MATLENG 731: Deformation Processing
Tuesdays and Thursdays 5:30 - 6:45 pm PHY 142

Catalog Description: Application of engineering principles to shape generation by deformation processing. Analysis of forging, stamping, drawing. Effect of deformation material properties and behavior. Prereq: grad st; MatlEng 410(P).


Course Instructor: Dr. Nidal Abu-Zahra, Associate Professor, Materials Engineering. EMS Building, Room E351, Tel. 229-2668, nidal@uwm.edu

Office hours: Tuesdays and Thursdays 4:30-5:30 pm by appointment only. Please email me in advance if you intend to stop by my office during office hours.

Grading
Midterm Exam I 25%
Midterm Exam II 25%
Final Exam 25%
HW Assignments 25%

Course Topics*
1. Stress and Strain (Chapter 1)
2. Plasticity (Chapter 2)
3. Strain Hardening (Chapter 3)
   -------------- Midterm Exam I --------------
4. Plastic Instability (Chapter 4)
5. Temperature and Strain-Rate Dependence (Chapter 5)
6. Work Balance (Chapter 6)
   -------------- Midterm Exam II --------------
7. Slab Analysis (Chapter 7)
8. Friction and Lubrication (Chapter 8)
9. Upper-Bound Analysis (Chapter 9)
10. Slip-Line Field Analysis (Chapter 10)

* The topics and schedule are tentative and subject to change as needed. The material source may vary as well to include materials available online.

Course Policy: please 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
http://www4.uwm.edu/acad-aff/policy/academicmisconduct.cfm