

U.S. Department of Labor Employment and Training Administration Office of Apprenticeship Training, Employer and Labor Services (OATELS) Washington, D.C. 20210	<u>Distribution:</u>  A-541 Headquarters A-544 All Field Tech A-547 SD+RD+SAC+; Lab.Com	<u>Subject:</u> New Apprenticeable Occupation Information Technology (IT) Project Manager  <u>Code:</u> 200
Symbols: DSNIP/FDK	Action: Immediate	

**PURPOSE:** To transmit to the Office of Apprenticeship Training, Employer and Labor Services (OATELS), Bureau of Apprenticeship and Training (BAT) Staff the recognition of a new apprenticeable occupation:

IT Project Manager  
 O\*NET/SOC Code: 11-3021.00  
 RAIS Code: 1048  
 Training Term: Competency - based

**BACKGROUND:** ATR Marlene Budge submitted the IT Project Manager occupation on behalf CompTIA the Computing Technology Industry Association. The OATELS Administrator approved the IT Project Manager as a new apprenticeable occupation on February 25, 2003. The IT Project Manager is responsible for project-based work efforts. The IT Project Manager manages the start-up, execution and closure of each project; meets with customers to determine business needs, then measures and documents success in achieving the goals

The IT Project Manager training program is competency based. A suggested work process schedule and related instruction outline is attached for your information.

The IT Project Manager will be added to the list of occupations recognized as apprenticeable by OATELS when the list is reissued.

**ACTION:** OATELS staff should familiarize themselves with this new occupation.

If you have any additional questions please contact (312) 596-5501.

Attachment

WORK PROCESS SCHEDULE  
**INFORMATION TECHNOLOGY (IT)**  
**PROJECT MANAGER**

O\*NET Code: 11-3021.00 RAIS Code: 1048

**DESCRIPTION:** Responsible for project – based work efforts. Manages the start-up, execution and closure of each project. Meets with customers to determine business needs, then measures and documents success in achieving the goals. Defines an interrelated series of tasks that must be performed for the successful completion of a project. Utilizes a proven methodology to plan, direct, monitor, adjust and control project plans. Resolves issues of scope, resource availability, resource expertise, budget constraints and deadlines. Defines, monitors and revises project scopes; and continually modifies project plans; evaluates and mitigates project risks; manages client relationships; manages project budgets and revenues; manages project team; manages vendor relations, monitors and reports progress against, objectives; oversees communication and reporting on projects; oversees quality issues for projects; selects and gets approval to use identified resources. Works under general supervision. Typically reports to the senior management.

<u>Work Process</u>	<u>Approx. Hours</u>
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<b>I <u>PROJECT STRATEGY &amp; LIFE CYCLE</u></b>	<b>300 Hours</b>
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**a. Observation of Process**

1. Generate and refine a preliminary project concept definition
2. Determine the business need and feasibility of the project
3. Identify project sponsors who will help obtain resources
4. Create a written business case
5. Create a first cut project charter
6. Identify an appropriate project life cycle (phases, tracks of work & deliverables)
7. and estimate phase transition dates
8. Summarize the project life cycle in a PowerPoint/Visio drawing
9. Perform Post-it note exercise
10. Create a release strategy
11. Obtain formal approval from the project sponsor
12. Confirm management authorization to begin planning
13. Capture issues in an issue log
14. Perform Initiate/Concept phase exit quality gate review

**b. Process Tools and Techniques**

1. Business case template
2. Life Cycle Chart
3. Project Charter template
4. Post-it note workshop to identify project mission, life cycle phases,
5. tracks of work and deliverables
6. Issue log
7. Quality gate review

**II DEFINED ROLES AND ORGANIZATION****300 Hours****a. Observation of process**

1. Given a project charter, recruit project team members
2. Create a project team organization using matrix (strong or weak) concepts
3. Develop and deliver a presentation describing roles/responsibilities of the
4. project manager, sponsor, skill center managers, project leaders, team
5. members and stakeholders
6. Identify project stakeholders
7. Identify project sponsor
8. Verify that sponsor understands his/her role in the process
9. Identify and document organizational and process issues
10. Close all issues for the phase regarding org structure, roles and process

