

<b>Department</b>	General Study	<b>Major</b>						
<b>Course Name</b>	Engineering Project Management	<b>Course Code</b>	GNRL 402					
<b>Prerequisites</b>	-	<b>Credit Hours</b> <b>CRH</b>	3		CTH		3	
			L	3	P	0	T	0

**Course Description :**

**Course description :**

The Engineering Project Management Course is intended to help meet the requirements of industry by educating undergraduate engineering students to understand engineering projects, project organizations and project management methods. Students completing this course will be able to work effectively in multidisciplinary engineering projects immediately after completion and to advance more rapidly within the project management organization and profession. The management of projects entails technical knowledge, engineering skills and management skills.

**Topics:**

- Introduction
- The environment in which projects operate
- The role of the project manager
- Project integration management
- Project scope management
- Project schedule management
- Project cost management
- Project quality management
- Project resource management
- Project communications management
- Project risk management
- Project procurement management
- Project stakeholder management

**Experiments:** if applicable it will support the course topics.

**References:**

A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Sixth Edition, Project Management Institute , Project Management Institute © 2017

**General Objective:**

The course introduces trainees to the fundamentals of project management and will give them an overview of the entire project management process. The course support exploring and understanding project management concepts through class discussions and examinations.

**Detailed Objectives:**

**Trainee will be able to:**

1-	Understand the importance of project management.
2-	Understand the role of the project manager.
3-	Describe the process of project integration management.
4-	Understand the importance of project scope management and use various techniques to manage scope.

5-	Understand the importance of project schedule management and how to use various techniques to develop and manage schedule.
6-	Understand project cost management and how to estimate it.
7-	Understand the importance of project quality management and how to use various techniques to manage time.
8-	Describe resource management and its role in project management.
9-	Understand project communications management and its role in project management.
10-	Understand risk management and techniques to manage risk in projects.
11-	Understand the importance of procurement.
12-	Describe stakeholders management and its role in project management.

Detailed of Theoretical Contents		
Hours	Contents	Assessment Tools
6	<p><b>Introduction</b></p> <ul style="list-style-type: none"> <li>- History of Project Management</li> <li>- Fundamental Elements               <ul style="list-style-type: none"> <li>○ Projects</li> <li>○ The Importance of Project Management</li> <li>○ Relationships of Project, Program. Portfolio and Operation Management</li> <li>○ Project and development life cycles</li> <li>○ Project Phase</li> <li>○ Phase Gate</li> <li>○ Project Management Process</li> <li>○ Project Management Process Groups</li> <li>○ Project Management Data and Information</li> </ul> </li> </ul>	Class activity Homework Quiz Exams
3	<p><b>The Environment in Which Projects Operate</b></p> <ul style="list-style-type: none"> <li>- Enterprise Environmental Factors               <ul style="list-style-type: none"> <li>○ EEFs Internal to the Organization</li> <li>○ EEFs External to the Organization</li> </ul> </li> <li>- Organizational Process Assets               <ul style="list-style-type: none"> <li>○ Process, Policies and Procedures</li> <li>○ Organization Knowledge Repositories</li> </ul> </li> <li>- Organizational Systems               <ul style="list-style-type: none"> <li>○ Organizational Governance Frameworks</li> <li>○ Management Elements</li> <li>○ Organizational Structure Types</li> </ul> </li> </ul>	Class activity Homework Quiz Exams

