body of knowledge. 4th ed. Newtown Square, PA: PMI; 2008

Student Application Activities

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Component 19/Unit 11

Unit Title

Project Closure and Transition

Unit Description

It is essential that project managers know all the processes required to bring a project to a successful conclusion. Key steps include completing all deliverables on time, gaining customer acceptance, documenting the project lessons learned, and managing the transition to operations.

Unit Objectives

By the end of this unit the student will be able to:

1. Bring project activities to a close.
2. Conclude the customer acceptance process.
3. Document and archive lessons learned.
4. Update and close out project documents.
5. Manage transition to operations.

Unit Topics / Lecture Titles

11.1 – Project Closure and Transition

Unit References

(All links accessible as of 1/1/2012)

Lecture 11 a

1. Fleming Q. Project procurement management: contracting, subcontracting, teaming. 1st ed. FMC Press; 2003.
2. Health Information and Management System Society. Chicago, IL. 2010. Available from: www.himss.org
3. Houston S, Bove LA. Project management for healthcare informatics. Springer Science + Business Media, LLC; 2010.
4. Kerzner H. Project management: a systems approach to planning, scheduling, and controlling. 10th ed. Wiley; 2009
5. Liebowitz J. Key ingredients to the success of an organization's knowledge management strategy. *Knowledge and process management*. (6:1), pp. 37-40, 1999.
6. Project Management Institute, A guide to the project management body of knowledge. 4th ed. Newtown Square, PA: PMI; 2008
7. Schwalbe K. Information technology project management (with Microsoft Project 2007 CD-ROM). 6th ed.; 2009

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8. Stackpole C. *A User's Manual to the PMBOK Guide*. Wiley; 2010.
9. Stackpole C. *A project manager's book of forms: a companion to the PMBOK guide*.
10. Wysocki, RK . *Effective project management: traditional, agile, extreme*. 5th Edition. New York: Wiley; 2009.

Lecture 11 b

1. Fleming Q. *Project procurement management: contracting, subcontracting, teaming*. 1st ed. FMC Press; 2003.
2. Health Information and Management System Society. Chicago, IL. 2010. Available from: www.himss.org
3. Houston S, Bove LA. *Project management for healthcare informatics*. Springer Science + Business Media, LLC; 2010.
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7. Schwalbe K. *Information technology project management (with Microsoft Project 2007 CD-ROM)*. 6th ed.; 2009
8. Stackpole C. *A User's Manual to the PMBOK Guide*. Wiley; 2010.
9. Stackpole C. *A project manager's book of forms: a companion to the PMBOK guide*.
10. Wiley; 2009: *a companion to the PMBOK guide*. Wiley; 2009
11. Wysocki, RK . *Effective project management: traditional, agile, extreme*. 5th Edition. New York: Wiley; 2009.

Suggested Readings

1. Examples of Forms and Documents -- e.g., Final Project Report: Stackpole C. *A project manager's book of forms: a companion to the PMBOK guide*. Wiley; 2009: *a companion to the PMBOK guide*. Wiley; 2009
2. Guidance on closing out procurements: Fleming Q. *Project procurement management: contracting, subcontracting, teaming*. 1st ed. FMC Press; 2003.
3. Alternative transition strategies: Wysocki, RK . *Effective project management: traditional, agile, extreme*. 5th Edition. New York: Wiley; 2009.

*Indicates this link is no longer functional.

Student Application Activities

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Glossary

ACM - Association for Computing Machinery

AHIMA—American Health Information Management Association

AMIA—American Medical Informatics Association

CASE—computer assisted system engineering tools

CDC—Centers for Disease Control

CMS—Centers for Medicare and Medicaid Services

CPOE—Computerized Provider Order Entry

CRMS—clinical research management System

DMAIC—define, measure, analyze, improve, control

EHR—Electronic Health Records

EMR—Electronic Medical Record

EPR—Electronic Patient Record

EVM—Earned Value Management

HIMMS—Health Information Management Systems Society

HIPPA—the Health Insurance Portability and Accountability Act of 1996

HIT—Health Information Technology

HITECH Act—Health Information Technology for Economic and Clinical Health Act

HR—Human Resource

IEEE—Institute of Electrical and Electronics Engineers

IFB—Invitation for Bid

INCOSE—International Council on Systems Engineering

IRR—internal rate of return

ISO—International Organization for Standardization

MU—meaningful use

NPV—net present value

PERT—Program Evaluation and Review Technique

PDM—Precedence Diagram Method

PDSA—Plan, Do, Study, Act

PM—Project Management

PMBOK—Project Management Body of Knowledge
PMI—Project Management Institute
QA—Quality assurance
QC—Quality control
RACI—Responsible, Accountable, Consulted, Informed
RAM—Responsibility Assignment Matrix
RFP—Request for Proposal
RFQ—Request For Quotation
RCA—root cause analysis
ROI—return on investment
SME—subject matter expert
SWOT—strengths, weaknesses, opportunities, threats
TQM—total quality management
WBS—work breakdown structure



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