

# Cover Sheet: Request 10395

## Aerospace Engineering

### Info

Process	Major Curriculum Modify Ugrad/Pro
Status	Pending
Submitter	Carroll, Bruce F bfc@ufl.edu
Created	9/3/2015 6:29:24 PM
Updated	10/27/2015 10:02:32 AM
Description	Modification of curriculum for the aerospace engineering major

### Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	ENG - Mechanical and Aerospace Engineering 011902000	Carroll, Bruce F		9/3/2015
No document changes					
College	Approved	ENG - College of Engineering	Caple, Elizabeth		10/7/2015
Replaced BS-ASE-revisions-8-11-2015.pdf					9/21/2015
Replaced Proposed Changes to the Curriculum in the BS Aerospace Engineering Degree Narrative Discussion.pdf					9/21/2015
Added BS-ASE-revisions-9-21-2015.pdf					9/21/2015
Added Proposed Changes to the Curriculum in the BS Aerospace Engineering Degree Narrative Discussion rev 1.pdf					9/21/2015
Added BSASE Curriculum Changes - catalog markup.docx					10/4/2015
Added MAP4305-engineering-math-department-memo.docx					
University Curriculum Committee	Comment	PV - University Curriculum Committee (UCC)	Baker, Brandi N	Added to November agenda.	10/27/2015
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			10/27/2015
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
Academic Assessment Committee Notified					
No document changes					

<b>Step</b>	<b>Status</b>	<b>Group</b>	<b>User</b>	<b>Comment</b>	<b>Updated</b>
College Notified					
No document changes					

# Major|Modify\_Curriculum for request 10395

## Info

**Request:** Aerospace Engineering

**Submitter:** Carroll, Bruce F bfc@ufl.edu

**Created:** 9/3/2015 6:29:24 PM

**Form version:** 1

## Responses

**Major Name:** Aerospace Engineering

**Major Code:** ASE

**Degree Program Name :** Bachelor of Science Aerospace Engineering

**Effective Term :** Earliest Available

**Effective Year :** Earliest Available

**Proposed Changes :** Modify requirements for capstone design course and modify aerodynamics course sequence.

**Pedagogical Rationale/Justification:** The modification to the capstone design requirement will allow greater flexibility in scheduling for seniors. The modification to the aerodynamics sequence will allow an earlier introduction to the major (in the sophomore year) and improve coverage of compressible aerodynamics.

**Impact on Enrollment, Retention, Graduation:** No anticipated impact on enrollment, retention or graduation rates. Current students in the major will be given option to implement the changes or complete major with existing curriculum.

## Proposed Changes to the Curriculum in the BS Aerospace Engineering Degree (rev. 1)

### Narrative Discussion

The following narrative explains the proposed changes to the curriculum for the undergraduate degree in aerospace engineering. This narrative explains the information contained in the accompanying side-by-side comparison between the current (2015 catalog year) and the proposed changes. The semesters below refer to terms in the proposed revision.

- Semester 3
  - Change in recommended semester for these courses
- Semester 4
  - COP2271 Computer Programming for Engineers - footnote revised
  - EAS2XXX Introduction to Aerospace Engineering – add as required course
- Semester 5
  - EGM3344 Introduction to Numerical Methods of Engineering Analysis - require C or better in this course
  - EGM3520 Mechanics of Materials - require C or better in this course
- Semester 6
  - EAS4101 Aerodynamics – moved from semester 7 to semester 6
  - EEL3003 Elements of Electrical Engineering – moved from semester 4 to semester 6
  - EML3301C Mechanics of Materials Laboratory – added E6 writing requirement
  - MAP4305 Differential Equations for Engineers and Physical Scientists – This course replaces EGM4313
- Semester 7
  - EAS4132 Compressible Flow – added as required course
  - EAS4XXC Aerospace Sciences Lab and Design – added as alternative to EML4304C.
  - Social and Behavioral Sciences – moved from semester 6 to semester 7
- Semester 8
  - Aerospace Electives – revised list of electives, changed to 6 hrs
- Semester 9
  - EAS4700 or EAS4710 Aerospace Design 1 or Aerospace Design 2 – replaced courses allowed for capstone design course
- Notes:
  - No change in total hours for degree
  - Addition of MAP4305 Differential Equations for Engineers and Physical Scientist has been approved by Department of Mathematics

## Aerospace Engineering Proposed Changes – Markup of 2015/16 catalog

### Recommended Semester Plan

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To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold.

