

Course Syllabus (ONLINE WEB)
Materials and Processes in Manufacturing

July 11 – August 20, 2022

(On-line Meetings: Mondays and Wednesdays 12:00 - 2:00 pm)

Catalog Description

330 Materials and Processes in Manufacturing, 3 cr. U. Principles and practice of manufacturing processes for engineering materials. Processes include casting, forging, rolling, extrusion, sintering and machining. Laboratory work is included. Prereq: MatlEng 201(P)

Textbook: *Manufacturing Processes for Engineering Materials, 6th ed. by S. Kalpakjian and S. R. Schmid, Pearson Publishing (2016). Earlier editions of this book also work!*

Course Instructor: Dr. Nidal Abu-Zahra, Associate Professor, Materials Science and Engineering department. nidal@uwm.edu

Office Hours: virtual meetings can be requested using Microsoft Teams or Collaborate Ultra.

Course Format: This course will be offered on-line in a synchronous mode. Exams and course assignments will be conducted on-line using CANVAS. The class will meet on-line twice a week on Mondays and Wednesdays 12:00 – 2:00 pm.

Workload Statement

This is a 3-credit course, so the expected time commitment for the semester is roughly 150 hours. Exact breakdown will vary by student and by week during the semester. Below is an approximate breakdown on expected activities and workload:

Item	Approx. Workload (hours)
On-line lectures	45
Reading	45
Studying / exam prep	60

Course Objectives

1. To become familiar with the basics of metal casting, forming, cutting, and polymer processes.
2. To recognize the strong interrelationships between material processing and its characteristics.
3. To learn and apply basic terminology associated with these fields.

Grading

3 midterm exams	60%
Final Exam (Comprehensive)	40%

The final exam is comprehensive of all the material covered in the course. The final exam date/time is determined by UWM campus.

Letter Grades (based on previous recent offerings)

A: 94-100; A-: 90-9; B+: 87-89; B: 84-86; B-: 80-83;

C+: 76-79; C: 70-75; C-: 66-69; D: 60-65; F: <60

(Class average was 71%, standard deviation 11%)

Passing Criteria: *a minimum overall grade in the course of 60%.*

Course Policy:

1. You are required to take the course exams during their scheduled times. There are no make-up exams for this course. In the case of emergencies that prohibit you from taking two or more of the midterm exams or the final exam, you will get an incomplete grade in the course and will be allowed to complete the course requirements in the following semester.
2. Check the following website for the university policies on: Students with disabilities, Religious observances, Active military duty, Incompletes, Academic misconduct, Discriminatory conduct, Complaint procedures, Grade appeal, and Final examination.
<http://www.uwm.edu/Dept/SecU/SyllabusLinks.pdf>

Schedule & Online Participation

Although attendance will not be recorded during online meetings on CANVAS, students are responsible for all material discussed in these meetings and any announcements made related to the exams or course activities.

Week	Chapter - Topic	Exams
1.0 - 1.5	CH5 - Metal Casting	I. W: 7/20 (12:00 - 2:00 pm)
1.5 - 3.0	CH 6 - Forming Processes	II. M: 8/1 (12:00 - 2:00 pm)
3.0 - 4.5	CH8 - Material Removal Processes	III. W: 8/10 (12:00 - 2:00 pm)
4.5 - 6.0	CH10 - Processing of Plastics	Final Exam (Comprehensive) following campus schedule

Any changes to the syllabus that might become necessary will be announced on the course website (CANVAS) and/or communicated by email.