

UNIVERSITY OF MIAMI
COLLEGE of ENGINEERING



Dear Incoming Engineering Student:

Welcome to the College of Engineering at the University of Miami. We look forward to seeing you in August 2017.

The Engineering Advising Office is responsible for advising freshmen and sophomore students. I, Ms. Tish Broadhurst and Ms. Cassandra Sierra are here to serve as a resource and help you with any questions, problems etc. -- no matter how small -- that you might have.

All incoming students have to be enrolled in courses by the end of June, 2017. Engineering students **have to take the ALEKS mathematics placement test before they can be registered for classes. Please take this test as soon as possible!**

Please read the “Information on Fall 2017 Registration for the College of Engineering” below and then fill out the “Information Form” carefully. Please e-mail it to advising@eng.miami.edu as an attachment. This information will help us in selecting classes for you.

The Engineering Advising office will register all incoming freshmen. We will do it after we have your ALEKS scores and also get the “Information Form” from you. So please do these as soon as possible.

Classes may change based on new information such as AP/IB/GCE/Dual enrollment credits. So anticipate changes once these credits are entered into the Cane Link system.

Should you have any questions or concerns, please do not hesitate to call (305) 284-3100 between the hours of 10:00 a.m. and 4:00 p.m. ET, Monday through Friday and ask for Tish or Cassandra or by e-mail at advising@eng.miami.edu .

Sincerely,

Ram Narasimhan, Ph.D.
Assistant Dean



Information on Freshmen Fall 2017 Registration FOR THE COLLEGE OF ENGINEERING

Welcome New Freshmen!

Welcome to the University of Miami's College of Engineering. We are pleased that you have chosen to join our program and look forward to your arrival on campus.

The College of Engineering offers a variety of majors. Given below are the majors available in the College of Engineering.

- Aerospace Engineering
- Architectural Engineering
- Audio Engineering
- Biomedical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Engineering Science
- Environmental Engineering
- Industrial Engineering
- Mechanical Engineering
- Software Engineering
- Undeclared Engineering

More information about these majors can be found on the College of Engineering's website and the University Bulletin.

How is Freshmen Year in Engineering Different?

You and every incoming student in the College of Engineering are in the IMPAcT (Integrated Mathematics, Physics and Chemistry/Communication Track) program. Students in this program take all/most of the classes together. This helps the freshmen to get to know each other much more quickly than would happen otherwise. This facilitates students seeking each other's help in

learning as well as coping with the transition from high school to university. The students form a learning community, which enhances their university experience and provides a support system during their freshmen year. The class groups are decided based on the mathematics class into which the student has been placed. The mathematics class is decided based on the student's ALEKS Math Placement Assessment scores (more about this latter).

All engineering students have to meet with a faculty advisor before their classes are finalized. This usually happens during the orientation week. We will send you more information about it towards the end of summer.

Advising in Engineering

All engineering students during their freshmen and sophomore years are advised in the Undergraduate Advising office located in the Dean's office. This office deals with all the incoming freshmen during the period before the students enroll at the University of Miami too. The advising office makes sure all the new freshmen take the math placement test and are placed in the appropriate classes. All incoming transfer students also spend at least a semester at the Undergraduate Advising office. During the period the office makes sure that all the transfer credits are evaluated to determine the equivalent class at the University of Miami.

When the students have completed about half their curriculum, the Undergraduate Advising office transfers their files to the department, where a faculty member will advise the student until they graduate.

GENERAL INSTRUCTIONS FOR PLANNING YOUR COURSE SELECTIONS

Engineering is a professional degree. As a result the curriculum in engineering is very structured. You can find the list of required classes for your major and the general order in which you have to take them in the University's Bulletin as well as the College of Engineering's website. The order is decided by your faculty and based on the knowledge required before you take certain classes. While there is a certain amount of flexibility, you have to meet the prerequisite for any class before you are allowed to take that class.

Courses needed for a first-semester Engineering freshman

During the first semester most freshmen take a mathematics class, a science class, an introduction to engineering class and an English composition class. Depending on the specific courses you take, the number of credits is usually about 14 or 15 credits.

Mathematics

All the incoming students have to be course selected before end of June. In order to do that you have to take the ALEKS mathematics placement test as early as possible.