Semester 1	Credits
<b>CHM 2045 General Chemistry 1 (GE-P) or CHM 2095 Chemistry for Engineers 1 (GE-P)</b>	<b>3</b>
CHM 2045L General Chemistry 1 Laboratory (GE-P)	1
EML 2920 Department and Professional Orientation	1
IUF 1000 What is the Good Life (GE-H)	3
<b>MAC 2311 Analytic Geometry and Calculus 1 (State Core GE-M)</b>	<b>4</b>
Composition (GE-C, E6; ACT/SAT placement scores do not exempt this requirement) <sup>3</sup>	3
Total	15
Semester 2	Credits
EML 2023 Computer Aided Graphics and Design	3
ENC 3246 Professional Communication for Engineers (State Core GE-C, E6)	3
<b>MAC 2312 Analytic Geometry and Calculus 2 (GE-M)</b>	<b>4</b>
<b>PHY 2048 Physics with Calculus 1 (State Core GE-P)</b>	<b>3</b>
PHY 2048L Physics with Calculus 1 Laboratory (GE-P)	1
Total	14

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Semester 5	Credits
EMA 3010 Materials	3
Science elective (AST 3018, AST 3019, BSC 2010, CHM 2046, CHM 2096 or PHY 3101)	3
Social and Behavioral Sciences (State Core GE-S) <sup>3</sup>	3
<u>Total</u>	<u>9</u>

Semester 3	Credits
COP 2271 Computer Programming for Engineers <sup>1</sup>	2
EAS2XXX Introduction to Aerospace Engineering	3
EGM 2511 Engineering Mechanics: Statics *	3
EML 2322L Design and Manufacturing Laboratory	2
MAC 2313 Analytic Geometry and Calculus 3 (GE-M)	4
PHY 2049 Physics with Calculus 2 (GE-B/P)	3
PHY 2049L Physics with Calculus 2 Laboratory	1
Total	<del>45</del> 16

Semester 4	Credits
EEL 3003 Elements of Electrical Engineering and Circuits <sup>2</sup>	3
EGM 3344 Introduction to Numerical Methods of Engineering Analysis <sup>*</sup>	3
EGM 3520 Mechanics of Materials <sup>*</sup>	3

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<a href="#">EML 2322L Design and Manufacturing Laboratory</a>	<u>2</u>
EML 3100 Thermodynamics *	3
<b>MAP 2302 Elementary Differential Equations</b>	<b>3</b>
Total	<u>4514</u>
<b>Semester 6 Credits</b>	
<a href="#">EAS 4101 Aerodynamics</a>	<u>3</u>
<a href="#">EEL 3003 Elements of Electrical Engineering<sup>2</sup></a>	<u>3</u>
EGM 3401 Engineering Mechanics: Dynamics *	3
<del>E<sup>3</sup>GM 4313 Intermediate Engineering Analysis</del>	<del>3</del>
<del>E<sup>3</sup>GN 3353C Fluid Mechanics</del>	<del>3</del>
EML 3301C Mechanics of Materials Laboratory <a href="#">(E6)</a>	3
<a href="#">MAP 4305 Differential Equations for Engineers and Physical Scientists or</a> <a href="#">EGM4313 Intermediate Engineering Analysis</a>	<u>3</u>
<del>Social and Behavioral Sciences (GE-S, E6)<sup>3</sup></del>	<del>3</del>
Total	15
<b>Semester 7 Credits</b>	
<del>EAS 4101 Aerodynamics</del>	<del>3</del>
<a href="#">EAS 4132 Compressible Flow</a>	<u>3</u>
EAS 4510 Astrodynamics	3

