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LaGrange College

Course Catalog - Pre-Engineering

A.S. in Mathematics - A.S. in Mathematics

Type: Major

The curriculum for the Associate of Science Degree in Mathematics includes a minimum of 60 hours. These hours are to consist of the general education program as well as additional mathematics courses which are generally necessary in engineering programs as follows:

General Education courses (approx. 46 hours):

Specifically including:
MATH 2221 and MATH 1114 in Programmatic Goal 1

CHEM 1101/1102 or PHYS 2121/2122 in Programmatic Goal 2

Each of the general education courses in PG2 should be scheduled in consultation with the Engineering Coordinator, as different courses are required for various engineering schools and programs, including the courses in the following areas:

- Diverse Cultures, Human Behavior, and Human Relationships
- Laboratory Science and the Natural World
- World Civilization and Humanities
- Artistic Expression

Additional mathematics courses (14 hours):

MATH 2222 (4 hours)

MATH 2223 (4 hours)

Two of:

MATH 3000 (3 hours)

MATH 3316 (3 hours)

MATH 3335 (3 hours)

Collegiate Enrichment:

Students pursuing the A.S. in Mathematics will be required to complete 10 Collegiatel Enrichment Credits.

Pre-Engineering - Pre-Engineering

Type: Major

Requirements for the Pre-Engineering Pathway

To declare the Pre-Engineering track, a student must have completed MATH 1221 and MATH 2221 with a GPA of 2.75 or higher before beginning their 2nd year. If a student starts at the level of MATH 2221 with no grade for MATH 1221 available, a 2.25 ("C+") or better is required for MATH 2221 in order to be eligible to declare. If a student starts the first semester of the first year at LaGrange College with MATH 2222 or higher, the student can declare once they have completed a required mathematics course at LaGrange College. Every Pre-Engineering student needs to have taken at least one math course at LaGrange College before declaring.

If a student meets the GPA requirement for MATH 1221 and 2221 but does not complete the courses before beginning the 2nd year, an exception to the declaration requirements will be allowed as long as the student understands that the required courses at LaGrange College will most likely take longer than 3 years to finish.

Course and GPA Requirements

All Pre-Engineering students should satisfactorily complete all the following courses before attending the engineering institution, with possible variation in the courses depending on the student's chosen field of study:

- Calculus I, II and III (MATH 2221, 2222, 2223)
- Differential Equations (MATH 3000)
- Linear Algebra (MATH 3335)
- Programming for the Sciences (MATH 2230 or 2241)
- General Chemistry I and II (CHEM 1101 and 1102 with labs)
- General Physics I and II (PHYS 2121 and 2122 with labs)

Note: Students must begin the study of calculus as early as possible in order to be prepared for the physics sequence, which has a co-requisite of MATH 2222.

Associate of Science Degree in Mathematics:

Students who are on track in the Pre-Engineering Pathway would be eligible for the Associate of Science Degree in Mathematics prior to transferring to the partner university to complete their engineering degree. The Associate's consists of 60 hours of coursework, including the general education courses in Ethos, as well as the Calculus sequence (MATH 2221, 2222, 2223), two 3000 level math courses (MATH 3000, 3316, or 3335), and either the General Chemistry or the General Physics sequence. There are 20 Collegiate Enrichment credits required as well.

Auburn Transfer Information:

The engineering fields at Auburn are Aerospace, Biosystems, Chemical, Civil and Environmental, Computer Science and Software, Electrical and Computer, Industrial and Systems, Materials, Mechanical, and Wireless.

At Auburn, a GPA average of at least 2.8 is necessary in the program, and students should check the Auburn website for information on admission policies and deadlines.

Georgia Tech Dual Degree Information:

The engineering fields at Georgia Tech are Aerospace, Biomedical, Chemical and Biomolecular, Civil, Environmental, Electrical, Computer, Industrial and Systems, Materials, Mechanical, and Nuclear and Radiological.

The Georgia Tech Dual Degree Program requires a minimum GPA of 3.0 separately for English courses, mathematics courses, and lab science courses to be accepted for transfer. Georgia Tech also maintains GPA requirements that vary from 3.0-3.3 depending on the intended engineering major. There is a "no grade forgiveness policy" with respect to repeating a course. Students should check the Georgia Tech website for current requirements and admission information under the Dual Degree Engineering program.

For the Dual Degree Program at GA Tech, students must first complete all components of the Ethos Curriculum and Collegiate Enrichment requirements (modified to 30 CE events) before transferring in order to qualify for the Bachelor's degree at LaGrange College. Further, the normal residency requirement for graduation from LaGrange College (last 39 semester hours at LaGrange College, or last 51 of 60) is waived for those who successfully complete the Dual Degree program. A student is only eligible for a Dual Degree transition if they have not completed a Bachelor's degree from LaGrange College.

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