**b. Process Tools and Techniques**

1. Project/Matrix organization chart template
2. Roles and responsibility assignment template
3. Issue log template

**III STABLE SCOPE AND REQUIREMENTS****800 Hours****a. Observation of process**

1. Given an approved business case create a high level Statement of Work (SOW) or project charter
2. Identify Product Scope document by using: 1) a simple requirements document or 2) QFD breakdown listing performance requirements at primary, secondary and tertiary levels as required
3. Document product specifications (i.e., objective measures of requirements) as required per QFD approach
4. Map product requirements to stakeholder objectives and identify gaps
5. Identify issues and gaps related to functionality (i.e., requires that can be delivered versus requirements requested)
6. Identify Project Scope by creating work breakdown structure (WBS.)
7. Drill down WBS to the activity level
8. Verify that WBS contains all project phases and tracks of work
9. Review project scope with appropriate stakeholders
10. Identify all open scope and requirements issues
11. Close all scope and requirements issues for the phase
12. Per QFD approach, develop a strategy to ensure that requirements are mapped, checked and managed in each of the implementation phases prior to phase exit

**b. Process Tools and Techniques**

1. Statement of Work (SOW) template QFD requirements list (A.K.A. House of Quality) or simple requirements document
2. Work Breakdown Structure (WBS) template
3. Issue Log
4. Requirements management tools

#### **IV CHANGE CONTROL**

**100 Hours**

##### **a. Observation of Process**

1. Select the appropriate change order form/tool
2. Develop a presentation describing the change order process
3. Explain the change order process to all team members and stakeholders
4. Formalize requested changes of scope and requirements by using the change order process

##### **b. Process Tools and Techniques**

1. Change order template

#### **V PLANNED COMMITMENTS**

**800 Hours**

##### **a. Observation of Process**

###### **A. Schedule Development**

1. Project WBS activities entered into appropriate scheduling tool
2. All activities assigned accountable "owners"
3. All activities estimated for most likely durations or for highly uncertain activities, durations are estimated using three point approach
4. Effort driven activities are estimated by hours/days and prioritized. Required resources are estimated
5. Logic ties are assigned linking all activities creating a network to enable calculation of total float
6. The project schedule is calculated through all phases and tracks of work
7. The project critical path is identified
8. Resources are assigned and the project is rescheduled based upon resource constraints (See Resource Loading below)
9. Phase transition milestones are highlighted (See Quality Planning below)
10. Project contingency time is added as required (see Risk Management below)
11. The project schedule is reviewed against stakeholder requirements
12. The project schedule is reviewed against product requirements
13. The team feels ownership of the schedule
14. Schedule issues are closed during the planning phase(s)
15. Baseline dates are set
16. The project schedule is published and communicated to stakeholders
17. The change control/change order process is applied to the project schedule following the planning phase(s)
18. Rolling wave planning (i.e., progressive detailing) is performed during the execution phases as required

###### **B. Risk Management**

1. Anticipating Problems Workshop is delivered. A document listing prioritized risks, owners and removal/mitigation strategies is produced
2. For high uncertainty activities, Monte Carlo techniques or three point estimates are applied to determine required schedule contingency

