



PhD (Aerospace) Space Engineering

Graduate Checklist

Doctor of Philosophy: (Excludes AOE 5944)				
Total minimum credits	Total minimum credits of coursework 5000 level or higher	Course	Title (excludes AOE 5944: Seminar)	Credits
90 Credits	27 Credits		Seminar	
			Seminar	
			Seminar	
			Seminar	
			(Maximum of 4 hours) TOTAL	

Research Credits and Variable Credit Courses:					
Course	Title	Credits	Course	Title	Credits
AOE 7994	Research and Dissertation		AOE 5974	Independent Study	
AOE 7994	Research and Dissertation		AOE 5974	Independent Study	
AOE 7994	Research and Dissertation		AOE 5974	Independent Study	
AOE 7994	Research and Dissertation		AOE 5984	Special Study	
AOE 7994	Research and Dissertation		AOE 5984	Special Study	
AOE 7994	Research and Dissertation		AOE 5984	Special Study	
AOE 7994	Research and Dissertation				
AOE 7994	Research and Dissertation				
	(Minimum of 30 hours) TOTAL			(Maximum of 18 hours) TOTAL	

The following courses are required prior to taking the Preliminary Written Examination.		
Course	Title	Credits
AOE 4404	Applied Numerical Methods	3
AOE 5204	Vehicle Dynamics and Control	3
AOE 5234	Orbital Mechanics	3
	(Minimum of 9 hours) TOTAL	

Take any two of the following courses		
Course	Title	Credits
AOE 5034	Vehicle Structural Dynamics	3
AOE 5174	Introduction to Space Plasmas	3
AOE 5136	Vehicle Propulsion	3
AOE 5XXX	Spacecraft Propulsion	3
AOE 5XXX	Ocean Remote Sensing	3
ECE 5104G	Microwave and RF Engineering	3
ECE 5105	Electromagnetic Waves	3
ECE 5106	Electromagnetic Waves	3
ECE 5164	Introduction to Space Science I: The Solar Wind and Magnetosphere	3
ECE 5194	Remote Sensing: Principles and Techniques	3

ECE 5604	Computer-Aided Design and Analysis of Communication Systems	3	
ECE 5655	Communication System Design	3	
ECE 6115	Antenna Theory and Design I	3	
ESM 5734	Introduction to the Finite Element Method	3	
ESM 6314	Advanced Dynamics	3	
PHYS 5405	Classical Electromagnetism	3	
	(Minimum of 6 hours) TOTAL		

Choose one of the following courses prior to taking the Final Examination.

Course	Title	Credits
AOE 5024	Vehicle Structures	3
AOE 5104	Advance Aero and Hydrodynamics	3
	(Minimum of 3 hours) TOTAL	

Additional courses determined in consultation with the Advisory Committee prior to taking the Final Examination.

Course	Title	Credits
AOE		3
AOE		3
AOE		
	(Minimum of 6 hours) TOTAL	

- Official transcripts of transfer courses – Confirm that both the Graduate School and AOE Department have transcripts in your student file.
 - Submit the [Transfer Course Approval Form](#) with a course description or syllabus for each course being considered for transfer (if applicable).
 - Submit the [Graduate Program Faculty and Additional Graduate Advisory Committee Members Form](#) with curriculum vitae of committee member (if applicable).
 - Submit the [PhD Plan of Study](#) by the end of the second semester within the program.
 - Submit the [Course Justification Request Form](#) and supporting documents if you are listing courses five years old or older on your MS Plan of Study.
 - Submit the [Change of Committee/Advisor Form](#) (if applicable).
 - Submit the [Request for Plan of Study Changes Form](#) (if applicable).
 - Schedule the Oral Preliminary Examination with Advisory Committee for a date within the four weeks immediately following the Preliminary Written Examination.
 - Submit the [Request to Admit Candidate to the Preliminary Examination Form](#) to the Graduate School at least three weeks prior to the date of the Oral Preliminary Exam.
 - Submit the [AOE Preliminary Exam Application and Eligibility Form](#) by September 1st.
 - Take the AOE Preliminary Written Examination on the 3rd Monday of September if approved.
 - The electronic Preliminary Exam Card is submitted to the Graduate School within two days of the Preliminary Exam.
 - Schedule the Dissertation Proposal with Advisory Committee at least six months prior to the expected completion date. The Chair will inform the Graduate Program Coordinator of the results of the Dissertation Proposal Defense.
 - Apply for your degree in [HokieSpa](#) by the following dates:

Fall – October 1st Spring – March 1st Summer I – June 1st Summer II – August 1st
 - Schedule the Final Exam with Advisory Committee prior to the following [dates](#) if participating in the ceremony:

Fall – October 31st Spring – March 27th
 - Schedule the Final Exam with Advisory Committee prior to the following [dates](#) if not participating in the ceremony:

Fall – December 10th Spring – May 6th Summer I – July 2nd Summer II – August 13th
 - Submit a copy of the FINAL version of your dissertation to the Advisory Committee two weeks in advance of the date of the Final Exam.
 - Submit the [Request to Admit Candidate to the Final Examination Form](#) to the Graduate School at least three weeks prior to the date of the Final Exam.
 - Submit the [Start of Semester Defense Exception Request Form](#) with the [Request to Admit Candidate to the Final Examination Form](#) if you plan to defend by the following dates (and not register for coursework that semester):

Fall – September 26th Spring – February 20th Summer I & II – May 26th through August 13th
- These forms must be submitted to the Graduate School at least **three weeks** prior to the date of the Final Exam.
- The electronic Final Exam Card is submitted to the Graduate School within two days of the Final Exam.

Submit your [Thesis and Dissertation \(ETD\)](#) .to the Graduate School within two weeks after the Final Exam and by the following dates if participating in the ceremony:

Fall – November 14th Spring – April 10th

Submit your [ETD](#) to the Graduate School within two weeks after the Final Exam and by the following [dates](#) if not participating in the ceremony:

Fall – December 24th Spring – May 20th Summer I – July 16th Summer II – August 27th

Confirm completion of all coursework and degree requirements by the following [dates](#) if participating in the ceremony:

Fall – December 12th Spring – May 8th

Confirm completion of all coursework and degree requirements by the following [dates](#) if not participating in the ceremony:

Fall – February 6th Spring – July 3rd Summer I – August 7th Summer II – September 18th

Pay all student fees on account prior to graduation.

Graduation Requirements and Commencement Deadlines

The specific dates for deadlines listed above should be confirmed based on the graduation requirements and commencement deadlines for the academic term in which you plan to graduate. This information is found on the Graduate School's website at http://graduateschool.vt.edu/academics/commencement_deadlines.

Forms

Graduate School (<http://graduateschool.vt.edu/academics/forms>)

AOE Department (<http://www.aoe.vt.edu/graduate/forms/.html>)

All forms must be submitted to either the Graduate Program Coordinator or the Graduate Program Director for Department Head and Graduate Program approval. The department will submit forms to the Graduate School in order to ensure that departmental requirements have been met and proper records are maintained.