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<u>EAS 4XXXC Aerospace Sciences Design and Laboratory or EML4304C Thermo/Fluids Design and Laboratory</u>	<u>3</u>
<u>EML 4304C Thermo/Fluids Design and Laboratory</u>	<u>3</u>
EML 4312 Control of Mechanical Engineering Systems	3
<u>Social and Behavioral Sciences (GE-S: E6)<sup>3</sup></u>	<u>3</u>
<u>Aerospace elective (EAS 4132, EML 4140, EML 4220 or EML 4507)</u>	<u>3</u>
Total	15
<b>Semester 8</b>	
	<b>Credits</b>
EAS 4200C Aerospace Structures	3
EAS 4400 Stability and Control of Aircraft	3
<u>EAS 4700 Aerospace Design 1 or EAS 4912 Integrated Product and Process Design 1</u>	<u>3</u>
Aerospace elective ( <u>EAS4240, EAS4412, EML4140, EML4220, EML4507, or any graduate level course taught by the MAE department</u> )( <u>EAS 4132, EML 4140, EML 4220 or EML 4507</u> )	<u>3</u>
Humanities ( <u>State Core GE-H</u> ) <sup>3</sup>	3
Total	15
<b>Semester 9</b>	
	<b>Credits</b>
EAS 4300 Aerospace Propulsion	3
<u>EAS4700 Aerospace Design 1 or EAS 4710 Aerospace Design 2 or EAS 4913 Integrated Product and Process Design 2</u>	<u>3</u>

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Humanities (GE-H, E6) <sup>3</sup> or Social and Behavioral Sciences (GE-S, E6) <sup>3</sup>	3
Technical electives (see approved list)	6
Total	15

\* Must be completed with a minimum grade of C

<sup>1</sup> ~~Can substitute COP 3275, COP 3502, EEL 3834 or other programming courses approved by the department.~~ Student should take Matlab section.

<sup>2</sup> Can substitute EEL 3111C.

<sup>3</sup> Students are also expected to complete the general education international (GE-N) and diversity (GE- D) requirements. This is often done concurrently with another general education requirement (typically, GE-C, H or S).

**Aerospace Engineering - Proposed Changes to Curriculum in the BS Degree**

Revision Date:9/21/2015

<b>Current</b>		
Semester 1 (Fall)	Title	CR
<b>CHM 2045 or CHM 2095</b>	<b>General Chemistry 1 (GE-P) or Chemistry for Engineers 1 (GE-P)</b>	<b>3</b>
CHM 2045L	General Chemistry Lab 1	1
EML 2920	Department and Professional Orientation	1
IUF 1000	What is the Good Life (UF Core - GE-H)	3
<b>MAC 2311</b>	<b>Analytical Geometry &amp; Calculus 1 (State Core GE-M)</b>	<b>4</b>
	English Composition (GE-C, E6) (ACT/SAT Placement scores do not exempt this requirement) <sup>3</sup>	3
	Semester Total	15
Semester 2 (Spring)	Title	CR
EML 2023	Computer Aided Graphics and Design	3
ENC 3246	Professional Communication for Engineers (State Core GE-C, E6)	3
<b>MAC 2312</b>	<b>Analytic Geometry and Calculus 2 (GE-M)</b>	<b>4</b>
<b>PHY 2048</b>	<b>Physics with Calculus 1 (State Core GE-B/P)</b>	<b>3</b>
PHY 2048L	Physics with Calculus 1 Laboratory (GE-P)	1
	Semester Total	14

Semester 3 (Fall)	Title	CR
COP 2271	Computer Programming for Engineers <sup>1</sup>	2
EGM 2511	Engineering Mechanics: Statics *	3
EML 2322L	Design and Manufacturing Laboratory	2
<b>MAC2 313</b>	<b>Analytic Geometry and Calculus 3 (GE-M)</b>	<b>4</b>
<b>PHY 2049</b>	<b>Physics with Calculus 2 (GE-B/P)</b>	<b>3</b>
PHY 2049L	Physics with Calculus 2 Laboratory (GE-P)	1
	Semester Total	15

Semester 4 (Spring)	Title	CR
EEL 3003	Elements of Electrical Engineering <sup>2</sup>	3
EGM 3344	Introduction to Numerical Methods of Engineering Analysis	3
EGM 3520	Mechanics of Materials	3
EML 3100	Thermodynamics *	3
<b>MAP 2302</b>	<b>Elementary Differential Equations</b>	<b>3</b>
	Semester Total	15

Semester 5 (Summer)	Title	CR
EMA3010	Materials	3
<b>Science Elective</b>	<b>(AST 3018 Astronomy and Astrophysics 1, BSC 2010 Integrated Principles of Biology 1, CHM 2046, General Chemistry 2, CHM 2096 Chemistry for Engineers 2 or PHY 3101 Introduction to Modern Physics)</b>	<b>3</b>
	Social and Behavioral Sciences (State Core GE-S) <sup>3</sup>	3
	Semester Total	9