- C. Resource Loading (medium to larger scale projects)**
1. Assign resources to WBS activities using the assumption of the "normal and efficient use of resources"
  2. Produce an exception report showing resource shortfalls
  3. Resolve resource/staffing issues to ensure the project has adequate headcount
  4. Lock schedule, scope and resources so that a challenging but achievable
  5. schedule is created
  6. Review resource requirements with stakeholders and secure approval
  7. Secure resource commitments to the project from functional skill areas/contractors (see Budget below)
- D. Quality Planning**
1. A process of Quality Gates and phase reviews are scheduled at phase exit dates
  2. Sufficiency criteria for each phase are identified with appropriate metrics
- E. Budget**
1. Enter Project Cost Elements and budget into Portfolio Dashboard tool
  2. Assign rates to Cost elements
  3. Extend project costs over a time phased budget and create Budget at Complete (BAC)
  4. Review summary time phased budget with stakeholders
  5. Create business case
  6. Receive budget approval and authorization to begin work
  7. All budget issues resolved
- F. Set Baseline Metrics**
1. Calculate Total float for each activity
  2. Create S Curve of activity completions
  3. Create quality gate sufficiency metrics (including requirements) for each project phase
  4. Create S Curve of Project Budget
  5. Develop baseline reporting metrics using graphical tools are created for key deliverables such as configurations, data records, testing, reports, forms, etc.
- G. Communications and change management**
1. A communications plan is created for medium to large scale projects
  2. A change management plan is created for project leading to significant organizational change
- H. Process Tools and Techniques**
1. Work Breakdown Structure
  2. Requirements document and or QFD requirements worksheet
  3. Activity duration estimate using three point estimate approach
  4. Activity effort estimate using three point estimate approach
  5. Project Scheduling software
  6. Monte Carlo Techniques/Three point estimates
  7. Anticipating Problems Workshop
  8. Quality Gates, sufficiency criteria and metrics
  9. Budget/EAC
  10. Total Float
  11. Critical path
  12. S Curve of activity completions
  13. Budget S curve

## **VI PERFORMANCE MEASUREMENT**

**800 Hours**

### **a. Observation of Process**

1. Project team meetings occur regularly. Performance
2. metrics are presented at those meetings and performance shortfalls are flagged
3. Project metrics are used in project reviews with the project sponsor and senior stakeholders
4. Tracking of the schedule adherence is performed routinely.
5. Variances are flagged
6. Baseline and actual start/finish dates and percent complete are recorded on a scheduling tool
7. The project schedule is recalculated each week highlighting projected variances versus plan and total float
8. Activity completion S-Curves (actual versus plan) are used and updated on a weekly basis
9. Budget S-curves (actual versus plan) are updated on at least a monthly basis
10. The Estimate at Complete (EAC) forecast is compared with Budget at Complete (
11. BAC) to identify cost variances
12. Appropriate reporting metrics using graphical tools are created and maintained for key deliverables such as configurations, data records, testing, reports, forms etc.
13. Resource gap reports/metrics are produced highlighting resource shortfalls
14. Project performance metrics are posted openly and publicly to all stakeholders
15. Forecasts are produced for scope, schedule and budget at regular intervals
16. The issue log is updated routinely
17. Project metrics are used effectively to trigger escalation and corrective action
18. Risk removal and mitigation plans are tracked routinely
19. Project Manager keeps the customer well informed
20. Quality metrics are utilized (see Phase Reviews and Quality management)

### **b. Process Tools and Techniques**

1. Project management scheduling and resource management software tools such as MS Project
2. Critical path and total float
3. Excel: Activity completion S-Curve actual versus plan
4. Excel: Budget S-Curve actual versus plan (EAC versus BAC)
5. Excel graphical tools such as stop light charts and run down curves for configurations, data records, testing, reports, forms etc as required Escalation/Corrective action

## **VII PHASE REVIEWS, QUALITY MANAGEMENT & QUALITY GATES**

**600 Hours**

### **a. Observation of Process**

1. Phase exit review milestones are integrated into the project plan
2. Phase exit criteria are identified, measured for sufficiency and openly reported
3. Phase exit reviews (i.e. quality gate reviews) occur and areas of insufficiency are rigorously identified as open issues
4. Phases are reported as complete only when sufficiency is actually achieved
5. Sufficient quality processes are built into the development of project deliverables. These processes include quality steps such as identification and documentation of requirements, unit testing, integration testing, test metrics, configuration management and change control
6. Key product deliverables produced within each phase are mapped to the original requirements of the project and/or the Statement of Work (SOW) and the business case. Gaps are identified and formally managed as issues throughout the project life cycle
7. Appropriate testing practices are part of the project life cycle (methodology)

