Aerospace Engineering Program 2014/2015 (128 Hours)

Student A# | Student Name (Last, First MI)

	Semester, Transfer or AP	Grade	Course Number	Cr Hrs	Course Title	Prerequisites, Corequisites and/or Prerequisites with Concurrency	Offered: F=Fall S=Spring M=Summer
	English - 6 hours						
			EH 101	3	Freshman Composition I	Placement	FSM
			EH 102	3	Freshman Composition II	EH 101	FSM
	Mathematics - 18 hours						
			MA 171	4	Calculus A	MA 113 or MA 115 or Level III Placement	FSM
			MA 172	4	Calculus B	MA 171	FSM
			MA 201	4	Calculus C	MA 172	FSM
			MA 238	3	Applied Differential Equations	Prereq w/Con: MA 201	FSM
			MA 244	3	Introduction to Linear Algebra	MA 172	FSM
	Chemistry - 4 hours						
			CH 121	3	General Chemistry I	Plcmt or CH 101, MA 113 or 115, Prereq w/Con: MA 171, Coreq: CH 125	FSM
			CH 125	1	General Chemistry Lab I	Coreq: CH 121	FSM
	Physics - 8 hours						
			PH 111	3	General Physics w/Calculus I	MA 171, Coreq: 114	FSM
			PH 114	1	General Physics Lab I	Coreq: PH 111	FSM
			PH 112	3	General Physics w/Calculus II	MA 172, PH 111, Coreq: 115	FSM
			PH 115	1	General Physics Lab II	Coreq: PH 112	FSM
	Science Elective - 4 hours						
				3		Choose from CH 123/126 or PH 113/116	FSM
				1			FSM
	History, Social & Behavioral Sciences, Humaities & Fine Arts - 18 hours						
				3	History	HY 103, HY 104, HY 221, or HY 222	FSM
				3	Literature	EH 207 or EH 208	FSM
				3	Fine Art	ARH 100, ARH 101, ARH 103, CM 122, MU 100, or ARS 160	FSM
				3	Social & Behavioral Science	For more information on HSBS/HFA Requirements: http://www.uah.edu/images/colleges/engineering/CUE2%20Files/Forms/HSBS_HFA_Requirements.pdf	FSM
				3	Sequence Course		FSM
				3	HSBS/HFA		FSM
	Engineering Core - 12 hours						
			MAE 271	3	Statics	PH 111, Prereq w/Con: MA 201	FSM
			MAE 341	3	Thermodynamics I	MA 201, CH 121, CH 125, PH 112	FSM
			EE 213	3	Electrical Circuit Analysis I	PH 112, Prereq w/Con: MA 238 & (MA 244 or CHE 244)	FSM
			ISE 321	3	Engineering Economy	Sophomore Standing	FSM
**	Class has required lab section				**Aerospace Engineering Option - 52 hours**		
			MAE 111	3	Intro to Computational Tools	Prereq w/Con: MA 113	FSM
			MAE 200	3	Principles of Aeronautics & Astronautics	PH 111	FS
			MAE 272	3	Dynamics	MAE/CE 271 & (MAE 111 or CPE 112)	FSM
**			MAE 284	3	Numerical Methods	MA 244 & (MAE 111 or CPE 112); Prereq w/Con: MA 238 & Coreq: MAE 284L	FSM
			MAE 310	3	Fluid Mechanics I	MA 238, MAE/CE 271 & (MAE 111 or CPE 112 or CHE 198)	FSM
**			MAE 311	3	Principles of Measurement & Instrumentation	EE 213 & (MAE 100 or 200), Coreq: MAE 311L	FSM
**			MAE 370	4	Mechanics of Materials	MAE/CE 271, MA 244 & (MAE 111 or CPE 112), Coreq: MAE 370L	FSM
			MAE 371	3	Aerospace Structures	MAE 111, MAE 200, MAE/CE 370	FS
			MAE 420	3	Compressible Aerodynamics	MAE 200, MAE 310, MAE 341	SM
			MAE 430	3	Fundamentals of Aerodynamics	MAE 200, MAE 310, MAE 341	FM
Select One			MAE 440	3	Rocket Propulsion I	MAE 420	FM*
			MAE 441	3	Airbreathing Propulsion	MAE 420	FM*
			MAE 468	3	Elements of Spacecraft Design	MAE/CE 272, MAE 371, Prereq w/Con: MAE 420	FS
			MAE 471	3	Advanced Aero Stucture & Materials	MAE 311, MAE 371	FS
			MAE 480	3	Aircraft Stability & Control	Prereq w/Con: MAE 430 & MAE 488	FS
			MAE 488	3	Analysis of Engineering Systems	EE 213, MAE/CE 272, MAE 284	FSM
			MAE 490	3	Intro to Engineering Design	ISE 321, MAE 310, MAE 311, MAE 341, MAE 370, (MAE 364 & MAE 387) or (MAE 200 & MAE 371)	FSM
Select One			MAE 491	3	Product Realization	MAE 490 & Senior Standing	FS
			MAE 492	3	Mission Design & Development	MAE 490 & Senior Standing	S
			MAE 493	3	Rocket Design	MAE 490 & Senior Standing	S
			MAE 494	3	Aircraft Design	MAE 490 & Senior Standing	S
	Technical Elective - 6 hours						
				3		300 - level or above Science or Engineering course.	
				3			