<b>Proposed Change</b>		
Semester 1 (Fall)	Title	CR
<b>CHM 2045 or CHM 2095</b>	<b>General Chemistry 1 (GE-P) or Chemistry for Engineers 1 (GE-P)</b>	<b>3</b>
CHM 2045L	General Chemistry Lab 1	1
EML 2920	Department and Professional Orientation	1
IUF 1000	What is the Good Life (UF Core - GE-H)	3
<b>MAC 2311</b>	<b>Analytical Geometry &amp; Calculus 1 (State Core GE-M)</b>	<b>4</b>
	English Composition (GE-C, E6) (ACT/SAT Placement scores do not exempt this requirement)	3
	Semester Total	15
Semester 2 (Spring)	Title	CR
EML 2023	Computer Aided Graphics and Design	3
ENC 3246	Professional Communication for Engineers (State Core GE-C, E6)	3
<b>MAC 2312</b>	<b>Analytic Geometry and Calculus 2 (GE-M)</b>	<b>4</b>
<b>PHY 2048</b>	<b>Physics with Calculus 1 (State Core GE-B/P)</b>	<b>3</b>
PHY 2048L	Physics with Calculus 1 Laboratory (GE-P)	1
	Semester Total	14

Semester 3 (Summer)	Title	CR
EMA3010	Materials	3
<b>Science Elective</b>	<b>(AST 3018 Astronomy and Astrophysics 1, BSC 2010 Integrated Principles of Biology 1, CHM 2046, General Chemistry 2, CHM 2096 Chemistry for Engineers 2 or PHY 3101 Introduction to Modern Physics)</b>	<b>3</b>
	Social and Behavioral Sciences (State Core GE-S) <sup>3</sup>	3
	Semester Total	9

Semester 4 (Fall)	Title	CR
COP 2271	Computer Programming for Engineers <sup>1</sup>	2
EAS2XXX	Introduction to Aerospace Engineering	3
EGM 2511	Engineering Mechanics: Statics *	3
<b>MAC2 2313</b>	<b>Analytic Geometry and Calculus 3 (GE-M)</b>	<b>4</b>
<b>PHY 2049</b>	<b>Physics with Calculus 2 (GE-B/P)</b>	<b>3</b>
PHY 2049L	Physics with Calculus 2 Laboratory (GE-P)	1
	Semester Total	16

Semester 5 (Spring)	Title	CR
EGM3344	Introduction to Numerical Methods of Engineering Analysis*	3
EGM3520	Mechanics of Materials *	3
EML 2322L	Design and Manufacturing Laboratory	2
EML3100	Thermodynamics *	3
<b>MAP2302</b>	<b>Elementary Differential Equations</b>	<b>3</b>
	Semester Total	14

Semester 6 (Fall)	Title	CR
EGM 3401	Engineering Mechanics: Dynamics *	3
EGM 4313	Intermediate Engineering Analysis	3
EGN 3353C	Fluid Mechanics	3
EML 3301C	Mechanics of Materials Laboratory	3
	Social and Behavioral Sciences (GE-S; E6) <sup>3</sup>	3
	Semester Total	15

Semester 7 (Spring)	Title	CR
EAS 4101	Aerodynamics	3
EAS 4510	Astrodynamics	3
EML4304C	Thermo/Fluid Design and Laboratory	3
EML 4312	Control of Mechanical Engineering Systems	3
	Aerospace Elective (EAS4132, EML4140, EML4220 or EML4507)	3
	Semester Total	15

Semester 8 (Fall)	Title	CR
EAS 4200C	Aerospace Structures	3
EAS 4400	Stability and Control of Aircraft	3
EAS4700 or EAS 4912	Aerospace Design 1 or Integrated Product and Process Design 1	3
	Aerospace Elective (EAS4132, EML4140, EML4220 or EML4507)	3
	Humanities (State Core GE-H) <sup>3</sup>	3
	Semester Total	15

Semester 9 (Spring)	Title	CR
EAS 4300	Aerospace Propulsion	3
EAS 4710 or EAS 4913	Aerospace Design 2 or Integrated Product and Process Design 2	3
	Humanities (GE-H; E6) <sup>3</sup> or Social and Behavioral Sciences (GE-S; E6) <sup>3</sup>	3
Technical Electives	See Approved List	6
	Semester Total	15

Total Hrs for Degree 128

\* Completed with a minimum grade of C.

