Georgia Tech | Daniel Guggenheim School of Aerospace Engineering
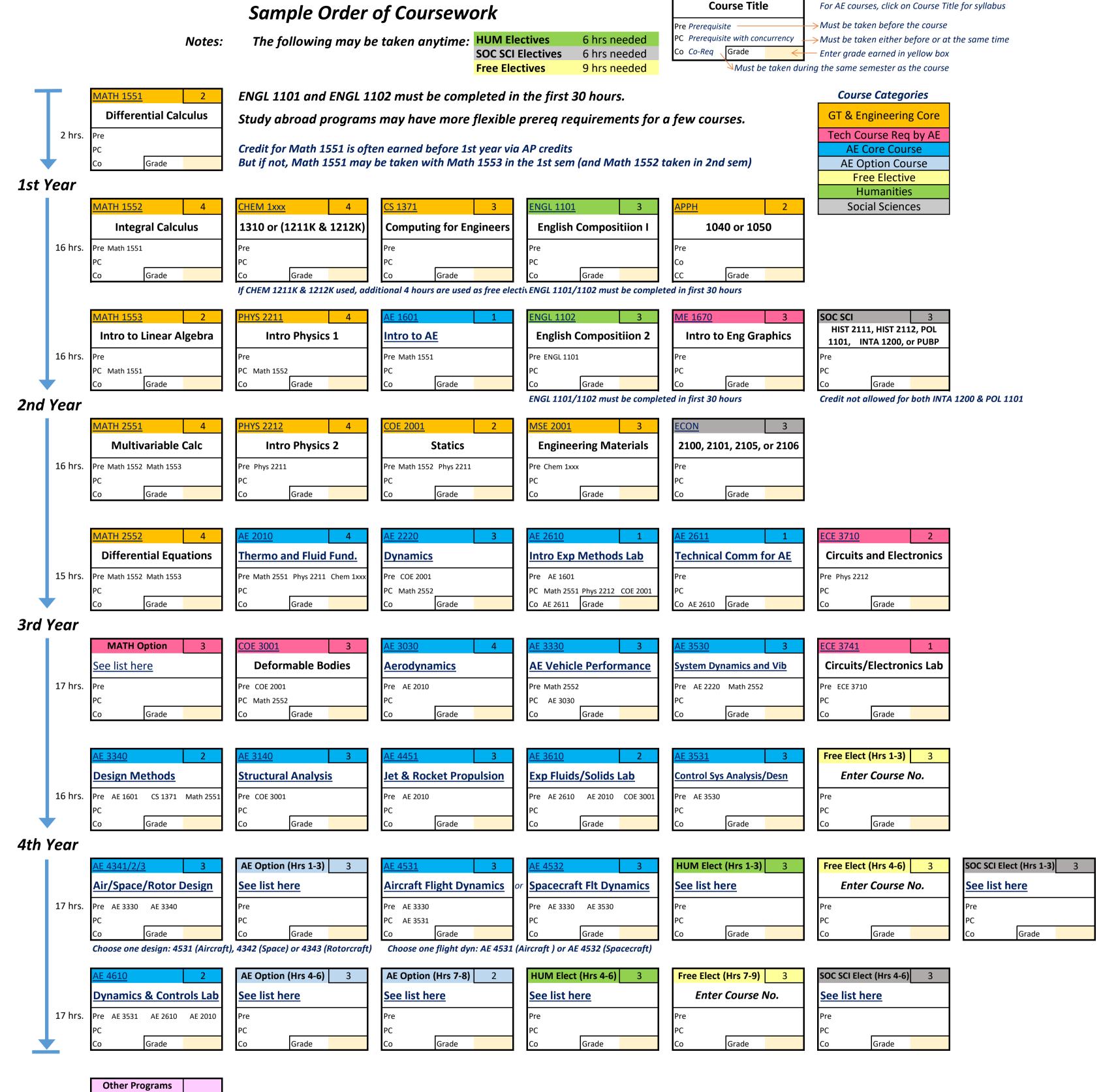
Courses Required for BS in Aerospace Engineering Degree

