



Master of Science in Engineering
The University of Alabama in Huntsville
Department of Industrial & Systems Engineering
and Engineering Management
Technology Hall, Room N138, Huntsville, AL 35899
Ph: (256) 824-6976, Fax: (256) 824-6608

Systems Engineering Concentration

The Systems Engineering concentration has been developed to meet the needs of engineers whose responsibility is to oversee the integration of large scale systems. A typical program of study for systems engineering includes the following courses:

Major Courses: ISE 627 Systems Engineering
(12 hours) ISE 723 Engineering Economic Analysis
ISE 670 Integrated Product and Process Design

Select one of the following:

ISE 637 Systems Analysis and Modeling
ISE 638 Engineering Reliability
ISE 734 Value and Decision Theory

1st Minor: Select from one of the following areas
(6 hours) Engineering Management Operations Research
Quality Engineering Reliability Engineering
Industrial Engineering Human Factors
(Others on approval of committee)

2nd Minor: Statistics (required)
(6 hours) ISE 526 Design and Analysis of Experiments
ISE 690 Statistical Methods for Engineers

Options:
Plan I - Thesis: Thesis – ISE 699 (6-9 hours)
Plan II – Capstone: Electives (9 hrs) and ISE 697: Approval of Committee
Plan II – Modified: Electives (12 hrs): Approval of Committee

Distance Learning:
The Systems Engineering concentration is supported by the Distance Learning program at The University of Alabama in Huntsville. For more information, please contact the Distance Learning Administrative Office at 256-824-6976.

<u>Further Information:</u>	<u>Phone:</u>	<u>Email:</u>
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I. Admission

Unconditional Admission

1) ABET-accredited B.S. degree in engineering; 2) GPA of 3.0 or better*; 3) GRE score of 400 or better on the Verbal, 500 or better on the Quantitative, and a combined score of 1000 or better; 4) GRE Analytical Writing score of 4.0 or better; 5) an undergraduate Probability and Statistics course or equivalent; and 6) an undergraduate Engineering Economy course or equivalent.

The GRE can be waived for students who have practiced engineering for five years past the BS degree, whose resume shows significant career progression, and who meet the first two requirements stated above.

Students seeking admittance to the Engineering Management or Systems Engineering concentrations for full-time study must have a minimum of two years of work experience in an engineering position past the BS degree. Students seeking admittance to these concentrations for part-time study must be employed as an engineer in a U.S.-based organization. The work requirements do not apply to the Industrial Engineering concentration.

Conditional Admission

Conditional admission may be granted to students meeting all requirements above except 5) and 6). However, students must successfully complete the undergraduate equivalent of these courses within the first year of admission.

II. Program of Study Options

Plan I - Thesis

A minimum of 24 semester hours of coursework and a thesis (6 hrs) must be completed. Exit exam is over the student's thesis.

Plan II - Capstone

A minimum of 33 hours of coursework and a final project paper (3 hrs) must be completed. Exit exam is over the student's capstone paper.

Plan II - Modified

A minimum of 36 hours of coursework must be completed. Exit exam is over the student's coursework.

III. Degree Requirements

1. Average grade on Program of Study courses numbered 600 or above cannot be less than "B".
2. Courses numbered between 500 and 599 may be taken for graduate credit; however, a minimum grade of "B" must be attained in each 500 level course on the Program of Study.
3. All courses on the Program of Study are selected by the student with the counsel of an advisor and are subject to the usual approvals at the Department, College and Graduate School levels. Additional coursework may be required to correct any deficiencies in undergraduate studies and for students who have English as a second language. Refer to the UAH catalog for details.

* MSE-seeking students who do not meet the GPA requirement stated above have an opportunity to begin graduate coursework as a Non-Degree student in order to establish a record of successful performance in graduate coursework in the first 12 hours. Only 12 hours of coursework taken as a Non-Degree student can be applied to a degree program. See the Graduate Catalog for more information.