<sup>1</sup> Can substitute COP2271 Computer Programming Using FORTRAN, COP3502 Programming Fundamentals 1 or other programming courses approved by department.

<sup>2</sup> Can substitute EEL3111C

<sup>3</sup> Students are also expected to complete the general education international (GE-N) and diversity (GE-E) requirements. This is often done concurrently with another general education requirement (typically GE-C, H or S)

Semester 6 (Fall)	Title	CR
EAS 4101	Aerodynamics	3
EEL3003	Elements of Electrical Engineering <sup>2</sup>	3
EGM3401	Engineering Mechanics: Dynamics *	3
EML3301C	Mechanics of Materials Laboratory (E6)	3
MAP 4305 or EGM4313	Differential Equations for Engineers and Physical Scientists	3
	Intermediate Engineering Analysis	3
	Semester Total	15

Semester 7 (Spring)	Title	CR
EAS 4132	Compressible Flow	3
EAS 4510	Astrodynamics	3
EAS4XXC or EML4304C	Aerospace Sciences Design and Laboratory	3
	Thermo/Fluid Design and Laboratory	3
EML4312	Control of Mechanical Engineering Systems	3
	Social and Behavioral Sciences (GE-S; E6) <sup>3</sup>	3
	Semester Total	15

Semester 8 (Fall)	Title	CR
EAS 4200C	Aerospace Structures	3
EAS 4400	Stability and Control of Aircraft	3
Aerospace Electives	course taught by the MAE department)	6
	Humanities (State Core GE-H) <sup>1</sup>	3
	Semester Total	15

Semester 9 (Spring)	Title	CR
EAS 4300	Aerospace Propulsion	3
EAS4700 or EAS4710	Aerospace Design 1 or Aerospace Design 2	3
	Humanities (GE-H; E6) <sup>3</sup> or Social and Behavioral Sciences (GE-S; E6) <sup>3</sup>	3
Technical Electives	(see approved list)	6
	Semester Total	15

Total Hrs for Degree 128

\* Completed with a minimum grade of C.

<sup>1</sup> Student should take Matlab section.

<sup>2</sup> Can substitute EEL3111C

<sup>3</sup> Students are also expected to complete the general education international (GE-N) and diversity (GE-E) requirements. This is often done concurrently with another general education requirement (typically GE-C, H or S)

Department of Mathematics

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November 5, 2015

**MEMORANDUM**

**TO:** Bruce Carroll, Mechanical and Aerospace Engineering

**FROM:** Kevin Knudson, Associate Chair



**SUBJECT:** Adding MAP 4305 to AE curriculum

The Department of Mathematics supports the adoption of MAP 4305, Differential Equations for Engineers and Physical Scientists, as a requirement for the BS degree in Aerospace Engineering. The department has the capacity to offer sufficient space in the course and agrees to accept EGM 3344 as a prerequisite in lieu of MAS 3114 or 4105. We will process the necessary forms to have this prerequisite change added to the undergraduate catalog.

**Aerospace Engineering - Proposed Changes to Curriculum in the BS Degree**

Revision Date:9/21/2015

Current		
<b>AA Degree from State College System</b> (Assume student has completed 8 of 8 Critical Tracking Courses. Note that many students have completed only 6 of 8 CT courses)		
<b>Semester 1 (Summer)</b>	<b>Title</b>	<b>CR</b>
EMA3010	Materials	3
EGM 2511	Engineering Mechanics: Statics *	3
EML 2023	Computer Aided Graphics and Design	3
	Semester Total	9
<b>Semester 2</b>	<b>Title</b>	<b>CR</b>
COP 2271	Computer Programming for Engineers <sup>1</sup>	2
EGM 3520	Mechanics of Materials	3
EML 2322L	Design and Manufacturing Laboratory	2
EML 3100	Thermodynamics *	3
ENC 3246	Professional Communication for Engineers (State Core GE-C, E6)	3
EML 2920	Department and Professional Orientation	1
	Semester Total	14
<b>Semester 3</b>	<b>Title</b>	<b>CR</b>
EGM 3401	Engineering Mechanics: Dynamics *	3
EGM 4313	Intermediate Engineering Analysis	3
EGN 3353C	Fluid Mechanics	3
EML 3301C	Mechanics of Materials Laboratory	3
EEL 3003	Elements of Electrical Engineering <sup>2</sup>	3
	Semester Total	15
<b>Semester 4</b>	<b>Title</b>	<b>CR</b>
EAS 4101	Aerodynamics	3
EAS 4510	Astrodynamics	3
EML4304C	Thermo/Fluid Design and Laboratory	3
EML 4312	Control of Mechanical Engineering Systems	3
EGM 3344	Introduction to Numerical Methods of Engineering Analysis	3
	Semester Total	15
<b>Semester 5</b>	<b>Title</b>	<b>CR</b>
EAS 4200C	Aerospace Structures	3
EAS 4400	Stability and Control of Aircraft	3
EAS4700 or EAS 4912	Aerospace Design 1 or Integrated Product and Process Design 1	3
	Aerospace Elective (EAS4132, EML4140, EML4220 or EML4507)	6
	Semester Total	15
<b>Semester 6</b>	<b>Title</b>	<b>CR</b>
EAS 4300	Aerospace Propulsion	3
EAS 4710 or EAS 4913	Aerospace Design 2 or Integrated Product and Process Design 2	3
Technical Electives	See Approved List	6
	Semester Total	12