**b. Process Tools and Techniques** *Correctly use the following tools and techniques:*

1. Quality Gates
2. Quality Functional Deployment (QFD)
3. Quality Process Management
4. Testing

**VIII ISSUE MANAGEMENT AND CORRECTIVE ACTION**

**1000 Hours**

**a. Observation of Process**

1. An issue log is used to record and review issues
2. Issues are reviewed regularly at team meetings
3. Issues are followed up and discharged in a timely manner
4. Tough issues are not hidden but openly and aggressively confronted
5. The project manager follows up with team members who own deliverables that are falling behind plan in a timely manner
6. The project manager rigorously works with team members who are operating behind plan to develop and implement recovery strategies
7. Issues are escalated as required
8. The project manager keeps the customer and project sponsor well informed

**b. Process Tools and Techniques**

1. Issue log
2. Issue management
3. Corrective action
4. Escalation

**IX PROJECT LEADERSHIP AND COMMUNICATIONS**

**1200 Hours**

**a. Observation of Process**

1. Provides adequate direction and work instructions to team members
2. Inspires and motivates team members
3. Confronts tough issues (as opposed to dodging those issues)
4. Spends time leading the team
5. Secures decisions from team members and stakeholders
6. Demonstrates stability and consistency in his/her direction
7. Runs team meetings effectively
8. Delegates and holds team members accountable
9. Facilitates crisis resolution effectively
10. Uses project metrics appropriately
11. Uses good judgment
12. Maintains the "appropriate" level of stress on the project environment, not too much & not too little
13. Performs "Integration" management and coordination effectively
14. Manages project risks effectively
15. Secures corrective action as required
16. Ensures appropriate project communications exist

**b. Process Tools and Techniques**

1. Integration management
2. Crisis management
3. Decision making
4. Communication
5. Corrective action

**X MULTI-PROJECT MANAGEMENT/SKILL CENTER MANAGEMENT****100 Hours****a. Observation of Process**

1. Creates a prioritized list of existing projects
2. Updates monthly/quarterly high level multi-project schedule update report
3. Creates and documents a process for handling new project requests
4. Creates a Resource Breakdown Structure (RBS)
5. Inputs projects into scheduling tool by phase
6. Loads resources into project scheduling tool (High Level only)
7. Resolves multi-project resource issues
8. Produces resource assignment/loading and exception reports
9. Utilizes multi-project change control effectively
10. Receives project status reports from project managers and updates multi-project scheduling model
11. Organizes formal meetings for resource/project reprioritization

**b. Process Tools and Techniques**

1. Project management software tools
2. Change control
3. Process Mapping
4. Resource gap report

**Related Instruction Schedule**  
**IT Project Manager**

<b>SECTION I - THE PROJECT MANAGEMENT FRAMEWORK</b>	<b>%</b>	<b>Planned Classroom</b>
<b>Chapter 1 – Introduction</b>		
<b>1.2 What is a Project?</b>	0.35%	0.50
1.2.1 <i>Temporary</i>		
1.2.2 <i>Unique Product, Service or Result</i>		
1.2.3 <i>Progressive Elaboration</i>		
<b>1.3 What is Project Management?</b>	0.69%	1.00
1.3.1 <i>The Project Management Framework</i>		
1.3.2 <i>The Project Management Knowledge Areas</i>		
<b>1.4 Intro Project Management Tools</b>	0.09%	0.13
<i>Lab exercises with Project scheduling, resource and cost tools</i>	13.86%	20.00
<b>Chapter 2 - The Project Management Context</b>		
<b>2.1 Project Phases and the Project Life Cycle</b>	0.69%	1.00
2.1.1 <i>Characteristics of Project Phases</i>	0.35%	0.50
2.1.2 <i>Characteristics of the Project Life Cycle</i>	0.35%	0.50
2.1.3 <i>Representative Project Life Cycles</i>	0.69%	1.00
<b>2.2 Project Stakeholders</b>	0.35%	0.50
<b>2.3 Organizational Influences</b>	0.69%	1.00
2.3.1 <i>Organizational Systems</i>	0.69%	1.00
2.3.2 <i>Organizational Cultures and Styles</i>		
2.3.3 <i>Organizational Structure</i>		
2.3.4 <i>Project Office</i>		



