# PhD (Aerospace) Applied Physics Track

## Graduate Checklist

### Doctor of Philosophy:  (Excludes AOE 5944)

<table>
<thead>
<tr>
<th>Total minimum credits</th>
<th>Total minimum credits of coursework 5000 level or higher</th>
<th>Course</th>
<th>Title (excludes AOE 5944: Seminar)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 Credits</td>
<td>27 Credits</td>
<td>Seminar</td>
<td></td>
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<td></td>
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<td>Seminar</td>
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<td>Seminar</td>
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</tr>
</tbody>
</table>

(Minimum of 30 hours) TOTAL (Maximum of 4 hours) TOTAL

### Research Credits and Variable Credit Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOE 7994</td>
<td>Research and Dissertation</td>
<td></td>
<td>AOE 5974</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>AOE 7994</td>
<td>Research and Dissertation</td>
<td></td>
<td>AOE 5974</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>AOE 7994</td>
<td>Research and Dissertation</td>
<td></td>
<td>AOE 5974</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>AOE 7994</td>
<td>Research and Dissertation</td>
<td></td>
<td>AOE 5984</td>
<td>Special Study</td>
<td></td>
</tr>
<tr>
<td>AOE 7994</td>
<td>Research and Dissertation</td>
<td></td>
<td>AOE 5984</td>
<td>Special Study</td>
<td></td>
</tr>
<tr>
<td>AOE 7994</td>
<td>Research and Dissertation</td>
<td></td>
<td>AOE 5984</td>
<td>Special Study</td>
<td></td>
</tr>
<tr>
<td>AOE 7994</td>
<td>Research and Dissertation</td>
<td></td>
<td>AOE 5984</td>
<td>Special Study</td>
<td></td>
</tr>
</tbody>
</table>

(Minimum of 30 hours) TOTAL (Maximum of 18 hours) TOTAL

### Doctorate of Philosophy Track:  Transfer courses as approved by Advisory Committee and Graduate Program Director.

<table>
<thead>
<tr>
<th>University</th>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

Updated: 9/27/16
**Applied Physics Track:** 18 credit hours prior to taking the Preliminary Written Examination.

*The following course is required prior to taking the Preliminary Written Examination.*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOE 4404</td>
<td>Applied Numerical Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

(Minimum of 3 hours) TOTAL 3

*Choose one of the following courses prior to taking the Preliminary Written Examination.*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5105</td>
<td>Electromagnetic Waves</td>
<td>3</td>
</tr>
<tr>
<td>AOE/ ECE 5174</td>
<td>Introduction to Space Plasmas</td>
<td>3</td>
</tr>
<tr>
<td>AOE 5135</td>
<td>Vehicle Propulsion</td>
<td>3</td>
</tr>
</tbody>
</table>

(Minimum of 3 hours) TOTAL

*Choose one graduate level course in Mathematics as determined by Advisory Committee prior to taking the Preliminary Written Examination.*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

(Minimum of 3 hours) TOTAL 3

*Choose three graduate or undergraduate courses in AOE, Electrical and Computer Engineering, Computer Science, Physics, or Mechanical Engineering as determined by the advisory committee with a maximum of one (4000-level) course.*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
</table>

(Minimum of 9 hours) TOTAL

*Choose two of the following three courses prior to taking the Final Examination.*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOE 5024</td>
<td>Vehicle Structures</td>
<td>3</td>
</tr>
<tr>
<td>AOE 5104</td>
<td>Advance Aero and Hydrodynamics</td>
<td>3</td>
</tr>
<tr>
<td>AOE 5204</td>
<td>Vehicle Dynamics and Control</td>
<td>3</td>
</tr>
</tbody>
</table>

(Minimum of 6 hours) TOTAL

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOE</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>AOE</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

(Minimum of 6 hours) TOTAL

Updated: 9/27/16
☐ 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](http://graduateschool.vt.edu/academics/commencement_deadlines).

**Forms**

Graduate School ([http://graduateschool.vt.edu/academics/forms](http://graduateschool.vt.edu/academics/forms))

AOE Department ([http://www.aoe.vt.edu/graduate/forms/.html](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.