

Individually Designed Major (IDM)

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School of Engineering students have 7 conventional choices for major pathways towards a Bachelor of Science in Engineering:

- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Environmental Engineering
- Electrical Engineering
- Mechanical Engineering

and an 8th choice, the Individually Designed Major, for students with interdisciplinary interests that don't fit into one of these conventional choices. An IDM is not just a minor modification of a conventional major. It must include a focus that is not available within a regular departmental major.

IDM students set goals for what they want to learn, and they design an engineering curriculum that will help them to achieve those goals. An IDM is appropriate for students with a focused research or career interest that extends beyond the boundaries of the 7 conventional Engineering majors. An IDM can be used as preparation for graduate study in a non-engineering discipline, and IDM students are encouraged to plan on continuing their education beyond the B.S. degree. Possible sample IDM curricula in Neuroengineering, Engineering Management, and Biostructural Engineering have been proposed, but these should be viewed as examples and points of departure for the design process, rather than as limiting choices.

The sequence of courses that IDM students take is meant to direct them towards their post-graduation goals. Because the student chooses the courses (with advisor help), they understand how each component of the curriculum contributes to their education. In a conventional major, students take all of the required courses. In an IDM, the student and advisor select the courses to be taken within the guidelines listed below. An IDM isn't any easier to complete than a traditional major, but for highly motivated students it's very enjoyable. The specific program name chosen by the student appears on the permanent transcript, and should be descriptive of the specialization that the student seeks.

Tulane University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS) to award bachelor's, master's, and doctoral degrees. This is the University's primary accreditation, and it is important because it enables our students to qualify for many forms of financial aid that are available only to students at accredited universities and colleges. The IDM program is included in this accreditation. When applying for a job or for admission to a graduate program, an IDM student will occasionally want to explain the program leading to the degree and the degree itself. However, for a student contemplating a career in public works engineering where a Professional Engineering (P.E.) license is viewed as important, then an IDM is at a disadvantage compared to a traditional major in Engineering. Because they are unique and individualized, curricula for IDMs cannot normally be reviewed by the Accreditation Board for Engineering and Technology.

When choosing a major, either in Engineering or in another field, the student's primary concern should be finding programs that fit their interest, talents, and life goals. The University's reputation, and our graduates' record of accomplishment, defines our students' credentials after graduation.

Each proposal for an Individually Designed Major must include:

Math (e.g. MATH 121, 122, 221, 224) ≥ 16 hours

Science (e.g. PHYS 131, 132 CHEM 107, 108) ≥ 16 hours

Engineering Topics (introductory and advanced courses in Engineering) ≥ 48 hours

Special Option (these courses are the core specialization of the Individually Designed Major) ≥ 24 hours

Writing (e.g. ENGL101 or xxxx119 which satisfy the School's writing requirement) 4 hours

Humanities and Social Sciences (at least 6 courses)
These may also be integral to the core specialization of the IDM. Course selection must conform to the School's distribution requirements for Humanities and Social Sciences ≥ 18 hours

In addition to the distribution requirements above:

1. The selection of courses needs to show development of communication skills.
2. Because many advanced courses in Engineering require an ability to work with higher level math, all IDM students should take differential and integral calculus and differential equations. Additional work is encouraged in one or more of the subjects of probability and statistics, linear algebra, numerical analysis and advanced calculus.
3. It is expected that IDM students will take the common freshman core courses taken by all School of Engineering students, though exceptions are possible with the approval of the IDM Program Director.

A faculty committee in the School of Engineering must review and approve each proposal for an IDM. Additional details on the process for proposing an IDM, along with sample curricula, are available on the program's website.