

## NVCC COLLEGE-WIDE COURSE CONTENT SUMMARY

### BLD 247 - CONSTRUCTION PLANNING AND SCHEDULING (3 CR.)

#### COURSE DESCRIPTION

Introduces principles of planning and scheduling of a construction project. Includes sequence of events and processes on a construction site. Studies scheduling techniques including the critical path method. Lecture 3 hours per week.

#### GENERAL COURSE PURPOSE

Purpose is to acquaint the student with fundamentals of construction planning, scheduling, and managing.

#### ENTRY LEVEL COMPETENCIES

College level competencies in knowledge of construction [building] materials and methods; contract documents and codes, and construction [building] cost estimating.

#### COURSE OBJECTIVES

Upon completion of this course, student will:

- A. have knowledge of construction and building planning and scheduling; introduction to GANTT [bar] chart; introduction to critical path methods [CPM]
- B. be able to analyze and plan task and job duration; capability to organize individual task into optimum job using CPM, and PERT methods
- C. have capability to revise job planning to accommodate changes
- D. have capability to utilize current microcomputer, software for construction planning

#### MAJOR TOPICS TO BE COVERED

- A. Overview of Construction/Building Planning and Scheduling
- B. Introduction to GANTT scheduling methods
- C. Introduction to Critical Path Methods [CPM] and Project Evaluation and Review Techniques [PERT]
- D. Utilization of CPM method; concept of early and late start and finish; calculation and use of float
- E. Methods for accelerating and decelerating projects; compression and decompression
- F. resource allocation and leveling
- G. cash flow projection using CPM; Introduction to microcomputer software for project management
- H. Computer Applications: Hands-on experience with microcomputer project management software

#### OPTIONAL TOPICS

Comparison of probabilistic and deterministic methods for task duration determination. Applications of simulation and modeling to construction planning and scheduling.