

MECH3710 “Manufacturing Processes and Systems”
Fall 2023/24

- (i) Topics to be covered
 1. Overview of manufacturing;
 2. Manufacturing material properties;
 3. Machining theory and operations;
 4. Nontraditional machining operations;
 5. Surface and tolerances;
 6. Rapid prototyping;
 7. Metal casting;
 8. Plastic and Rubber shaping;
 9. Powder metallurgy;
 10. Ceramic processing;
 11. Metal forming;
 12. Integrated circuit processing;

- (ii) Assessment approach and weight
 - Homework: 50%
 - Midterm: 20%
 - Final Exam: 30%

- (iii) Textbooks
 - Reference Book: Principles of Modern Manufacturing: Materials, Processes, and Systems, Mikell P. Groover

- (iv) Course Structure
 - Lecture – 2 days per week, 3 hours;
 - Tutorial – 1 day per week, 1 hours