



# EASTERN MICHIGAN UNIVERSITY EQUIVALENCY GUIDE

## COLLEGE OF ENGINEERING AND SCIENCE

### ENGINEERING PROGRAMS

Entrance Requirements: 2.5 GPA based on at least 24 credits. If less than 24 credits have been earned, high school transcripts are required.

The following courses will transfer into a University of Detroit Mercy Engineering program [Architectural, Civil/Environmental, Electrical/Computer, or Mechanical]. Additional courses not on this guide may also be transferable. Students may transfer a maximum of 96 credits; grades must be “C” or better.

To arrange a campus visit, contact an Admissions Counselor at 313-993-1245, 800-635-5020 or [admissions@udmercy.edu](mailto:admissions@udmercy.edu). In order to determine when you may begin the cooperative education program (sometimes even prior to taking classes at UDM), contact the Transfer Director at 313-993-1530 or [rmllec@udmercy.edu](mailto:rmllec@udmercy.edu) as soon as possible.

UDM website: [udmercy.edu](http://udmercy.edu)

#### EASTERN MICH UNIVERSITY COURSES

#### UDM EQUIVALENCIES

##### Math, Science, Engineering Courses:

BIO 105	Intro Biology for Non-Majors <sup>1</sup>	BIO 1080	The Science of Life
CHEM 121	General Chemistry I	CHM 1070	General Chemistry I
CHEM 122	General Chemistry I Laboratory	CHM 1100	Chemistry Laboratory I
CHEM 123	General Chemistry II <sup>2</sup>	CHM 1080	General Chemistry II
CHEM 341	Fundamentals of Material Science <sup>3</sup>	ENGR 3170	Science of Materials
CNST 206	Surveying <sup>4</sup>	CIVE 3400/3410	Civil Engr: Surveying, CAD, GIS
COSC 246	Programming in C++	ENGR 2040 or CSC 1710	Engr Comp/Intro Prog I
COSC 405	Switching Theory <sup>5</sup>	ELEE 2640	Digital Logic
COSC 422	Intro to Microprocessors <sup>5</sup>	ELEE 3860	Intro to Microprocessors
COSC 439	Computing Network Principles <sup>5</sup>	ELEE 4680	Computer Networks
MATH 120	Calculus I	MTH 1410	Analytic Geometry & Calculus I
MATH 121	Calculus II	MTH 1420	Analytic Geometry & Calculus II
MATH 223	Multivariable Calculus	MTH 2410	Analytic Geometry & Calculus III
MATH 122	Elementary Linear Algebra <b>and</b>		
MATH 325	Differential Equations	MTH 3720	Differential Equ w/Linear Algebra
MATH 370	Probability and Statistics I	MTH 4270	Applied Probability and Statistics
PHY 223	Mechanics and Sound	PHY 1600/1610	General Physics I/ Lab
PHY 224	Electricity and Light	PHY 1620/1630	General Physics II/ Lab
PHY 229	Strength & Elasticity of Materials <sup>3</sup>	ENGR 3260/3270	Mech of Deformable Bodies/ Lab
PHY 230	Engineering Dynamics <sup>3</sup>	ENGR 3130	Dynamics
PHY 370	Introduction to Modern Physics <sup>5</sup>	PHY 3670	Modern Physics
PHY 485	Fluid Dynamics <sup>3</sup>	ENGR 3140	Fluid Mechanics

- If EMU’s PHY 223, 229, and 230 courses are all taken, UDM’s ENGR 3120 Statics will also transfer.
- Additional COSC & PHY 400-level courses may transfer as Technical Electives. Contact UDM advisor.

<sup>1</sup> BIO 105 is required by Architectural Engineering program only; this or another approved Biology/ Ecology/Geology class may be used for Civil/Environmental Engineering – consult with UDM advisor.

<sup>2</sup> Required by the Mechanical Engineering program only. CHEM 123 or *another science course* may be used to fulfill a requirement for Mechanical Engineering – consult with UDM advisor.

<sup>3</sup> Not required by Electrical/Computer Engineering programs.

<sup>4</sup> Required by Civil/Environmental Engineering program only.

<sup>5</sup> Required by Electrical/Computer Engineering programs only.

## Core Curriculum/Additional Courses:

### EMU

ENGL 121      Comp II: Researching the Pub Exp  
CTAC 124 or 224 Fund Speech/Public Speaking  
ENGL 324      Principles of Technical Comm  
PHIL 100      Introduction to Philosophy  
HIST 100      Comparative Study of Religion  
                  (or other Religious Studies course)  
PHIL or Religious Studies related course

### UDM

ENL 1310      Academic Writing (OB1)  
CST 1010      Fundamentals of Speech (OB1)  
ENL 3030      Technical Writing  
PHL 1000      Introduction to Philosophy (OB4A)  
Choose 1 Religious Studies Course (OB4B)  
Choose 1 add'l Philosophy or Religious Studies (OB4C)

### **UDM's Objective 5:**

- Choose two courses (6 credits total) with a focus on Historical, Literary, or Aesthetic Experiences.
- Choose one course (3 credits) with a focus on Comparative Experiences (study of another culture) or select a Foreign Language class.

Contact the UDM Engineering and Science Transfer Director at 313-993-1530 or [rimlec@udmercy.edu](mailto:rimlec@udmercy.edu) for specific transferable courses to fulfill Objective 5.

---

## UDM HIGHLIGHTS

**Great Reputation** – For the tenth consecutive year, University of Detroit Mercy is listed in the top tier of Midwestern Master's Universities in the 2011 edition of the *U.S. News and World Report's* "America's Best Colleges." UDM was once again ranked one of the top 30 schools in its category and the highest ranking Michigan university in the list.

**UDM is affordable!** Nearly 80% of UDM students receive financial aid and/or scholarships. Combining co-op income and potential scholarships and financial aid, you may have little out-of-pocket expenses. To determine if you qualify for any of UDM's scholarships (including full tuition grants) established for transfer students, contact the Admissions office at 800-635-5020, 313-993-1245 or [admissions@udmercy.edu](mailto:admissions@udmercy.edu).

**Co-op Leader** – For all engineering students at UDM, co-op integrates real engineering practice with a rigorous on-campus education that includes computing and laboratory intensive components. UDM has one of the few four-year engineering programs in the country where all students obtain one full year of experience prior to graduation. Besides valuable experience, students earn an average of nearly \$30,000 during their three co-op rotations. This provides a significant amount of income for tuition. Previous engineering related work experience can be considered for transfer credits.

**Excellent Faculty** – UDM's small classes are taught by experienced professors (not teaching assistants) who help foster a positive learning environment. Engineering faculty conduct research, receive grant money for lab equipment and curriculum development, work in industry, and win national teaching awards.

**Dual Enrollment** – To ease the transition between EMU and UDM, it is an option to take one or more engineering courses at UDM while completing courses at EMU. Contact Carolyn Rimle at [rimlec@udmercy.edu](mailto:rimlec@udmercy.edu) for specific courses, which vary by department.

**Campus Activities** – To gain professional, technical, and social connections, we highly encourage participation in at least one of the many Engineering and Science organizations or University clubs.

**Location** - UDM, located in a residential area of Northwest Detroit, is close to numerous corporations including many companies' headquarters. The Metro Detroit area is also home to a wide variety of cultural activities, entertainment, and sports teams. UDM is easily accessible from most major freeways, including I-94. Come visit!