

PRE-ENGINEERING

**DESIGN.
BUILD.
CREATE.
INNOVATE.**

PRE-ENGINEERING
TRANSFER PROGRAM

 dmacc.edu/engineering

 engineering@dmacc.edu



Get started toward your engineering degree

As an engineer, you'll get to use technology to help improve our world. You can put your skills to work to help design, create and build a better future.

THE DMACC ADVANTAGE

- ▶ Enjoy **small class sizes** of 30 students or fewer
- ▶ Receive **one-on-one support** from faculty and staff
- ▶ Access **free tutoring**
- ▶ Make your **tuition dollars go further**

At Des Moines Area Community College, we're preparing aspiring engineers for a successful career by providing a pathway to the top engineering programs in the country, including Iowa State University, University of Iowa and more.

At DMACC, you can choose from two Pre-Engineering paths based on your goals and academic progress:

Option 1

For students interested in transferring to ISU's College of Engineering and prepared to take Calculus I their first semester.

Take 32 credit hours at DMACC that work toward completing the ISU Engineering "Basic Program." When you successfully complete this 2-term program at DMACC, you'll meet the requirements to transfer to ISU's College of Engineering.

Option 2

For students who need more foundational math courses and/or want to obtain an Associate's degree before transferring to a 4-year school.

Complete 64+ credits to earn your Associate in Science degree with a Pre-Engineering concentration. You can continue your DMACC education beyond the "Basic Program" with classes that include Physics II, Engineering Graphics, and more, as well as earn a valuable degree before transferring.

Both options allow you to take courses in a personalized setting with faculty who give you individual attention - all at a more affordable price per credit hour than a 4-year school. Students who start in DMACC's pre-engineering program have gone on to study aerospace, computer, environmental, civil, mechanical, and agricultural engineering, just to name a few. DMACC academic advisors, staff and faculty will work with you every step of the way!

Two Pre-Engineering Tracks to Choose From

SUGGESTED COURSE SEQUENCE

1 Year (2 term) Engineering “Basic Program”

Based on ALEKS score of 76% or higher

SEMESTER 1

MAT 211* Calculus I	5 Credits
ENG 105 Composition I	3 Credits
CHM 165* Chemistry I	4 Credits
EGR 100 Engineering Orientation	1 Credit
SDV 171 Library Instruction	1 Credit
SDV 108 College Experience (Optional)	1 Credit

TOTAL Credits: 15

MAT 217* Calculus II	5 Credits
ENG 106* Composition II	3 Credits
PHY 213* Physics I	6 Credits
EGR 161* Engineering Computations	2 Credits

TOTAL Credits: 18

Total 32 Credits

I like the small class sizes,
and it's easy to establish
relationships with professors.
If you want to meet intelligent
people or challenge yourself,
definitely come to DMACC!

Hu, DMACC Engineering Transfer Student

* Course has a prerequisite and/or corequisite that must be met.

2 Year (4 term) Associate of Science Degree with Pre-Engineering Concentration

Based on ALEKS score of 46% or higher

SEMESTER 1

SDV 108* (STEM sections may be available)	1 Credits
ENG 105 Composition I	3 Credits
MAT 121 or 211*	4-5 Credits
CHM 165* Chemistry I	4 Credits
Social and Behavioral Science Choice	3 Credits
EGR 100 Engineering Orientation	1 Credit

TOTAL Credits 16 - 17

SEMESTER 2

ENG 106* Composition II	3 Credits
MAT 130 or 217*	3-5 Credits
Humanities Choice	3-4 Credits
Social and Behavioral Science Choice	3 Credits
EGR 161* Engineering Computations	2 Credits
EGR 151, 152 or 155* (Select one)	2 Credits

TOTAL Credits 16 - 19

Begin foreign language at DMACC if needed to transfer. Different institutions have different requirements. Please see an advisor if you need assistance.

SEMESTER 3

MAT 211 or 219*	4-5 Credits
PHY 213 Physics I	6 Credits
EGR 166* Engineering Graphics	4 Credits
SDV 171 Library Instruction	1 Credit

TOTAL Credits: 15-16

SEMESTER 4

Math 217 or 227*	4-5 Credits
PHY 223 Physics II	6 Credits
DMACC Elective (Diversity)	3 Credits
SPC 101 Oral Communications	3 Credits

TOTAL Credits: 16-17

Total 64+ Credits

WHAT YOU'LL DO

Make decisions and solve problems
Analyze data or information
Think creatively
Update and use relevant knowledge
Monitor processes, materials,
or surroundings

CORE JOB SKILLS

Analytical thinking
Attention to detail
Innovation
Dependability
Cooperation
Communication

While at DMACC

Meet regularly with your advisors. Get to know the advisors at DMACC and your desired transfer school. Connect early and often!

Get into a study routine. And stick with it.

Do your research. Look at your desired school's Engineering Transfer Student Webpage. It will include useful links for students looking to apply to the engineering program.

B is the key! It's been shown that the Engineering Basic Program GPA and transfer GPA are best indicators for retention in an engineering program. These minimum grades indicate future success:

- B in Calculus Coursework**
- B in Physics**
- B in Engineering Problem Solving**

Considering Iowa State?

Join ISU's **FREE Engineering Admissions Partnership Program (E-APP)**. This pre-engineering community is designed to enrich your transition to Iowa State's College of Engineering. Talk to your DMACC advisor to find out more.

GPA matters! Entrance into ISU's College of Engineering requires completion of the "Basic Program" with a grade point average of 2.00 or better in the required basic program courses.

THE U.S. WILL NEED
250,000
MORE ENGINEERS BY 2023.

KELLY SERVICES, ENGINEERING EMPLOYMENT OUTLOOK

Study groups helped a lot
with my classes, but I also
got to know other
engineering students.
They were able to
tell me how the classes
at ISU and DMACC
compared.

Elizabeth, Biological Systems
Engineering Transfer Student

Visit dmacc.edu/engineering for more information.
Questions? Contact Engineering@dmacc.edu