Mathematics is a very important subject area for all engineering students. All incoming students in Engineering **have to take the ALEKS mathematics placement test before they are registered for classes** here at the University of Miami. In order to be placed in Calculus class, you need a strong background in Algebra and Trigonometry

Students **who already have Calculus I credit from AP, IB, GCE or dual enrollment** do not have to take the ALEKS Math Placement Assessment. **Please send the engineering advising office a copy of your scores.** However, please **keep in mind that AP and IB scores often are not received until mid-July, so if you are taking the test this year, you should take the ALEKS Math Placement Assessment.**

About the ALEKS Math Placement Assessment

ALEKS (Assessment and Learning in Knowledge Spaces) is a web-based assessment system that uses artificial intelligence to create an adaptive test in order to determine a student's mathematical knowledge. The results from the ALEKS test will be used to determine the appropriate math course for a student based on his/her prerequisite knowledge.

The ALEKS Math Placement Assessment covers a broad range of material from basic Algebra to Precalculus. The assessment will have a maximum of 30 questions and it will take approximately 90 minutes to complete. After the assessment, students will immediately receive their ALEKS score. The score will be visible in the student's CaneLink account within 24 hours of completing the assessment. If the desired placement is not achieved, the ALEKS Prep and Learning Module will be available for the student to review, learn material, re-take the assessment and possibly improve his/her ALEKS score.

Quick Facts about the ALEKS Math Placement Assessment:

- The ALEKS Math Placement Assessment has a maximum of 30 questions.
- The assessment is untimed, but you must complete it within 24 hours after you begin.
- The assessment will take approximately 90 minutes to complete, but the amount of time will vary by student since the test is adaptive.
- You will need a pen or pencil and paper. You may not receive assistance from any individual, websites, textbooks, or any other resource not provided by ALEKS. Using outside resources may lead to improper placement and ultimately course failure.
- An on-screen calculator will be provided in ALEKS in the case that you need one to complete a particular problem. Otherwise, you may not use a calculator.
- You may retake the ALEKS Math Placement Assessment up to 5 times. Before repeating the assessment, you will need to spend 3 hours in the ALEKS Prep and Learning Module so that you can improve your skills and overall score.
- There is a 24 hour waiting period before you are allowed to repeat the assessment.

ALEKS Prep and Learning Module

The ALEKS subscription for each student will include 6 weeks of access to the ALEKS Prep and Learning Module.

Once a student completes the ALEKS Math Placement Assessment, he or she will be able to access the ALEKS Prep and Learning Modules. If a student would like to improve his/her ALEKS score and repeat the assessment, he/she will need to spend at least 3 hours on the Prep and Learning Modules. This will allow the student to remediate on prerequisite material deemed necessary to succeed in a particular course.

Quick Facts about the ALEKS Prep and Learning Module:

- There is no fee for the ALEKS Prep and Learning Module.
- You will have six weeks of access to the ALEKS Prep and Learning Module from the time that you first start using it.
- You will be required to spend a minimum of 3 hours in the ALEKS Prep and Learning Module before repeating the ALEKS assessment.
- Your progress in the Prep and Learning Module will not count towards your placement score. You must complete a new placement assessment to change your ALEKS score and placement result.

For fall 2017 enrollment, the ALEKS Math Placement Assessment will be available to incoming students beginning early May, 2017. Students will be able to access the assessment free of charge through the ALEKS link on CaneLink. The ALEKS assessment can be taken from any location with internet access. *Students are expected to complete the ALEKS assessment on their own, without any outside assistance of any kind (this includes any individual, websites, etc.), and adhere to the University of Miami's Honor Code.*

Math Placement Guide for Engineering

ALEKS score	RECOMMENDED COURSE
< 40	MTH099
>= 40	MTH101 Algebra for College Students
> = 55	MTH 105 Algebra & Trigonometry
>= 65	MTH108 Precalculus II
>= 76	MTH151 Calculus I for Engineers

AP/IB Exams, Dual Enrollment, Transfer Courses

AP/IB (Higher Level) exams: Please send the engineering advising office the scores of the AP/IB (HL) tests you took in your freshman, sophomore and junior year at high school. For the AP/IB (HL) tests you are taking this year, you will need to make a judgment about the potential for receiving credits. Please make sure you accurately fill out the information form and e-mail it to the advising office. Let us know which exams you have or will have taken. Upon receipt of the results, please inform the Engineering Advising office by e-mail at advising@eng.miami.edu. You may check the AP/IB (HL) [score tables online](#) in order to determine the exam scores necessary for the awarding of University of Miami credit for specific courses.

