

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: BMT-270 Department: BIOM
Course Title: Senior Project Capstone Semester: Spring Year: 2019

Course Objective	Competencies
<ol style="list-style-type: none">1. The skills that will be stressed will be communication, project management, and customer focused process management2. Prepare a proposal, schedule of tasks, finalized design, finalized manufacturing process, and final report and presentation	<ul style="list-style-type: none">• Student teams will be given a problem statement and design requirements with expected deliverables.• Develop the conceptual design by<ul style="list-style-type: none">• Establishing the design specifications• Generate Alternatives• Develop a Preliminary Design<ul style="list-style-type: none">• Model and analyze the design• Evaluate design for match with customer requirements• Develop a Detailed Design<ul style="list-style-type: none">• Refine and Optimize the design• Develop a Final Design<ul style="list-style-type: none">• Document the design with detailed and assembly drawings• Communicate the design using the design review process• Develop manufacturing processes<ul style="list-style-type: none">• Create an Operation Book for the manufacturing operations

Course Objective	Competencies
	<ul style="list-style-type: none"> • Generate CNC program to manufacture part • Develop manufacturing costs • Apply Project Management skills to a given project by <ul style="list-style-type: none"> • Developing a problem statement and mission statement to support and define the project. • Developing project objectives to achieve for the desired project result. • Developing a project strategy that will meet all project objectives • Developing a Work Breakdown Structure for the project • Determining task durations and resource requirements and performing the scheduling computations to develop a timeline for the project. • Preparing the project master schedule using Microsoft Project 98. • Developing a project notebook. • Practice communication skills by interviewing faculty,, students, and then providing a presentation to the Biomedical and Mechanical Engineering Technology department. • Practice communication skills by taking part in weekly team meetings and providing meeting minutes for the meetings throughout the semester.