**Systems Engineering (DSc)**

**Degree Requirements**

Degree requirements for the D.Sc. Program in Systems Engineering include a minimum of 67 graduate credit hours, 24-30 credit hours of which may come from an M.S. degree with the approval of the Program Chair. Only courses with a grade of A or B are eligible for transfer. A minimum of 36 graduate credit hours of the required 67 graduate credits must be University of South Alabama awarded credits. In addition to meeting graduate school requirements, the following requirements must be met:

2. Completion of at least one elective in a Systems Engineering subject area approved by the student's advisor will be required.
3. Balance of remaining credits after successful completion of core courses, approved electives (including SE 692 Directed Study courses), and transfer credits (if applicable) will be SE 699 Dissertation credits until a total of 67 credits is attained.
4. Completion of doctoral level research, a written dissertation presenting the research and findings, and a public defense of that research. The written dissertation and public defense must be approved and accepted by the student's dissertation committee.

**Department Information**

<table>
<thead>
<tr>
<th>Department of Systems Engineering Staff</th>
<th>(251) 460-7993</th>
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<tbody>
<tr>
<td>Chair</td>
<td>Dr. Robert Cloutier</td>
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<tr>
<td>Associate Professor</td>
<td>Dr. Henry D. Lester</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Dr. Sean Walker</td>
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</tbody>
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Department of Systems Engineering website
https://www.southalabama.edu/colleges/engineering/dsc-se

The Doctor of Science (D.Sc.) in systems engineering offers the students a holistic approach to the design and understanding complex systems. NASA defines systems engineering as “a holistic, integrative discipline, wherein the contributions of structural engineers, electrical engineers, mechanism designers, power engineers, human factors engineers, and many more disciplines are evaluated and balanced, one against another, to produce a coherent whole that is not dominated by the perspective of a single discipline.” The main objectives of the D.Sc. program are to 1) provide our graduates with the ability to approach all systems (engineered, environmental, coastal, etc.) with the ability to understand the entire system lifecycle in a manner that meets the needs of industry, and 2) prepare our graduates for leadership positions requiring applied research and critical thinking. This program is appropriate for students who want to pursue research-based careers in industry, government, or academia. The program requires coursework across multiple engineering disciplines, and specific, validated systems research resulting in a publicly defended doctoral thesis.

**Requirements For Admission (With Master's Degree):**

In addition to meeting Graduate School requirements, the requirements for admission with a Master's degree to the D.Sc. Program are as follows:

1. A written statement of the applicant's professional goals and commitment to completing the degree requirements. (Statement of Purpose)
2. Three letters of recommendation from individuals familiar with the student's academic and technical abilities.
3. An M.S. degree in a discipline related to engineering (e.g. civil, computer, chemical, electrical, industrial, mechanical).
4. A grade point average of 3.0 or greater (on a scale of 4.0) on all graduate coursework.
5. A minimum score of 151 in the Verbal portion and a minimum score of 151 in the Quantitative portion of the Graduate Record Examination (GRE). If the applicant has a current P.E. license, or has an M.S. degree in a discipline related to engineering (e.g. civil, computer, chemical, electrical, industrial, mechanical), they may request the GRE requirement be waived.

6. For international students whose native language is not English, a minimum score of 79 on the Internet-based TOEFL, 213 on the computer-based TOEFL, or a minimum score of band 6.5 on the IELTS is required.

7. Transcripts from all colleges and universities attended.

**Requirements For Admission (With Bachelor's Degree)**

Those students who have not yet obtained a Master’s degree yet may apply to the D.Sc. program. The admission requirements are as follows:

In addition to meeting Graduate School requirements, the requirements for acceptance without a Master’s degree are as follows:

1. A B.S. degree in a discipline related to engineering (e.g. civil, computer, chemical, electrical, industrial, mechanical, etc.). (The D.Sc. admission committee reserves the right to review the coursework at the B.S. level before making an admission decision.)

2. A grade point average of 3.0 or greater (on a scale of 4.0) on all undergraduate coursework.

3. A grade of B or higher for all graduate courses to be considered as transfer credits from previous institutions attended. Only graduate credits that have not been applied to another degree can be considered for transfer.

4. Transcripts from all colleges and universities attended.

5. A minimum score of 151 in the Verbal portion and a minimum score of 151 in the Quantitative portion of the Graduate Record Examination (GRE).

6. For international students whose native language is not English, a minimum score of 79 on the Internet-based TOEFL, 213 on the computer-based TOEFL, or a minimum score of band 6.5 on the IELTS is required.