DOCTOR OF PHILOSOPHY (PHD) DEGREE IN THE FIELD OF MECHANICAL ENGINEERING

Program Learning Outcomes for the PhD Degree in the field of Mechanical Engineering

Upon completing the PhD Degree in the field of Mechanical Engineering, students will be able to:

1. Apply the technical skills required by industrial and governmental organizations to solve mechanical engineering problems at an advanced level.
2. Conduct research that demonstrates advanced mastery of a subfield within Mechanical Engineering.
3. Communicate scientific ideas effectively in writing and when speaking.
4. Understand and exhibit professional and ethical responsibility.
5. Recognize the need to engage in life-long learning.
6. Recognize and understand the role of leadership.

Requirements for the PhD Degree in the field of Mechanical Engineering

For general university requirements, please see Doctoral Degrees ([ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-doctoral-degrees](http://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-doctoral-degrees)). Students seeking the PhD degree are expected to complete all the requirements for the degree within five calendar years following entrance into the program. Continuation in the program beyond this time limit will require special approval of the department.

All entering graduate students pursuing a thesis degree program will be subject to a preliminary evaluation of their candidacy for the highest degree program they intend to pursue. The evaluation will be conducted by the end of the second semester of enrollment in the graduate program in the Mechanical Engineering department.

By the end of the third year of enrollment in the graduate program in the Mechanical Engineering department, the student must pass an oral qualifying examination.

Each candidate for the PhD must complete a thesis that constitutes an original contribution to scientific knowledge (analytical, numerical or experimental). It is expected that the research will be of sufficient importance and quality that positive results would lead to publications. On completion of the thesis, each candidate for the PhD degree must pass a final public oral examination. The examination will be conducted by a committee consisting of at least four members. Three, including the committee chair, must be members of the department. One member must be from another department within the university.

The minimum semester hours of course work (a one-semester course is usually three semester hours credit) required are tabulated below as a function of the degree held on entrance into the program. In all cases, a student's course of study is formulated in consultation with the thesis director and must be approved by the department.

Course requirements for the research degrees vary depending on the extent of individual undergraduate preparation as well as each student's performance in graduate courses and on qualifying examinations. For both the MS and PhD degrees, students must present a thesis that comprises an original contribution to knowledge and defend it in a public oral examination.

As part of their degree requirements, graduate students are expected to provide instructional assistance to the department not to exceed 10 hours per week. The department chair will assign graduate student work at the beginning of each semester.

All graduate students (except professional master's students, MME) must attend at least 75 percent of the Mechanical Engineering seminars. For details, please see the degree requirements on the mech.rice.edu.

Degree at Entrance: Minimum graduate-level semester hours required (course work)

- MS: 18 graduate-level credit hours
- 5-year BS: 30 graduate-level credit hours
- BS: 36 graduate-level credit hours
- BA: 42 graduate-level credit hours

Summary

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<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<td>Total Credit Hours Required for the PhD Degree in the field of Mechanical Engineering</td>
<td>90</td>
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For additional information and details, please visit the Mechanical Engineering website ([http://mech.rice.edu](http://mech.rice.edu)).

Policies for the PhD Degree in the field of Mechanical Engineering

Department of Mechanical Engineering Graduate Program Handbook

The General Announcements (GA) is the official Rice curriculum. As an additional resource for students, the department of Mechanical Engineering publishes a graduate program handbook, which can be found here: [http://gradhandbooks.rice.edu/2017_18/Mechanical_Engineering_Graduate_Handbook.pdf](http://gradhandbooks.rice.edu/2017_18/Mechanical_Engineering_Graduate_Handbook.pdf).

For additional information, please see the Mechanical Engineering website: [https://mech.rice.edu/](https://mech.rice.edu/).

Opportunities for the PhD Degree in the field of Mechanical Engineering

For additional information, please see the Mechanical Engineering website: [https://mech.rice.edu/](https://mech.rice.edu/).