Sample Order of Coursework

Notes: The following may be taken anytime:

HUM Electives	6 hrs needed
SOC SCI Electives	6 hrs needed
Free Electives	9 hrs needed

Course Tile KEY

Course No.	Cred Hrs
Course Title	

- Click on Course No. for catalog description
- For AE courses, click on Course Title for syllabus
- Pre — Prerequisite → Must be taken before the course
- PC — Prerequisite with concurrency → Must be taken either before or at the same time
- Co — Co-Req [Grade] ← Enter grade earned in yellow box / Must be taken during the same semester as the course

Course Categories

GT & Engineering Core
Tech Course Req by AE
AE Core Course
AE Option Course
Free Elective
Humanities
Social Sciences

ENGL 1101 and ENGL 1102 must be completed in the first 30 hours.

Study abroad programs may have more flexible prereq requirements for a few courses.

Credit for Math 1551 is often earned before 1st year via AP credits. But if not, Math 1551 may be taken with Math 1553 in the 1st sem (and Math 1552 taken in 2nd sem)

1st Year

2 hrs.

MATH 1551	2
Differential Calculus	
Pre	
PC	
Co	Grade

16 hrs.

MATH 1552	4	CHEM 1xxx	4	CS 1371	3	ENGL 1101	3	APPH	2
Integral Calculus		**1310 or (1211K & 1212K)**		**Computing for Engineers**		**English Compositiion I**		**1040 or 1050**	
Pre Math 1551		Pre		Pre		Pre		Pre	
PC		PC		PC		PC		Co	
Co	Grade	Co	Grade	Co	Grade	Co	Grade	CC	Grade

If CHEM 1211K & 1212K used, additional 4 hours are used as free electi... ENGL 1101/1102 must be completed in first 30 hours

16 hrs.

MATH 1553	2	PHYS 2211	4	AE 1601	1	ENGL 1102	3	ME 1670	3	SOC SCI	3
Intro to Linear Algebra		**Intro Physics 1**		**Intro to AE**		**English Compositiion 2**		**Intro to Eng Graphics**		HIST 2111, HIST 2112, POL 1101, INTA 1200, or PUBP	
Pre		Pre		Pre Math 1551		Pre ENGL 1101		Pre		Pre	
PC Math 1551		PC Math 1552		PC		PC		PC		PC	
Co	Grade	Co	Grade	Co	Grade	Co	Grade	Co	Grade	Co	Grade

ENGL 1101/1102 must be completed in first 30 hours   Credit not allowed for both INTA 1200 & POL 1101

2nd Year

16 hrs.

MATH 2551	4	PHYS 2212	4	COE 2001	2	MSE 2001	3	ECON	3
Multivariable Calc		**Intro Physics 2**		**Statics**		**Engineering Materials**		**2100, 2101, 2105, or 2106**	
Pre Math 1552 Math 1553		Pre Phys 2211		Pre Math 1552 Phys 2211		Pre Chem 1xxx		Pre	
PC		PC		PC		PC		PC	
Co	Grade	Co	Grade	Co	Grade	Co	Grade	Co	Grade

15 hrs.

MATH 2552	4	AE 2010	4	AE 2220	3	AE 2610	1	AE 2611	1	ECE 3710	2
Differential Equations		**Thermo and Fluid Fund.**		**Dynamics**		**Intro Exp Methods Lab**		**Technical Comm for AE**		**Circuits and Electronics**	
Pre Math 1552 Math 1553		Pre Math 2551 Phys 2211 Chem 1xxx		Pre COE 2001		Pre AE 1601		Pre		Pre Phys 2212	
PC		PC		PC Math 2552		PC Math 2551 Phys 2212 COE 2001		PC		PC	
Co	Grade	Co	Grade	Co	Grade	Co AE 2611	Grade	Co AE 2610	Grade	Co	Grade

3rd Year

17 hrs.