To have AP and IB (HL) scores evaluated for UM credit, you must request that your scores be sent directly to the UM Office of Admission from the College Board or from your regional IB office---a notation on the high school transcript is not sufficient.

All official test score reports should be sent to: University of Miami, Office of Admission, and P.O. Box 249117, Coral Gables, FL 33124-9117.

Dual Enrollment/Transfer credits: If you took a course for college credit, you must submit official transcripts to the UM Office of Admission from the issuing College or University. A listing on the high school transcript is not sufficient to award college credit. A minimum grade of "C" is required for consideration of credit in all dual enrollment and transfer courses.

Please note: All grades earned in these courses are part of your permanent record.

Official transcripts for credits earned from any college/university should be sent to: University of Miami, Office of Admission, and P.O. Box 249117, Coral Gables, FL 33124-9117.

You can check on CaneLink about the transfer credits the University has received. Here is the link to [Cane Link Student Guide](#).

English Composition

English Composition I (ENG 105) is a required course for all engineering students.

Your placement in English Composition in the University of Miami is determined according to your scores on AP or IB tests.

Should you receive the appropriate AP or IB scores, you will NOT need to take ENG 105 or ENG 106 and will earn 3 credits each. AP CREDITS FOR ENG 106 CAN SUBSTITUTE FOR ENG 107 (WRITING ABOUT SCIENCE) IN THE COLLEGE OF ENGINEERING.

Should you receive exemption from (not credit in) ENG 105 through appropriate SAT scores, *you will still need to take ENG105* in the COLLEGE OF ENGINEERING.

Science Requirement

Most engineering students have to take at least one Chemistry course with laboratory and at least three University physics courses with two laboratories. During your freshmen year you will take the first physics or chemistry depending on your math placement. You have to be placed in Calculus I or above for you to be registered for the first University Physics.

Introduction to Engineering

All engineering students have to take Introduction to Engineering I class. This class is really a class you learn about the common computer tools that you will use as an engineer.

General Educational Requirements

Depending on a variety of factors, some students might have to register for a general education requirement class. The details are given below.

Areas of Knowledge

Beginning Fall 2014, students at the College of Engineering have to fulfill the Areas of Knowledge requirement by completing three *cognates*, one from each of the three areas of the university curriculum: Arts & Humanities; People & Society; and Science, Technology, Engineering & Mathematics. For students in the College of Engineering, their engineering major will count as a cognate in Science, Technology, Engineering & Mathematics. These students have to complete a cognate in People & Society and Arts & Humanities.

A cognate is a group of at least three courses for at least nine credits, related in a topical, thematic, interdisciplinary, sequential, or other fashion, so that completion of a cognate provides coherent depth of knowledge. Each cognate has course options that allow students to complete the cognate in a manner that meets their interests, while staying within the coherent focus of the cognate. All cognates completed by students are listed on the students' transcripts, thus certifying their depth of knowledge in those areas.

The university offers a large number and range of cognates. All approved cognates are visible in a cognate search engine (at www.miami.edu/cognates) that allows students to search for cognates based on cognate features, cognate courses, and keywords. Each cognate is administered by a department or program that is designated as the Responsible Academic Unit (RAU) for the cognate. Enquiries regarding a cognate should be directed to the cognate's RAU.

Please look through the Cognates and pick one People & Society and one Humanities & Arts Cognate of interest to you and that you would like to pursue. Write the name of the cognates in the information form.

CONGRATULATIONS! You have now all the information you need to start the course selection process and fill the information form for the College of Engineering. Please download the form, fill it and e-mail it to advising@eng.miami.edu

If you have any questions call: (305) 284-3100 or email advising@eng.miami.edu.

The Engineering Advising office will register all incoming freshmen in the required courses. We will do it after we have your ALEKS scores and also get the “Information Form” from you. So please do these as soon as possible.

You will receive a copy of your Fall 2017 schedule of classes during Orientation in August and will have an appointment with a faculty advisor during that time – before classes begin.

Please note: SCHEDULES WILL CHANGE AS YOUR AP, IB and Dual Enrollment credits ARE RECEIVED BY THE UNIVERSITY. SCHEDULES ARE NOT FINALIZED TILL YOU MEET WITH YOUR ADVISOR IN AUGUST.