<b>2.4 Key General Management Skills</b>	0.09%	0.13
2.4.1 <i>Leading</i>		
2.4.2 <i>Communicating</i>		
2.4.3 <i>Negotiating</i>		
2.4.4 <i>Problem Solving</i>		
2.4.5 <i>Influencing the Organization</i>		
<b>2.5 Social-Economic-Environmental Influences</b>	0.09%	0.13
2.5.1 <i>Standards and Regulations</i>		
2.5.2 <i>Internationalization</i>		
2.5.3 <i>Cultural Influences</i>		
2.5.4 <i>Social-Economic-Environmental Sustainability</i>		
<b>Chapter 3 - Project Management Processes</b>		
<b>3.1 Project Processes</b>	0.09%	0.13
<b>3.2 Process Groups</b>	0.09%	0.13
<b>3.3 Process Interactions</b>	0.09%	0.13
3.3.1 <i>Initiating Processes</i>		
3.3.2 <i>Planning Processes</i>		
3.3.3 <i>Executing Processes</i>		
3.3.4 <i>Controlling Processes</i>		
3.3.5 <i>Closing Processes</i>		
<b>3.4 Customizing Process Interactions</b>		
<b>3.5 Mapping of Project Management Processes</b>	0.35%	0.50
<b>Section II - THE PROJECT MANAGEMENT KNOWLEDGE AREAS</b>		
<b>Chapter 4 - Project Integration Management</b>		
<b>4.1 Project Plan Development</b>	6.93%	10.00
4.1.1 <i>Inputs to Project Plan Development</i>		
4.1.2 <i>Tools and Techniques for Project Plan Development</i>		
4.1.3 <i>Outputs from Project Plan Development</i>		
<b>4.2 Project Plan Execution</b>	1.39%	2.00
4.2.1 <i>Inputs to Project Plan Execution</i>		
4.2.2 <i>Tools and Techniques for Project Plan Execution</i>		
4.2.3 <i>Outputs from Project Plan Execution</i>		
<b>4.3 Integrated Change Control</b>	6.93%	10.00
4.3.1 <i>Inputs to Integrated Change Control</i>		
4.3.2 <i>Tools and Techniques for Integrated Change Control</i>		
4.3.3 <i>Outputs from Integrated Change Control</i>		
<b>Chapter 5 - Project Scope Management</b>		
<b>5.1 Initiation</b>	0.35%	0.50
5.1.1 <i>Inputs to Initiation</i>		
5.1.2 <i>Tools and Techniques for Initiation</i>		
5.1.3 <i>Outputs from Initiation</i>		
<b>5.2 Scope Planning</b>	1.39%	2.00
5.2.1 <i>Inputs to Scope Planning</i>		
5.2.2 <i>Tools and Techniques for Scope Planning</i>		
5.2.3 <i>Outputs from Scope Planning</i>		
<b>5.3 Scope Definition</b>	1.39%	2.00

5.3.1 Inputs to Scope Definition		
5.3.2 Tools and Techniques for Scope Definition		
5.3.3 Outputs from Scope Definition		
<b>5.4 Scope Verification</b>	1.39%	2.00
5.4.1 Inputs to Scope Verification		
5.4.2 Tools and Techniques for Scope Definition		
5.4.3 Outputs from Scope Definition		
<b>5.5 Scope Change Control</b>	1.39%	2.00
5.5.1 Inputs to Scope Change Control		
5.5.2 Tools and Techniques for Scope Change Control		
5.5.3 Outputs from Scope Change Control		
<b>Chapter 6 - Project Time Management</b>		
<b>6.1 Activity Definition</b>	1.39%	2.00
6.1.1 Inputs to Activity Definition		
6.1.2 Tools and Techniques for Activity Definition		
6.1.3 Outputs from Activity Definition		
<b>6.2 Activity Sequencing</b>	1.39%	2.00
6.2.1 Inputs to Activity Sequencing		
6.2.2 Tools and Techniques for Activity Sequencing		
6.2.3 Outputs from Activity Sequencing		
<b>6.3 Activity Duration Estimating</b>	1.39%	2.00
6.3.1 Inputs to Activity Duration Estimating		
6.3.2 Tools and Techniques for Activity Duration Estimating		
6.3.3 Outputs from Activity Duration Estimating		
<b>6.4 Schedule Development</b>	3.47%	5.00
6.4.1 Inputs to Schedule Development		
6.4.2 Tools and Techniques for Schedule Development		
6.4.3 Outputs from Schedule Development		
<b>6.5 Schedule Control</b>	8.32%	12.00
6.5.1 Inputs to Schedule Control		
6.5.2 Tools and Techniques for Schedule Control		
6.5.3 Outputs from Schedule Control		
<b>Chapter 7 - Project Cost Management</b>		
<b>7.1 Resource Planning</b>	1.39%	2.00
7.1.1 Inputs to Resource Planning		
7.1.2 Tools and Techniques for Resource Planning		
7.1.3 Outputs from Resource Planning		
<b>7.2 Cost Estimating</b>	0.35%	0.50
7.2.1 Inputs to Cost Estimating		
7.2.2 Tools and Techniques for Cost Estimating		
7.2.3 Outputs from Cost Estimating		
<b>7.3 Cost Budgeting</b>	1.39%	2.00
7.3.1 Inputs to Cost Budgeting		
7.3.2 Tools and Techniques for Cost Budgeting		
7.3.3 Outputs from Cost Budgeting		