These courses are offered in alternating summers. Please consult the MAE 5 year plan.
All prerequisite classes must be completed with a "C-" or higher grade.
The Catalog is the final authority for all degree requirements.

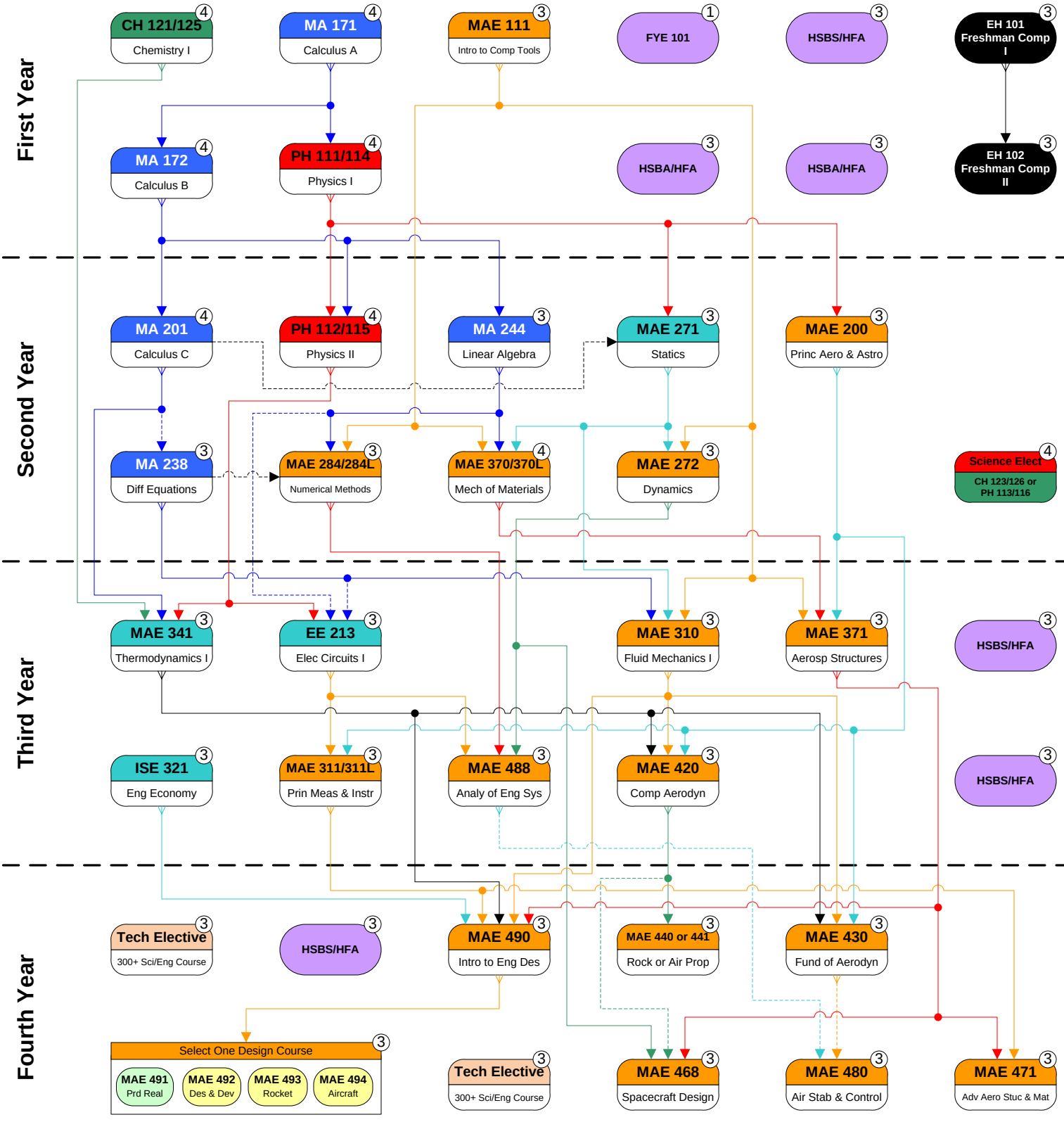
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Updated: 9/18/2014

