# McHenry County College and NIU CEET Transfer Guidelines for B.S. Degree in <u>Mechanical Engineering</u>

## The 2+2 Plan for Community College Students

The Department of Mechanical Engineering welcomes transfer students from Illinois community colleges. Students find it easy to continue their studies at NIU if they plan well. Therefore, following the course guidelines in this brochure while completing an Associate in Engineering Science (AES) Degree is highly recommended [1]. Students should always work closely with their community college advisor.

### **Courses at McHenry County College**

Courses at McHenry County College		Equivalent courses at NIU
*SPE 151	Introduction to Speech	COMS 100
**ENG 151	Composition I	ENGL 103
**ENG 152	Composition II	ENGL 203
CHM 165	General Chemistry I	CHEM 210 and CHEM 212
CSC 121	Computer Science I	CSCI 240 (see CSCI department to adjust)
MAT 175	Calculus w/ Analytic Geometry I	MATH 229
MAT 245	Calculus w/ Analytic Geometry II	MATH 230
MAT 255	Calculus w/ Analytic Geometry III	MATH 232
MAT 260	Differential Equations	MATH 336
PHY 291	Principles of Physics I	PHYS 253
PHY 292	Principles of Physics II	PHYS 273
EGR 151	Engineering Graphics	MEE 270
EGR 251	Statics	MEE 210
EGR 252	Dynamics	MEE 211
EGR 260	Electrical Circuit Analysis	ELE 210 and ELE 210U
*Online NILL Foundational Outline Cont. Communication Province and		

<sup>\*</sup>Satisfies NIU Foundational Studies Oral Communication Requirement.

#### **General Education Requirements**

NIU's College of Engineering and Engineering Technology no longer requires special sequences in Social Sciences and Humanities. Therefore, students only need to satisfy NIU's general education requirements. When choosing general education ("knowledge domain") courses, please consult with your McHenry CC advisor, verify general education requirements in the NIU Undergraduate Catalog, and check the NIU Community College Articulation Tables for transferability.

<sup>\*\*</sup>Satisfies NIU Foundational Studies Writing Requirement.

<sup>[1]</sup> Only A.A. and A.S. degrees satisfy NIU's general education requirements.

#### **Courses at NIU**

Remaining classes to be taken at NIU's College of Engineering and Engineering Technology to earn a Bachelor of Science Degree in **Mechanical Engineering**:

MEE 212       Mechanics of Materials         MEE 320       Mechanism Design and Analysis         MEE 321       Mechanical Vibrations I         MEE 322 OR POPMARIO Systems and Control I OR CONTROL Systems I       MEE 322 OR CONTROL Systems I         MEE 330       Materials Science         MEE 331       Manufacturing Processes         MEE 340       Fluid Mechanics         MEE 350       Engineering Thermodynamics         MEE 352       Heat Transfer         MEE 380 OR Computational Methods in Engineering Design OR Computational Methods and Programming in Engineering Design         MEE 381       Engineering Analysis         MEE 390       Experimental Methods in Mechanical Engineering I         MEE 430       Computer-Aided Design and Manufacturing         MEE 470       Design of Machine Elements         MEE 485       Senior Mechanical Engineering Design I         MEE 486       Senior Mechanical Engineering Design II         ISYE 220       Engineering Economy         UEET 101/301       Introduction to Engineering/Transition to the Profession of Engineering			
MEE 321 Mechanical Vibrations I  MEE 322 OR ELE 380 Control Systems and Control I  OR Control Systems I  MEE 331 Materials Science  MEE 331 Manufacturing Processes  MEE 340 Fluid Mechanics  MEE 350 Engineering Thermodynamics  MEE 352 Heat Transfer  MEE 380 OR MEE 381 Computational Methods in Engineering Design OR MEE 381 Computational Methods and Programming in Engineering Design  MEE 383 Engineering Analysis  MEE 390 Experimental Methods in Mechanical Engineering I  MEE 430 Computer-Aided Design and Manufacturing  MEE 470 Design of Machine Elements  MEE 485 Senior Mechanical Engineering Design I  MEE 486 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy	MEE 212	Mechanics of Materials	
MEE 322 OR ELE 380 Dynamic Systems and Control I OR Control Systems I  MEE 330 Materials Science  MEE 331 Manufacturing Processes  MEE 340 Fluid Mechanics  MEE 350 Engineering Thermodynamics  MEE 352 Heat Transfer  MEE 380 OR MEE 381 Computational Methods in Engineering Design OR Computational Methods and Programming in Engineering Design  MEE 383 Engineering Analysis  MEE 390 Experimental Methods in Mechanical Engineering I  MEE 430 Computer-Aided Design and Manufacturing  MEE 470 Design of Machine Elements  MEE 485 Senior Mechanical Engineering Design I  MEE 486 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy	MEE 320	Mechanism Design and Analysis	
OR ELE 380 Control Systems I  MEE 330 Materials Science  MEE 331 Manufacturing Processes  MEE 340 Fluid Mechanics  MEE 350 Engineering Thermodynamics  MEE 352 Heat Transfer  MEE 380 OR MEE 381 Computational Methods in Engineering Design OR MEE 383 Engineering Analysis  MEE 380 Experimental Methods in Mechanical Engineering I  MEE 430 Computer-Aided Design and Manufacturing  MEE 470 Design of Machine Elements  MEE 486 Senior Mechanical Engineering Design I  ISYE 220 Engineering Economy	MEE 321	Mechanical Vibrations I	
ELE 380 Control Systems I  MEE 330 Materials Science  MEE 331 Manufacturing Processes  MEE 340 Fluid Mechanics  MEE 350 Engineering Thermodynamics  MEE 352 Heat Transfer  MEE 380 Computational Methods in Engineering Design OR Computational Methods and Programming in Engineering Design  MEE 381 Engineering Analysis  MEE 390 Experimental Methods in Mechanical Engineering I  MEE 430 Computer-Aided Design and Manufacturing  MEE 470 Design of Machine Elements  MEE 485 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy	_		
MEE 331 Manufacturing Processes  MEE 340 Fluid Mechanics  MEE 350 Engineering Thermodynamics  MEE 352 Heat Transfer  MEE 380 OR Computational Methods in Engineering Design OR Computational Methods and Programming in Engineering Design  MEE 381 Engineering Analysis  MEE 383 Engineering Analysis  MEE 390 Experimental Methods in Mechanical Engineering I  MEE 430 Computer-Aided Design and Manufacturing  MEE 470 Design of Machine Elements  MEE 485 Senior Mechanical Engineering Design II  MEE 486 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy		• • •	
MEE 340 Fluid Mechanics  MEE 350 Engineering Thermodynamics  MEE 352 Heat Transfer  MEE 380 Computational Methods in Engineering Design OR Computational Methods and Programming in Engineering Design  MEE 383 Engineering Analysis  MEE 390 Experimental Methods in Mechanical Engineering I  MEE 430 Computer-Aided Design and Manufacturing  MEE 470 Design of Machine Elements  MEE 485 Senior Mechanical Engineering Design I  MEE 486 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy	MEE 330	Materials Science	
MEE 350 Engineering Thermodynamics  MEE 352 Heat Transfer  MEE 380 Computational Methods in Engineering Design OR	MEE 331	Manufacturing Processes	
MEE 352 Heat Transfer  MEE 380 Computational Methods in Engineering Design OR Computational Methods and Programming in Engineering Design MEE 381 Engineering Analysis  MEE 390 Experimental Methods in Mechanical Engineering I  MEE 430 Computer-Aided Design and Manufacturing  MEE 470 Design of Machine Elements  MEE 485 Senior Mechanical Engineering Design I  MEE 486 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy	MEE 340	Fluid Mechanics	
MEE 380 OR OR MEE 381 Computational Methods in Engineering Design OR Computational Methods and Programming in Engineering Design  MEE 383 Engineering Analysis  MEE 390 Experimental Methods in Mechanical Engineering I  MEE 430 Computer-Aided Design and Manufacturing  MEE 470 Design of Machine Elements  MEE 485 Senior Mechanical Engineering Design I  MEE 486 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy	MEE 350	Engineering Thermodynamics	
OR MEE 381 Computational Methods and Programming in Engineering Design  MEE 383 Engineering Analysis  MEE 390 Experimental Methods in Mechanical Engineering I  MEE 430 Computer-Aided Design and Manufacturing  MEE 470 Design of Machine Elements  MEE 485 Senior Mechanical Engineering Design I  MEE 486 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy	MEE 352	Heat Transfer	
MEE 381 Computational Methods and Programming in Engineering Design  MEE 383 Engineering Analysis  MEE 390 Experimental Methods in Mechanical Engineering I  MEE 430 Computer-Aided Design and Manufacturing  MEE 470 Design of Machine Elements  MEE 485 Senior Mechanical Engineering Design I  MEE 486 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy	==		
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MEE 430 Computer-Aided Design and Manufacturing  MEE 470 Design of Machine Elements  MEE 485 Senior Mechanical Engineering Design I  MEE 486 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy	MEE 383	Engineering Analysis	
MEE 470 Design of Machine Elements  MEE 485 Senior Mechanical Engineering Design I  MEE 486 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy	MEE 390	Experimental Methods in Mechanical Engineering I	
MEE 485 Senior Mechanical Engineering Design I  MEE 486 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy	MEE 430	Computer-Aided Design and Manufacturing	
MEE 486 Senior Mechanical Engineering Design II  ISYE 220 Engineering Economy	MEE 470	Design of Machine Elements	
ISYE 220 Engineering Economy	MEE 485	Senior Mechanical Engineering Design I	
	MEE 486	Senior Mechanical Engineering Design II	
UEET 101/301 Introduction to Engineering/Transition to the Profession of Engineering	ISYE 220	Engineering Economy	
	UEET 101/301	Introduction to Engineering/Transition to the Profession of Engineering	

#### **Technical Electives:**

In addition to the courses listed above, students are required to complete 15-18 hours of electives within CEET. Specific electives will be reviewed with student's assigned faculty advisor and academic catalog.

#### For More Information

Department of Mechanical Engineering CEET EB 226 Northern Illinois University DeKalb, IL 60115-2854 (815) 753-9979



Visit our Home Page. This site provides information on course descriptions, course syllabi, lab tours, faculty profiles, student organizations, suggested 4-year degree plans, other useful links, etc.

#### For undergraduate application materials, contact:

Office of Admissions Northern Illinois University DeKalb, IL 60115-2857 admissions@niu.edu

Apply online at: http://www.admissions.niu.edu/admissions/

For more information on transfer programs at NIU:

Call (815) 753-0446 or (800) 892-3050 (toll free) and ask to speak with a Transfer Counselor.

For more information about the Engineering Transfer Program at McHenry County College, contact: Advising and Transfer Center at (815) 479-7565 or advising@mchenry.edu.

**Disclaimer:** Although NIU attempts to accommodate the course requests of all students, some course offerings may be limited by financial, space, and staffing considerations, or may otherwise be unavailable. Nothing in this brochure may be construed to promise or guarantee registration in any course or course of study (whether required or elective), nor may anything be construed to promise or guarantee the completion of an academic program within a specific length of time. All degree requirements are subject to the provisions and notices in the Undergraduate Catalog. Information in this brochure is valid through August 2020.

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