<b>7.4 Cost Control</b>	1.39%	2.00
7.4.1 Inputs to Cost Control		
7.4.2 Tools and Techniques for Cost Budgeting		
7.4.3 Outputs from Cost Control		
<b>Chapter 8 - Project Quality Management</b>		
<b>8.1 Quality Planning</b>	4.16%	6.00
8.1.1 Inputs to Quality Planning		
8.1.2 Tools and Techniques for Cost Budgeting		
8.1.3 Outputs from Quality Planning		
<b>8.2 Quality Assurance</b>	2.77%	4.00
8.2.1 Inputs to Quality Assurance		
8.2.2 Tools and Techniques for Quality Assurance		
8.2.3 Outputs from Quality Planning		
<b>8.3 Quality Control</b>	2.77%	4.00
8.3.1 Inputs to Quality Control		
8.3.2 Tools and Techniques for Quality Control		
8.3.3 Outputs from Quality Control		
<b>Chapter 9 - Project Human Resource Management</b>		
<b>9.1 Organizational Planning</b>	1.39%	2.00
9.1.1 Inputs to Organization Planning		
9.1.2 Tools and Techniques for Organization Planning		
9.1.3 Outputs from Organization Planning		
<b>9.2 Staff Acquisition</b>	1.39%	2.00
9.2.1 Inputs to Staff Acquisition		
9.2.2 Tools and Techniques for Staff Acquisition		
9.2.3 Outputs from Staff Acquisition		
<b>9.3 Team Development</b>	6.93%	10.00
9.3.1 Inputs to Team Development		
9.3.2 Tools and Techniques for Team Development		
9.3.3 Outputs from Team Development		
<b>Chapter 10 - Project Communications Management</b>		
<b>10.1 Communications Planning</b>	0.69%	1.00
10.1.1 Inputs to Communications Planning		
10.1.2 Tools and Techniques for Communications Planning		
10.1.3 Outputs from Communications Planning		
<b>10.2 Information Distribution</b>	1.73%	2.50
10.2.1 Inputs to Information Distribution		
10.2.2 Tools and Techniques for Information Distribution		
10.2.3 Outputs from Information Distribution		
<b>10.3 Performance Reporting</b>	3.47%	5.00
10.3.1 Inputs to Performance Reporting		
10.3.2 Tools and Techniques for Performance Reporting		
10.3.3 Outputs from Information Distribution		
<b>10.4 Administrative Closure</b>	0.35%	0.50
10.4.1 Inputs to Administrative Closure		
10.4.2 Tools and Techniques for Administrative Closure		