Total Hrs for Degree 80

\* Completed with a minimum grade of C.

<sup>1</sup> Can substitute COP2271 Computer Programming Using FORTRAN, COP3502 Programming Fundamentals 1 or other programming courses approved by department.

<sup>2</sup> Can substitute EEL3111C

<sup>3</sup> Students are also expected to complete the general education international (GE-N) and diversity (GE-E) requirements. This is often done concurrently with another general education requirement (typically GE-C, H or S)

Proposed Change		
<b>AA Degree from State College System</b> (Assume student has completed 8 of 8 Critical Tracking Courses. Note that many students have completed only 6 of 8 CT courses)		
<b>Semester 1</b>	<b>Title</b>	<b>CR</b>
EMA3010	Materials	3
EGM 2511	Engineering Mechanics: Statics *	3
EML 2023	Computer Aided Graphics and Design	3
	Semester Total	9
<b>Semester 2</b>	<b>Title</b>	<b>CR</b>
COP 2271	Computer Programming for Engineers <sup>1</sup>	2
EAS2XXX	Introduction to Aerospace Engineering	3
EGM3520	Mechanics of Materials *	3
EML3100	Thermodynamics *	3
ENC 3246	Professional Communication for Engineers (State Core GE-C, E6)	3
EML 2920	Department and Professional Orientation	1
	Semester Total	15
<b>Semester 3</b>	<b>Title</b>	<b>CR</b>
EAS 4101	Aerodynamics	3
EEL3003	Elements of Electrical Engineering <sup>2</sup>	3
EGM3401	Engineering Mechanics: Dynamics *	3
EGM3344	Introduction to Numerical Methods of Engineering Analysis*	3
EML 2322L	Design and Manufacturing Laboratory	2
	Semester Total	14
<b>Semester 4</b>	<b>Title</b>	<b>CR</b>
EAS 4132	Compressible Flow	3
EAS 4510	Astrodynamics	3
EML3301C	Mechanics of Materials Laboratory (E6)	3
MAP 4305 or	Differential Equations for Engineers and Physical Scientists	3
EML4312	Control of Mechanical Engineering Systems	3
	Semester Total	15
<b>Semester 5</b>	<b>Title</b>	<b>CR</b>
EAS 4200C	Aerospace Structures	3
EAS 4400	Stability and Control of Aircraft	3
Aerospace Electives	(EAS4240, EAS4412, EML4140, EML4220, EML4507, or any graduate level course taught by the MAE department)	6
EAS4XXXC	Aerospace Sciences Design and Laboratory	3
	Semester Total	15
<b>Semester 6</b>	<b>Title</b>	<b>CR</b>
EAS 4300	Aerospace Propulsion	3
EAS4700 or EAS4710	Aerospace Design 1 or Aerospace Design 2	3
Technical Electives	(see approved list)	6
	Semester Total	12

Total Hrs for Degree 80

\* Completed with a minimum grade of C.

<sup>1</sup> Student should take Matlab section.

<sup>2</sup> Can substitute EEL3111C

<sup>3</sup> Students are also expected to complete the general education international (GE-N) and diversity (GE-E) requirements. This is often done concurrently with another general education requirement (typically GE-C, H or S)