

MASTER OF SCIENCE WITH A MAJOR IN MECHANICAL ENGINEERING (UNDESIGNATED)

The undesignated master's degree (M.S.) enables you to pursue a program of highly interdisciplinary course work. For the undesignated degree, the major area is a coherent field of interest in the Woodruff School, but courses taken in the major area need not all have ME designations. Examples of major areas are acoustics and dynamics, bioengineering, materials science, MEMS, and thermal sciences. The list of major areas is limited only by the current interests of the faculty in the Woodruff School. The requirement for a major area is motivated by the need to have some coherent area of special expertise. There is a non-thesis and thesis option available for this degree.

The undesignated master's degree (M.S.) is also offered in a partnership with the University of Stuttgart. See Designators and Options for details.

The Master of Science has the following 30 minimum course credit-hour requirements. Only 6 credits at the 4000 level are permitted, the remaining credits must be 6000 level or above. Only 9 ME credits are required for this degree.

Non-Thesis Option

Major Area (21 hours) Must be in a coherent subject area appropriate to Mechanical Engineering or related combinations. Up to 6 credit hours of Special Problems courses of focused research under a supervision of a faculty member is allowed towards the 30 credit hour of the program.

Minor Area (6 hours) The coherent minor area must be distinctly different from the major area. Note: ME 6753, ME 6789, and ME 6799 may only be used to satisfy the minor. COA 8685, COA 8833 (with title Computational Simulation of Building Design), MGT 6165 and BC 6650 may be included in the minor. ME 6753 and BC 6650 may not be counted together in the minor. Only ME 4405 or ME 6705 can count towards the degree, but not both.

Math Area (3 hours) Only courses from the School of Mathematics fulfill the mathematics requirement.

Thesis Option

The Thesis Option involves working with a faculty member on a project in a wide range of research topics being investigated by Woodruff School faculty members. This will give hands-on experience in working with a faculty mentor; the opportunity to work in a laboratory or a research environment; and the chance to perform theoretical and experimental work. These events will foster the career interests and expand the selection of possible employers. In some cases, a student will receive a graduate research assistantship, which includes a stipend and a tuition waiver. The time to graduation depends on the thesis project, advisor, and the work ethic.

Major Area (21 hours) This area will consist of 12 hours of coursework in a coherent subject area appropriate to Mechanical Engineering or related combinations and 9 hours of MS thesis hours.

Minor Area (6 hours) The coherent minor area must be distinctly different from the major area. Note: ME 6753, ME 6789, and ME 6799 may only be

used to satisfy the minor. COA 8685, COA 8833 (with title Computational Simulation of Building Design), MGT 6165 and BC 6650 may be included in the minor. ME 6753 and BC 6650 may not be counted together in the minor. Only ME 4405 or ME 6705 can count towards the degree, but not both.

Math Area (3 hours) Only courses from the School of Mathematics fulfill the mathematics requirement.

The joint Master of Science degree is an innovative collaboration between Georgia Tech and the University of Stuttgart. This is a two-year, thesis-based program. US students are expected to complete research and an industrial internship in Germany during the 2nd year of the program. German students are expected to complete research in the US during the 2nd year of the program. Each student will have an co-advisor on the primary campus and a co-advisor on the secondary campus, as well as a thesis committee co-chaired by the co-advisors, approved by the Program Graduate Committee. The thesis committee shall consist of no less than four members, at least three of whom are affiliated with the Program and at least two members come from each campus. The degree awarded is the "Master of Science (Georgia Institute of Technology – University of Stuttgart)", conferred by both universities.

The program of study requirements will follow the same format as the MS in Mechanical Engineering:

Major Area (24 hours)

Minor Area (21 hours)

Math Area (3 hours)

Requirements for US Students and German Students

US students will complete the first year, fall and spring, of the program, in Atlanta. Some courses can also be taken in the summer. The second year, fall and spring, will be completed in Stuttgart, Germany. While students are completing the degree requirements at Stuttgart, they must register for the Georgia Tech place holder, GT 7056 – GT-Stuttgart. Some courses can also be taken in the summer term.*

• Term 1 (Atlanta) - Must take a total 15 credit hours

- 4 technical courses at 3 credit hours each

- German Language Course #1 at 3 credit hours

• Term 2 (Atlanta) – Must take a total 15 credit hours

- 4 technical courses at 3 credit hours each (must include at least 1 Math Course offered by the School of Math)

- German Language Course #2 at 3 credit hours

• Term 3 (Stuttgart) - Must take a total of 9 credit hours

- 2 technical courses at 3 credit hours each

- MS Thesis (Lab) Research at 3 credit hours

- Internship

• Term 4 (Stuttgart)

- MS Thesis Research = 15 credit hours

German students will complete the first year, fall and spring, of the program, in Stuttgart. The second year, fall and spring, will be completed in Atlanta. Some courses can also be taken in the summer term.

- **Term 1 (Stuttgart) – Must take 15 credit hours**

-5 technical courses at 3 credit hours each

- **Term 2 (Stuttgart) – Must take a total of 15 credit hours**

-5 technical courses at (four at 1.5 credit hours each) and (one at 3 credit hour)

-Research Project at 6 credit hours

- **Term 3 (Atlanta) – Must take a total of 15 hours**

-3 technical courses at 3 credit hours each (must include at least 1 Math Course offered by the School of Math)

-MS Thesis Research (GRA) at 12 credit hours

- **Term 4 (Atlanta) – Must take a total of 21 credit hours**

-MS Thesis Research (GRA) at 21 credit hours

**Note: Course credit hours (number of courses) taken at a given semester during studies in ATL/GT could be adjusted based on individual circumstances, but the total number of credit hours during the entire duration of studies in ATL should be maintained.*