10.4.3 Outputs from Administrative Closure

**Chapter 11 - Project Risk Management**

<b>11.1 Risk Management Planning</b>	0.69%	1.00
11.1.1 Inputs to Risk Management Planning		
11.1.2 Tools and Techniques for Risk Management Planning		
11.1.3 Outputs from Risk Management Planning		
<b>11.2 Risk Identification</b>	2.77%	4.00
11.2.1 Inputs to Risk Identification		
11.2.2 Tools and Techniques for Risk Identification		
11.2.3 Outputs from Risk Management Planning		
<b>11.3 Qualitative Risk Analysis</b>	1.39%	2.00
11.3.1 Inputs to Qualitative Risk Analysis		
11.3.2 Tools and Techniques for Qualitative Risk Analysis		
11.3.3 Outputs from Qualitative Risk Analysis		
<b>11.4 Quantitative Risk Analysis</b>	1.39%	2.00
11.4.1 Inputs to Qualitative Risk Analysis		
11.4.2 Tools and Techniques for Quantitative Risk Analysis		
11.4.3 Outputs from Quantitative Risk Analysis		
<b>11.5 Risk Response Planning</b>	4.16%	6.00
11.5.1 Inputs to Risk Response Planning		
11.5.2 Tools and Techniques for Risk Response Planning		
11.5.3 Outputs from Risk Response Planning		
<b>11.6 Risk Monitoring and Control</b>	0.69%	1.00
11.6.1 Inputs to Risk Monitoring and Control		
11.6.2 Tools and Techniques for Risk Monitoring and Control		
11.6.3 Outputs from Risk Monitoring and Control		
<b>Chapter 12 - Project Procurement Management</b>		
<b>12.1 Procurement Planning</b>	0.35%	0.50
12.1.1 Inputs to Procurement Planning		
12.1.2 Tools and Techniques for Procurement Planning		
12.1.3 Outputs from Procurement Planning		
<b>12.2 Solicitation Planning</b>	0.35%	0.50
12.2.1 Inputs to Procurement Planning		
12.2.2 Tools and Techniques for Procurement Planning		
12.2.3 Outputs from Solicitation Planning		
<b>12.3 Solicitation</b>	0.35%	0.50
12.3.1 Inputs to Solicitation		
12.3.2 Tools and Techniques for Solicitation		
12.3.3 Outputs from Solicitation		
<b>12.4 Source Selection</b>	0.35%	0.50
12.4.1 Inputs to Source Selection		
12.4.2 Tools and Techniques for Source Selection		
12.4.3 Outputs from Source Selection		
<b>12.5 Contract Administration</b>	1.04%	1.50
12.5.1 Inputs to Contract Administration		

12.5.2 Tools and Techniques for Contract Administration

12.5.3 Outputs from Contract Administration

<b>12.6 Contract Closeout</b>	0.35%	0.50
12.6.1 Inputs to Contract Closeout		
12.6.2 Tools and Techniques for Contract Closeout		
12.6.3 Outputs from Contract Closeout		
<b>Total Hours</b>	<b>100.00%</b>	<b>144.28</b>

## 2<sup>nd</sup> Year

### **RELATED INSTRUCTION SCHEDULE FOR: IT Project Manager:**

#### **Personal competencies – 82 Hours**

In addition to having knowledge of project management tools and techniques, IT Project Managers need to possess general business skills. The following is a list of some of the courses and training topics covering the general personal business skills that every IT Project Manager should have.

This training can be delivered by a variety of IT training and management training provider organizations including training companies, community colleges, universities or in-house within a company.

#### **Contracting and Procurement**

##### **Section 1.01 E Business**

(a) Business Process Modeling

**Article II. Conflict Resolution**

**Article III. Contract Management**

#### **Technical Career Compass Elective areas-- 200 hours**

In addition to project management training and personal business competencies, the Computing Technology Industry Association (CompTIA) has worked with members of the IT industry to identify IT technical training and overall educational achievements that enhance a project manager's effectiveness in an IT environment. The following is a list of some of the courses and training topics covering this area. This training can be delivered by a variety of IT training and management training provider organizations including training companies, community colleges, universities or in-house within a companies.

**Article IV. Risk Management**

**Article V. General Business Skills**

**Section 5.01 Developing Leadership Skills**

**Section 5.02 IT Technology Skill (Software And/Or Hardware)**

**Section 5.03 IT Development Methodologies, Tools and Managerial Methods**