MATH Option	3	COE 3001	3	AE 3030	4	AE 3330	3	AE 3530	3	ECE 3741	1
See list here		**Deformable Bodies**		**Aerodynamics**		**AE Vehicle Performance**		**System Dynamics and Vib**		**Circuits/Electronics Lab**	
Pre		Pre COE 2001		Pre AE 2010		Pre Math 2552		Pre AE 2220 Math 2552		Pre ECE 3710	
PC		PC Math 2552		PC		PC AE 3030		PC		PC	
Co	Grade	Co	Grade	Co	Grade	Co	Grade	Co	Grade	Co	Grade

16 hrs.

AE 3340	2	AE 3140	3	AE 4451	3	AE 3610	2	AE 3531	3	Free Elect (Hrs 1-3)	3
Design Methods		**Structural Analysis**		**Jet & Rocket Propulsion**		**Exp Fluids/Solids Lab**		**Control Sys Analysis/Desn**		*Enter Course No.*	
Pre AE 1601 CS 1371 Math 2551		Pre COE 3001		Pre AE 2010		Pre AE 2610 AE 2010 COE 3001		Pre AE 3530		Pre	
PC		PC		PC		PC		PC		PC	
Co	Grade	Co	Grade	Co	Grade	Co	Grade	Co	Grade	Co	Grade

4th Year

17 hrs.

AE 4341/2/3	3	AE Option (Hrs 1-3)	3	AE 4531	3	AE 4532	3	HUM Elect (Hrs 1-3)	3	Free Elect (Hrs 4-6)	3	SOC SCI Elect (Hrs 1-3)	3
Air/Space/Rotor Design		See list here		**Aircraft Flight Dynamics**	*or*	**Spacecraft Flt Dynamics**		See list here		*Enter Course No.*		See list here	
Pre AE 3330 AE 3340		Pre		Pre AE 3330		Pre AE 3330 AE 3530		Pre		Pre		Pre	
PC		PC		PC AE 3531		PC		PC		PC		PC	
Co	Grade	Co	Grade	Co	Grade	Co	Grade	Co	Grade	Co	Grade	Co	Grade

Choose one design: 4531 (Aircraft), 4342 (Space) or 4343 (Rotorcraft)   Choose one flight dyn: AE 4531 (Aircraft) or AE 4532 (Spacecraft)

17 hrs.

AE 4610	2	AE Option (Hrs 4-6)	3	AE Option (Hrs 7-8)	2	HUM Elect (Hrs 4-6)	3	Free Elect (Hrs 7-9)	3	SOC SCI Elect (Hrs 4-6)	3
Dynamics & Controls Lab		See list here		See list here		See list here		*Enter Course No.*		See list here	
Pre AE 3531 AE 2610 AE 2010		Pre		Pre		Pre		Pre		Pre	
PC		PC		PC		PC		PC		PC	
Co	Grade	Co	Grade	Co	Grade	Co	Grade	Co	Grade	Co	Grade

Other Programs	
Enter Course No.	
Pre	
PC	
Co	Grade

May use this tile to represent as many courses as needed for optional programs beyond the BSAE degree requirements.
Examples: Minor, ROTC, Double-Major, …

These courses do not count toward 132 credit hours used for BSAE degree

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Notes:
1. Total credit hours = 132
2. A grade of C or better is required in each 1000- and 2000-level mathematics and physics course
3. Math or physics course with a D or F grade must be repeated next semester student is in residence
4. A cumulative GPA of 2.0 or higher is required to schedule COE 2001 or AE 2010
5. A grade of C or better must be attained in all required 2000-level AE and COE courses
6. At the 3000-level and above, no more than two D grades are permitted in required AE (core & AE options) and required COE courses. Additional D grades must be repeated
7. Only free electives may be taken pass/fail. All other courses must be taken on a letter grade basis
8. Minimum cumulative GPA to graduate is 2.0

nomsg