College: engineering Department: civil engineering

Course Title:
Construction Management

Course No:
CE 570

Credit Hours:
3h

Semester: second 2021/2020

About The Course

Course Title: **Construction Management** Class:
Course No: **CE 570**
Credit Hours: 3 h Lecture Room: 408

Obligatory/ Optional:
Text Book: Construction management by Halpin.

The Instructor

Name: Eng. Ja'far A. Aldibat Albtoosh Title: full time lecturer
Office Tel:
Office No: 201 Office Hours: sun. Tus. 11-12
Mon . wed. 8-11

E-mail: j,btoosh@jpu.edu.jo

Course Description

The construction business and processes; project phases; managerial duties, responsibilities, and authorities; project planning: WBS, networking techniques, scheduling, resources profiling and leveling, cash flow projections and budgeting; project monitoring and directing, actual progress reporting, and updating the project plan; project control: earned value analysis of cost and schedule variance; evaluating performance and identifying areas of potential improvement; forecasting time and cost to complete and at completion; computer applications in project planning and control. Equipment: calculating equipment cost and estimating productivity, economic life, and process production cost; optimizing process production and production cost.

Course Objectives

Furnish the student with basic understanding of the project management process. Understand the project manager duties and responsibilities, and project organization and communication.

Furnish the student with advanced skills of project planning and control: perform WBS and activity level planning. Perform schedule computations, resource leveling, and time-cost tradeoff. Perform cash-flow analysis, budgeting and finance requirements. Update the work program and perform earned value analysis and time and cost forecasting.

Furnish the student with means and procedures of estimate equipment cost, economic life, production rates, and production cost; and optimizing fleet size and production processes..

Learning Outcome

1. Understand the role of project managers.
2. Understand project organization, communication, and reporting processes.

3. Plan the work: perform WBS, estimate activity duration, and establish relationships among the project activities.
4. Perform network analysis and scheduling calculations.
5. Optimize the plan: perform time-cost tradeoff and resource leveling.
6. Update the plan, evaluate the project status, and forecast project completion time and cost.
7. Perform earned value analysis to control schedule and cost variances.
8. estimate equipment cost, productivity and production cost
9. Optimize production processes and equipment fleet size.

Course Outline and Time schedule

Week	Course Outline
First week	Introduction to project management
2nd week	Project phases and the role of project manager in each phase
3rd week	Project organization, reporting, and communication.
4th week	Project organization, reporting, and communication.
5th week	Project planning: WBS, networking, Gantt charts, and scheduling
	Plan optimization: time-cost tradeoff and resource leveling
6th week	Plan optimization: time-cost tradeoff and resource leveling
7th week	Cash-flow analysis, budgeting, and financial requirements
8th week	Overlapping (precedence) networks
9th week	Updating project status
10th week	Time and cost control: Earned value analysis
11th week	Time and cost control: Earned value analysis
12th week	Construction equipment: productivity, cost, and production cost

13th week	Process analysis and fleet size optimization
14th week	Process analysis and fleet size optimization
15thweek	**FINAL EXAM**

Presentation methods and techniques

Methods of teaching varied according to the type of text, student and situation. The following techniques are usually used:

1- Problem solving.

2- Discussion.

3- Learning by activities.

Sources of information and Instructional Aids

- Computer … power point …etc.
- Library sources

Assessment Strategy and its tools

The assigned syllabus is assessed and evaluated
Through: feed back and the skills that are acquired by the students

The tools:

1- Digonistic tests to identify the students level and areas of weakness
2- Formal (stage) evaluation
   a) Class Participation
   b) Ist Exam
   c) 2nd Exam
   d) Activity file

Tool & Evaluation

Tests are permanent tools & assessment, in addition to the activity file which contains curricular and the co-cussiculor activities, research, report papers and the active participation of the student in the lecture.

The following table clarifies the organization of the assessment schedule:

Test	Date	Grade
First Exam		20
2nd Exam		20
Attendance and quiz	Students should be notified about their marks	20
Final Exam		40

Activities and Instructional Assignment

1- Practical assignments to achieve the syllabus objectives.

Regulations to maintain the teaching-Learning Process in the Lecture:

1- Regular attendance.

2- Respect of commencement and ending of the lecture time.

3- Positive relationship between student and teacher.

4- Commitment to present assignments on time.

5- High commitment during the lecture to avoid any kind of disturbance and distortion.

6- High seuse of trust and sincerity when referring to any piece of information and to mention the source.

7- The student who absents himself should submit an accepted excuse.

8- University relevant regulations should be applied in case the studen,s behavior is not accepted.

9- Allowed Absence percentages is (%).

Internet websites

References :

1. Construction management by Halpin.
2. Handout Materials
3. Project planning and scheduling by Harris.
4. Construction equipment and methods by Purifoy.

Syllabus Classification

Objectives	***Learning outcome***	***Assessment tools***
1-		
2-		
3-		
4-		
5-		