

Department of Mechanical Engineering

PhD Graduation Requirements (Rev. A)

Requirements	Credits	Details																														
General Engineering & Mathematics Courses	09	<p>Select three (3) courses from the list below. Courses not on this list maybe taken only with the approval of your faculty advisor AND the Graduate Coordinator. The request must be made prior to enrolling in the course.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">EEL 5173 - Signal and System Analysis</td> <td style="width: 33%;">MAD 5420 - Numerical Optimization</td> <td style="width: 33%;">MAP 5441 - Perturbation Theory</td> </tr> <tr> <td>EEL 6502 - Digital Signal Processing I</td> <td>MAD 5708 - Numerical Analysis II</td> <td>MAP 5513 - Wave Propagation Theory</td> </tr> <tr> <td>EGN 5456 - Computational Mechanics</td> <td>MAD 5738 - Numerical Solution of PDE's I</td> <td>MAS 4106 - Applied Linear Algebra II</td> </tr> <tr> <td>EML 5060 - Analysis in ME II</td> <td>MAD 5739 - Numerical Solution of PDE's II</td> <td>PHY 5515 - Thermal & Statistical Physics</td> </tr> <tr> <td>EML 5361 - Multivariable Control</td> <td>MAD 5745 - Spectral Methods for PDE's</td> <td>PHY 4523 - Statistical Physics</td> </tr> <tr> <td>EML 5930 - Adaptive Controls</td> <td>MAP 5207 - Optimization</td> <td>STA 4202 - Design of Experiments I</td> </tr> <tr> <td>EGM 5444 - Advance Dynamics</td> <td>MAP 5217 - Calculus of Variations</td> <td>STA 5206 - Analysis of Variance & Design</td> </tr> <tr> <td>EML 5317 - Advance Controls</td> <td>MAP 5336 - Qualitative Theory of ODE's</td> <td>STA 5207 - Applied Regression Methods</td> </tr> <tr> <td>ESI 5408 - Applied Optimization</td> <td>MAP 5346 - Elementary PDE's II</td> <td></td> </tr> <tr> <td>MAA 4402 - Complex Variables</td> <td>MAP 5423 - Complex Vars, Asymp. Exps</td> <td></td> </tr> </table>	EEL 5173 - Signal and System Analysis	MAD 5420 - Numerical Optimization	MAP 5441 - Perturbation Theory	EEL 6502 - Digital Signal Processing I	MAD 5708 - Numerical Analysis II	MAP 5513 - Wave Propagation Theory	EGN 5456 - Computational Mechanics	MAD 5738 - Numerical Solution of PDE's I	MAS 4106 - Applied Linear Algebra II	EML 5060 - Analysis in ME II	MAD 5739 - Numerical Solution of PDE's II	PHY 5515 - Thermal & Statistical Physics	EML 5361 - Multivariable Control	MAD 5745 - Spectral Methods for PDE's	PHY 4523 - Statistical Physics	EML 5930 - Adaptive Controls	MAP 5207 - Optimization	STA 4202 - Design of Experiments I	EGM 5444 - Advance Dynamics	MAP 5217 - Calculus of Variations	STA 5206 - Analysis of Variance & Design	EML 5317 - Advance Controls	MAP 5336 - Qualitative Theory of ODE's	STA 5207 - Applied Regression Methods	ESI 5408 - Applied Optimization	MAP 5346 - Elementary PDE's II		MAA 4402 - Complex Variables	MAP 5423 - Complex Vars, Asymp. Exps	
EEL 5173 - Signal and System Analysis	MAD 5420 - Numerical Optimization	MAP 5441 - Perturbation Theory																														
EEL 6502 - Digital Signal Processing I	MAD 5708 - Numerical Analysis II	MAP 5513 - Wave Propagation Theory																														
EGN 5456 - Computational Mechanics	MAD 5738 - Numerical Solution of PDE's I	MAS 4106 - Applied Linear Algebra II																														
EML 5060 - Analysis in ME II	MAD 5739 - Numerical Solution of PDE's II	PHY 5515 - Thermal & Statistical Physics																														
EML 5361 - Multivariable Control	MAD 5745 - Spectral Methods for PDE's	PHY 4523 - Statistical Physics																														
EML 5930 - Adaptive Controls	MAP 5207 - Optimization	STA 4202 - Design of Experiments I																														
EGM 5444 - Advance Dynamics	MAP 5217 - Calculus of Variations	STA 5206 - Analysis of Variance & Design																														
EML 5317 - Advance Controls	MAP 5336 - Qualitative Theory of ODE's	STA 5207 - Applied Regression Methods																														
ESI 5408 - Applied Optimization	MAP 5346 - Elementary PDE's II																															
MAA 4402 - Complex Variables	MAP 5423 - Complex Vars, Asymp. Exps																															
Technical Electives	12	Select four (4) graduate-level, letter-graded courses in engineering, mathematics, and/or any science discipline (e.g. computer science, physics, etc.). All technical electives must be approved by your graduate advisor or the Graduate Coordinator.																														
Preliminary Examination & Admission to Candidacy		All PhD students are required to register for and pass EML 8968 - Preliminary Examination before the end of their second semester. The exam consists of both written and oral examinations and is usually administered in the Spring semester. After passing the exam, you must file an Admission to Candidacy Form with the Registrar's Office.																														
Formation of Dissertation Committee & Prospectus Defense		Once candidacy status has been granted you should begin forming your Dissertation Committee. The committee must consist of your faculty advisor, at least two members of the ME department, (one of which must be outside your depth area), and at least one member from outside the Department. Within one year of obtaining candidacy status you must present to your Committee a prospectus on a research project suitable for a doctoral dissertation. A 45-minute presentation of the proposed dissertation topic will be followed by an oral examination in the general area of the dissertation.																														
Dissertation & Dissertation Defense	24	You must register for twenty-four (24) credit hours of EML 6980 - Dissertation. Additionally, in your final term you must register for EML 8985 - Dissertation Defense.																														
Total	45	You must complete forty-five (45) credit hours of graduate-level coursework (of which at least twenty-four (24) credit hours must be dissertation courses) to satisfy the requirements for a PhD in Mechanical Engineering.																														
<p>You must maintain at least a 3.0 cumulative GPA each semester you are enrolled. If your GPA drops below a 3.0 you will be placed on academic probation. Additionally, you may not earn more than two C's. If you do, you will be required to repeat a course in which you earned a 'C' grade.</p>																																