

University of Michigan-Flint
B.S.E. in MECHANICAL ENGINEERING: 2010-2011 Catalog

Student's Name _____
 UMID: _____
 Expected Graduation Date _____

Current/Revised Date(s) _____
 Cum G.P.A. _____ Cum Credits _____
 First Term at UM-Flint _____
 Advisor: _____

Note: 1) A grade of "C" or better is required for many courses and some prerequisites to courses, and 2) program requires a minimum cumulative 2.5 GPA.

CSC - CHM - ENG - MTH (32 credits)	Term	Grade
CSC/CIS 175 Programming C++ (t) (4)		
CHM 260 Prin Chem I (3)		
CHM 261 Gen Chem Lab (1)		
CHM 262 Prin Chem II (3)		
ENG 112 or EHS 120 (Eng. Comp) (3)		
MTH 121 Calc I (fq) (4)		
MTH 122 Calc II (4)		
MTH 220 Elem Linear Algebra (3)		
MTH 222 Multivariate Calc (4)		
MTH 305 Diff Equations (3)		

PHY (10 credits)	Term	Grade
PHY 243 Prin Phys I (n/nl) (5)		
PHY 245 Prin Phys II (n/nl) (5)		

EGR Prerequisite Courses (15 credits)	Term	Grade
EGR 102 Intro to Engineering (t) (3)		
EGR 165 Computer-Aided Design (t) (3)		
EGR 230 Statics (3)		
EGR 260 Mechanics of Solids (3)		
EGR 280 Engineering Materials (3)		

EGR Core Courses (24 credits)	<i>"C" or better in at least five.</i>	
	Term	Grade
EGR 310 Engineering Economics (fq)(3)		
EGR 315 Machine Element Design (3)		
EGR 330 Egr Circuit Analysis (3)		
EGR 350 Fluid Mechanics (3)		
EGR 353 Thermodynamics (3)		
EGR 370 Dynamics (3)		
EGR 465 Egr Design I (3)		
EGR 466 Egr Design II (Capstone) (3)		

EGR Labs from: (3+ credits)	Term	Grade
EGR 281 Egr Materials Lab (1)		
EGR 322 Analog/Digital Elec Lab (1)		
EGR 335 Egr Circuit Analysis Lab (1)		
EGR 355 Thermofluids Egr Lab (1)		
EGR 397 Robotics/Mechatronics Lab (1)		
EGR 433 Adv Physics Lab II (1-3)		

EGR Elective Courses - 200+ level EGR courses (not already listed as program prereq, core or lab course); possibilities listed below. (21 credits)	Term	Grade
EGR 265 Computer Aided Egr Analysis(3)		
EGR 312 Kinematics & Mechanism (3)		
EGR 321 Analog & Digital Elect (3)		
EGR 354 Optics (3)		
EGR 356 Heat Transfer (3)		
EGR 367 Elect & Magnetism (3)		
EGR 380 System Dyn & Control (3)		
EGR 391 Independent Study (1-4)		
EGR 392 Special Topics in Egr (1-4)		
EGR 399 Robotics/Mechatronics (3)		
EGR 410 Vibrations (3)		
EGR 432 Manufacturing Process (3)		
EGR 492 Adv Topics in EGR (1-4)		

Other Program Requirements
Minimum cumulative GPA of 2.5
F.E. license exam (taken typically during last term)

General Education (for CAS B.S.)	Term	Grade
FYE - UNV 100 (3)		
English Comp: ENG 112 (or EHS 120, HON 156) (3)		ENG 112
Humanities (h) <i>PHL 162 Ethics recom.</i> (3)		
Humanities (h) (3)		
Soc Sci (s) <i>EGR/SOC 203 Technology & Society recommended</i> (3)		
Soc Sci (s) (3)		
Global Studies (gs) <i>EGR/POL 235 Global Energy recommended</i> (3)		
Fine Arts (f) (3)		
Health & Well Being (hw) <i>PHS 421 Occupational Health and Safety recom.</i> (3)		
Finance & Quantitative Literacy (fq) (3)		EGR 310/MTH121
Nat Sci w/lab (n/nl) (4)		PHY 243/245
Technology (t) (3)		EGR 102/165
Capstone (3)		EGR 466

B.S.E. in Mechanical Engineering - 2010-2011

Prerequisites. (57 credits).

- A. ENG 112 (3 credits).
- B. MTH 121, 122, 220, 222, 305 (18 credits).
- C. CSC/CIS 175 (4 credits).
- D. CHM 260, 261, 262 (7 credits).
- E. PHY 243, 245 (10 credits).
- F. EGR 102, 165, 230, 260, 280 (15 credits).

Requirements. (48 credits).

- A. Core courses: EGR 310, 315, 330, 350, 353, 370, 465, 466 (24 credits).
- B. Laboratory courses: 3-4 credits selected from EGR 281, 322, 335, 355, 397, or 433 (3-4 credits).
- C. Elective courses: EGR courses at the 200 level or above not already listed as a program prerequisite, core, or laboratory course (21 credits).
- D. A grade of C (2.0) or better in at least five of the eight core courses.
- E. A cumulative grade point average of 2.5 or better.
- F. Fundamentals of Engineering (FE) license examination (*typically taken during final term before graduation*).
- G. Completion of at least 129 credits and all requirements of the College of Arts and Sciences B.S.E. degree, including general education requirements.

Summary - 129 credits required	Credits
CSC, CHM, ENG, MTH	32
PHY	10
EGR Prereqs	15
EGR Core Courses	24
EGR Labs	3+
EGR Electives	21
General Ed (not met within program)	24
Total	129

Katie Leist, Secretary - kleist@umflint.edu
Pat Slackta, Administrative Assistant - pslackta@umflint.edu
Young-Man Kim, Ph.D., Assistant Professor - kymkmo@umflint.edu
Quamrul Mazumder, Ph.D, Assistant Professor - qmazumde@umflint.edu
Olanrewaju Aluko, Ph.D., Assistant Professor - aluko@umflint.edu
C. Pearson, Ph.D., Chair - pear@umflint.edu

Department of Computer Science, Engineering and Physics (CSEP)
207 MSB - 810/762-3131 - www.umflint.edu/csep/