

# Department of Aerospace Engineering and Mechanics

(Students starting or transferring to UA Fall 2009 or after)

## FRESHMAN YEAR

**Fall**  
15 Hrs

Placement	MATH 125 Calculus I MA 4	PH 105 MATH 126

Placement	CH 101 Gen Chem NS 4	

Placement	ENGR 111 Engineering the Future. ENGR 1	

MATH 112	ENGR 131 Eng Concepts and Design I ENGR 1	

	<b>F</b> AEM 121 + 131 Intro to AE O 2	ENGR 141
MATH 112		

Placement or EN 099	EN 101 English Comp I FC 3	EN 102

**Spring**  
16 Hrs

MATH 125	MATH 126 Calculus II MA 4	PH 106 MATH 227 ME 215

MATH 125	PH 105 Physics I NS 4	PH 106 AEM 201

MATH 100	EC 110 Microeconomics SB 3	

EN 101	EN 102 English Comp II FC 3	

ENGR 131	ENGR 141 Eng Concepts and Design II ENGR 1	

MATH 112	ENGR 151 Fund Eng Graphics ENGR 1	

## SOPHOMORE YEAR

**Fall**  
16 Hrs

MATH 126	MATH 227 Calculus III MA 4	MATH 238 AEM 313

MATH 126 PH 105	PH 106 Physics II NS 4	ECE 225 ECE 320

PH 105	AEM 201 Statics ES 3	AEM 250 AEM 264 AEM 311
MATH 126 ENGR 151 or equiv		

	<b>F</b> AEM 249 Algorithms C 2	AEM 349
MATH 125		

MATH 126	MATH 237 Intro to Linear Algebra MA 3	AEM 349
MATH 227		

**Spring**  
16 Hrs

MATH 227	MATH 238 Applied Diff Equations I MA 3	AEM 368 AEM 469

AEM 201	AEM 250 Mechanics of Materials ES 3	AEM 341 AEM 454 AEM 455
MATH 227		

	AEM 251 Mechanics Lab ES 1	
AEM 250		

AEM 201	AEM 264 Dynamics ES 3	AEM 313 AEM 469
MATH 227		

AEM 201	AEM 311 Fluid Mechanics ES 3	AEM 313
MATH 238		

PH 106	ECE 320 Fund Electrical Engineering ES 3	AEM 451
MATH 238		

### Legend

- F** = Fall semester only
- S** = Spring semester only
- C = Computer requirement
- CS = Computer Science
- ES = Engineering Science
- ENGR = Freshman Engineering

- FC = Freshman Composition
- HI/SB = History/Social Science & Behavioral Science
- HU/L/FA = Humanities/Literature/Fine Arts
- MATH = Mathematics
- NS = Natural Science
- W = Writing requirement

This is an unofficial flow chart prepared to assist students in planning their coursework. The University Catalog contains the official listing of academic information. Aerospace Engineering and Mechanics or other departments may change their prerequisites and corequisites from time to time as course content changes to keep pace with changing technologies. As these changes become known, they are posted on the academic bulletin board outside the department office. Students should consult the CATALOG and seek advisement prior to registering for courses.

Dr. Stanley E. Jones, Department Head  
Aerospace Engineering and Mechanics

### Key

Pre-requisites	Course # Title	Downward Dependencies
Co-requisites	Course # Area & Credits	

# Department of Aerospace Engineering and Mechanics

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## JUNIOR YEAR

**Fall**  
16 Hrs

AEM 264 AEM 311	<b>F</b>	<b>AEM 313</b> Aerodynamics I ES 3	AEM 413 AEM 416
MATH 238			

AEM 249 AEM 250	<b>F</b>	<b>AEM 341</b> Aircraft Structures ES 3	AEM 402 AEM 451 AEM 461 AEM 474

AEM 249 MATH 237	<b>F</b>	<b>AEM 349</b> Engineering Analysis ES/C 4	AEM 468
MATH 238			

MATH 126 or MATH 132		<b>ME 215</b> Thermodynamics ES 3	AEM 413

HU/L/FA Elective HU/L/FA 3			
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**Spring**  
16 Hrs

MATH 238 AEM 264 AEM 313	<b>S</b>	<b>AEM 368</b> Flight Dynamics and Controls I ES 4	AEM 402 AEM 423 AEM 468 AEM 474

ME 215 AEM 313	<b>S</b>	<b>AEM 413</b> Aerodynamics II ES 3	AEM 402 AEM 414

AEM 341 MATH 227	<b>S</b>	<b>AEM 461</b> Computational Structures ES 3	

HU/L/FA Elective HU/L/FA 3			
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HI/SB Elective HI/SB 3			
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## SENIOR YEAR

**Fall**  
15 Hrs

AEM 341 AEM 368 AEM 413	<b>F</b>	<b>AEM 402</b> Aerospace Design I ES 3	AEM 404
AEM 408			

AEM 413	<b>F</b>	<b>AEM 408</b> Propulsion ES 3	AEM 428

AEM 349 AEM 368	<b>F</b>	<b>AEM 468</b> Flight Dynamics and Controls II ES 4	AEM 425

	<b>F</b>	<b>AEM 495</b> Professional Development ES/W 2	
AEM 402			

AEM Elective ES 3			
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**Spring**  
16 Hrs

AEM 402	<b>S</b>	<b>AEM 404</b> Aerospace Design II ES 3	

AEM 341 ECE 320	<b>S</b>	<b>AEM 451</b> Structural Design and Test ES/W 4	
AEM 461			

AEM Elective ES 3			
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HI/SB Elective HI/SB 3			
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HU/L/FA Elective HU/L/FA 3			
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