

## NCSU Aerospace Engineering

(Unofficial Community Colleges to NCSU Curriculum)

Degree Earned: NCSU Bachelor of Science in Aerospace Engineering

Transfer GPA = 3.8+

Effective: 2015-2016

Grey Highlighted Courses – Take at NCSU

FRESHMAN YEAR					
Fall Semester		Credit	Spring Semester		Credit
CHM 151	CH 101 Chemistry -- A Molecular Science <sup>1</sup>	3	CSC 134	CSC 113 Intro Comp MATLAB (or CSC 112)	3
CHM 151	CH 102 General Chemistry Lab <sup>1</sup>	1	MAT 272	MA 241 Calculus II <sup>1</sup>	4
EGR 150	E 101 Intro to Engr & Problem Solving <sup>1</sup>	1	PHY 251	PY 205 Physics for Engr & Science <sup>1</sup> PY 206 Physics for Engr & Science <sup>1</sup> Lab	3 1
NCSU	E 115 Intro to Computing Environment	1	DFT 170	GC 120 Found of Graphics (or GC 120)	3
ENG 111 & ENG 112	ENG 101 Academic Writing & Research	4	PED 110	HES *** Health and Exercise Studies Course*	1
MAT 271	MA 141 Calculus I <sup>1</sup>	4			
ECO 251	EC 205 Economics (or EC 201 or ARE 201) (GEP Social Science)	3			
PED 110	HES 1** Health and Exercise Studies Fitness Course*	1			
<b>18</b>			<b>15</b>		
SOPHOMORE YEAR					
Fall Semester		Credit	Spring Semester		Credit
MAT 273	MA 242 Calculus III	4	MAT 285	MA 341 Applied Differential Equations	3
EGR 220	MAE 206 Engr Statics <sup>2,3</sup>	3	EGR 225	MAE 208 Engr Dynamics <sup>2,3</sup>	3
NCSU	MAE 250 Intro to Aero Engr	1	NCSU	MAE 252 (355) Aerodynamics I	3
NCSU	MAE 251 (261) Aero Vehicle Perf	3	NCSU	MAE 253 (357) Expt. Aerodynamics I	1
PHY 252	PY 208 Physics for Engr & Science II	3	NCSU	MAE 314 Solid Mechanics <sup>2,3</sup>	3
	PY 209 Physics for Engr & Science II Lab	1			
ENG 231/232, REL 110	GEP Requirement* (Humanities)	3	PSY/SOC	GEP Requirement* (Social Science credits) <sup>3</sup>	3
<b>18</b>			<b>16</b>		
JUNIOR YEAR					
Fall Semester		Credit	Spring Semester		Credit
NCSU	ENG 331 Comm Engr & Tech	3	NCSU	MAE 351 (356) Aerodynamics II	3
NCSU	MAE 301 Engr Thermodynamics <sup>2,3</sup>	3	NCSU	MAE 352 (358) Aerodynamics II Lab	1
NCSU	MAE 361 (461) Vibrations (or MAE 315)	3	NCSU	Tech Elective Flight/Space MAE 457 (462) or MAE 467 (453)	3
NCSU	MAE 371 Aerospace Structures I	3	NCSU	Tech Elective Structures MAE 430 or MAE 472	3
NCSU	MAE 372 (473) Aerospace Structures I Lab	1	NCSU	Materials /Electrical Tech elective (MSE 201 or ECE 331)	3
COM 231 recommended	GEP Requirement* (Additional Breadth)	3	HUM 110	GEP Requirement* (Interdisciplinary Perspectives)	3
<b>16</b>			<b>16</b>		
SENIOR YEAR					
Fall Semester		Credit	Spring Semester		Credit
NCSU	MAE 435 Automatic Controls	3	NCSU	MAE 481 (479) Aerospace Vehicle Design II	3
NCSU	MAE 405 (469) Controls Lab	1	NCSU	MAE *** Tech Elect <sup>4</sup>	3
NCSU	MAE 451 (466) Expt Aero III	1	NCSU	MAE *** Tech Elect <sup>4</sup>	3
NCSU	MAE 480 (478) Aero Vehicle Design I	3		GEP Requirement* (see advisor for assistance in selecting)	3
NCSU	Tech Elect Propulsion (MAE 458 or MAE 459)	3	NCSU	Ethics (GEP Humanities Requirement and Ethics Requirement) <sup>5</sup>	3
NCSU	MAE *** Tech Elect <sup>4</sup>	3			
<b>14</b>			<b>15</b>		

**NCSU - Minimum Credit Hours Required for Graduation in Aerospace Engineering**

**128**

## NCSU Aerospace Engineering (continued)

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### **Major/Program requirements and footnotes:**

<sup>1</sup> Minimum grade of C must be earned.

<sup>2</sup> Minimum grade of C- must be earned.

<sup>3</sup> A minimum 2.5 GPA is required to enroll.

<sup>4</sup> Technical Electives must be selected from the following list (when offered)

<http://www.mae.ncsu.edu/academics/course-electives.php/>

<sup>5</sup> Select from STS 302, STS 304, STS 302, PHI 214 OR PHI 375, IDS 201, and PHI/STS 325 are also permitted with permission from your MAE advisor.

\*General Education program (GEP) requirements and GEP footnotes - <http://oucc.ncsu.edu/gep-courses>

See Advisor for assistance in planning electives.