Detailed of Theoretical Contents		
Hours	Contents	Assessment Tools
3	<p><b>The Role of the Project Manager</b></p> <ul style="list-style-type: none"> <li>- Definition of a Project Manager</li> <li>- The Project Manager Sphere of Influence <ul style="list-style-type: none"> <li>o The Project</li> <li>o The Organization</li> <li>o The Industry</li> <li>o Professional Discipline</li> <li>o Across Discipline</li> </ul> </li> <li>- Project Manager Competences <ul style="list-style-type: none"> <li>o Technical Project Management Skills</li> <li>o Strategic and Business Management Skills</li> <li>o Leadership Skills</li> <li>o Comparison of Leadership and Management</li> </ul> </li> <li>- Performing Integration <ul style="list-style-type: none"> <li>o Performing Integration at the Process Level</li> <li>o Integration at Cognitive Level</li> <li>o Integration at Context Level</li> <li>o Integration at Complexity</li> </ul> </li> </ul>	<p>Class activity Homework Quiz Exams</p>
3	<p><b>Project Integration Management</b></p> <ul style="list-style-type: none"> <li>- Develop Project Charter</li> <li>- Develop Project Management Plan</li> <li>- Direct and Manage Project Work</li> <li>- Manage Project Knowledge</li> <li>- Monitor and Control Project Work</li> <li>- Perform Integrated Change Control</li> <li>- Close Project or Phase</li> </ul>	<p>Class activity Homework Quiz Exams</p>
3	<p><b>Project Scope Management</b></p> <ul style="list-style-type: none"> <li>- Plan Scope Management</li> <li>- Collect Requirements</li> <li>- Define Scope</li> <li>- Create WBS</li> <li>- Validate Scope</li> <li>- Control Scope</li> </ul>	<p>Class activity Homework Quiz Exams</p>
6	<p><b>Project Schedule Management</b></p> <ul style="list-style-type: none"> <li>- Plan Schedule Management</li> <li>- Define Activities</li> <li>- Sequence Activities</li> <li>- Estimate Activity Durations</li> <li>- Develop Schedule</li> <li>- Control Schedule</li> </ul>	<p>Class activity Homework Quiz Exams</p>
6	<p><b>Project Cost Management</b></p> <ul style="list-style-type: none"> <li>- Plan Cost Management</li> <li>- Estimate Costs</li> </ul>	<p>Class activity Homework Quiz</p>

Detailed of Theoretical Contents		
Hours	Contents	Assessment Tools
	<ul style="list-style-type: none"> <li>- Determine Budget</li> <li>- Control Costs</li> </ul>	Exams
3	<b>Project Quality Management</b> <ul style="list-style-type: none"> <li>- Plan Quality Management</li> <li>- Perform Quality Assurance</li> <li>- Control Quality</li> </ul>	Class activity Homework Quiz Exams
3	<b>Project Resource Management</b> <ul style="list-style-type: none"> <li>- Plan Resource Management</li> <li>- Estimate Activity Resources</li> <li>- Acquire Resources</li> <li>- Develop Team</li> <li>- Manage Team</li> <li>- Control Resources</li> </ul>	Class activity Homework Quiz Exams
3	<b>Project Communications Management</b> <ul style="list-style-type: none"> <li>- Plan Communications Management</li> <li>- Manage Communications</li> <li>- Control Communications</li> </ul>	Class activity Homework Quiz Exams
3	<b>Project Risk Management</b> <ul style="list-style-type: none"> <li>- Plan Risk Management</li> <li>- Identify Risks</li> <li>- Perform Qualitative Risk Analysis</li> <li>- Perform Quantitative Risk Analysis</li> <li>- Plan Risk Responses</li> <li>- Implement Risk Responses</li> <li>- Monitor Risks</li> </ul>	Class activity Homework Quiz Exams
3	<b>Project procurement management</b> <ul style="list-style-type: none"> <li>- Plan Procurement Management</li> <li>- Conduct Procurements</li> <li>- Control Procurements</li> </ul>	Class activity Homework Quiz Exams
3	<b>Project stakeholder management</b> <ul style="list-style-type: none"> <li>- Identify Stakeholders</li> <li>- Plan Stakeholder Engagement</li> <li>- Manage Stakeholder Engagement</li> <li>- Control Stakeholder Engagement</li> </ul>	Class activity Homework Quiz Exams

<b>Textbook</b>	<ul style="list-style-type: none"> <li>• A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Sixth Edition, Project Management Institute , Project Management Institute © 2017</li> </ul>
-----------------	---