
Course/Prefix No.: MET 219
Course Title: Production Process Planning
Lecture Hours/Week: 2.0
Lab Hours/Week: 0.0
Credit Hours/Semester: 2.0

[Distance Learning Attendance/VA Statement](#)
[Textbook Information](#)

COURSE DESCRIPTION

This course covers the development of techniques to achieve the most efficient sequence of operations in manufacturing processes.

COURSE COMPETENCIES

Upon successful completion of the course, the student should be competent to perform the following:

- Define production planning and control and understand the scientific method of investigating production problems.
- Understand the techniques of production planning using Gantt chart and network modeling.
- Understand the flow charts used in the sequencing of processes involved in producing a product.
- Understand the development of the Master production schedules by taking into account full consideration of limiting factor demand and capacity.

MINIMAL STANDARDS/PERFORMANCE OBJECTIVE

- On a closed book examination, for a given production situation determine all schedules and work activities.
- Identify the major factors influencing the type of system that will lead to the most efficient production.
- On a closed book examination, demonstrate knowledge of PERT Technique; for a series of events, create Gantt chart and CPM charts.
- Demonstrate knowledge of medium term production planning and capacity planning.
- Demonstrate understanding of inventory control process through calculation of economic order quantity (EOQ), economic order value (EOV) and periodic order quantity (POQ) and apply them to minimize inventory costs.

COURSE REQUIREMENT

Students are responsible for attaining competencies through completion of the following requirements:

Attendance

Students will be bound by the policies stated in the York Technical College Student Handbook. Students must attend 90% of the hours assigned the class for a semester to receive credit for

the course. In case a student does miss a class, the student is responsible for obtaining the material that was covered during the absence.

If a student is aware that a class will be missed, then the student should notify the instructor at the earliest possible date. If a student misses a test because of illness or urgent emergency, it is the responsibility of the student:

- Notify the instructor prior to the class period, or at the earliest possible date. At that time a new date for a make-up test can be scheduled.
- Students with unexcused absences during tests will be allowed to take a make-up test at the discretion of the instructor.
- The student has the burden to be sure that some arrangement was made with the instructor for taking a make-up test.

PARTICIPATION IN CLASS

Maintaining a Course Notebook

A class notebook is to be maintained. Notes should be made during study, class, and while conducting research assignments. The notes will be reviewed by the instructor at least twice (about midterm and at semester end) during the semester.

Academic Honesty

“York Technical College adheres to the South Carolina TECH Student Code, approved by the State Board for Technical and Comprehensive Education on March 13, 1974 (revised April 25, 1984). Copies of this code are available in the Library and from Student Services. ... Any student caught cheating or involved in any other academic dishonesty will be given a grade of zero and will be subject to further disciplinary action.”

EVALUATION CRITERIA/GRADING

The grading scale follows:

Grade Points

A 90-100
B 80-89
C 70-79
D 60-69
F 0 –59

Evaluation Method	Total Points
Quizzes (minimum of 4)	60%
Homework	20%
Project	<u>20%</u>
	100%

METHOD OF INSTRUCTION

Traditional instructor lectures, problem solving and case studies will be used to accomplish course competency.

ENTRY LEVEL SKILLS

The student must be capable of reading/comprehending/retaining written material as contained in the textbooks, encyclopedias and periodicals.

PREREQUISITES: EGR 175

CO-REQUISITES: None

Disabilities Statement: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Offices (SR) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.

TOPIC/CONTENT OUTLINE

- A. Productivity
- B. Relationship among demand, technology and production systems
- C. Continuous production, batch production and unit production
- D. Contingency plans, decision making
- E. Production Planning Technique, Gantt Chart, CPM Charts
- F. Bill of Materials (BOM)
- G. Process planning techniques/Break Even Analysis/Group Technology/Work Cells/Kaizen/Cycle Time
- H. Demand management
- I. Capacity planning
- J. Inventory control
- K. Material requirement planning (MRP)

NOTE:

All of the above topics will be covered if time permits. If class time runs short, omission will be at the discretion of the instructor.