Academic Flowchart

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Aerospace Engineering
2014/2015 (128 Hours)



Legend Updated: 9/18/14

- Mathematics
- Physics
- Chemistry / Biology
- Engineering Core
- Aerospace Engineering Option
- Electives
- Freshman Comp
- History, Social & Behavioral Science
  Humanity & Fine Art
- Offered only in semester listed
- (3) Credit Hours
- Prerequisite
- Prereq w/concurrency

Academic Pathways

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Aerospace Engineering
2014-2015 Plan

Curriculum Pathway	Research Pathway	Internship Pathway	Co-op Pathway

Required
Recommended

Miletone Year-1

[ ] 35 hours completed including:	[ ] Meet with Faculty to discuss pathway choices
MA 171, CH 121/125, MAE 111,	[ ] Meet with Career Development
HSBS/HFA, FYE 101, EH 101	[ ] Attend Career Services Workshop on Resume
MA 172, PH 111/114,	[ ] Outline Resume
HSBS/HFA, HSBS/HFA ,EH 102	[ ] Participate in Career Fair

Milestone Year-2

[ ] 68 hours completed including:	[ ] Meet with Faculty for Undergraduate research opportunities
MA 201, PH 112/115, MA 244,	[ ] Attend Career Services Workshop on Interviews
MAE 271, MAE 200	[ ] Professional Resume
MA 238, MAE 284, Sci Elec,	[ ] Attend Career Fair
MAE 272, MAE 370	[ ] Co-op/Internship Offer (Summer Start)

SELECT ONE PATHWAY OPTION

Research Pathway | **Intership Pathway** | **Co-op Pathway**

Milestone Year-3

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 98 hours completed including:	[ ] 98 hours completed from	[ ] Obtain Faculty Mentor
MAE 341, EE 213, MAE 371,	Curriculum Pathway	[ ] 65 hours completed including:
MAE 310, HSBS/HFA	[ ] Summer Internship	Work Semester (Summer)
MAE 420, MAE 311, MAE 488,		MAE 341, EE 213, MAE 310,
ISE 321, HSBS/HFA		MAE 371, HSBS/HFA (Fall)
[ ] Undergraduate Research		Work Semester (Spring)
[ ] Attend JUMP Information Session		EE 420, MAE 311,
		ISE 321, HSBS/HFA (Summer)
		[ ] 2 Semesters of Co-op

Milestone Year-4

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 128 hours completed including:	[ ] 128 hours completed from	[ ] 89 hours completed including:
MAE 490, MAE 430, MAE 440,	Curriculum Pathway	Work Semester (Fall)
MAE 441, Tech Elec, HSBS/HFA	[ ] Summer Internship	MAE 490, MAE 471,
MAE 49x, MAE 471, MAE 468,	[ ] Senior Design Complete	MAE 468, Tech Elec (Spring)
MAE 480, Tech Elec	[ ] Degree Complete	MAE 488, MAE 430, MAE 440
[ ] Undergraduate Research Complete	[ ] Begin Career or Graduate School	MAE 441, HSBS/HFA (Summer)
[ ] Senior Design Complete		[ ] Experiential Learning complete
[ ] Degree Complete		[ ] Decision on Industry
[ ] Begin Career or Graduate School		or Graduate School

Milestone Year-5

Co-op Pathway
[ ] 128 hours completed including:
MAE 49x, Tech Elec,
MAE 480 (Fall)
[ ] Senior Design Complete
[ ] Degree Complete
[ ] Begin Career or Graduate School

6/4/2014

Civil Engineering Program 2014/2015 (128 Hours)

Student A# | Student Name (Last, First MI)

	Semester, Transfer or AP	Grade	Course Number	Cr Hrs	Course Title	Prerequisites, Corequisites and/or Prerequisites with Concurrency	Offered: F=Fall S=Spring M=Summer
					English - 6 hours		
			EH 101	3	Freshman Composition I	Placement	FSM
			EH 102	3	Freshman Composition II	EH 101	FSM
					Mathematics - 18 hours		
			MA 171	4	Calculus A	MA 113 or MA 115 or Level III Placement	FSM
			MA 172	4	Calculus B	MA 171	FSM
			MA 201	4	Calculus C	MA 172	FSM
			MA 238	3	Applied Differential Equations	Prereq w/Con: MA 201	FSM
			MA 244	3	Introduction to Linear Algebra	MA 172	FSM
					Chemistry - 4 hours		
			CH 121	3	General Chemistry I	Plcmt or CH 101, MA 113 or 115, Prereq w/Con: MA 171, Coreq: CH 125	FSM
			CH 125	1	General Chemistry Lab I	Coreq: CH 121	FSM
					Physics - 8 hours		
			PH 111	3	General Physics w/Calculus I	MA 171, Coreq: 114	FSM
			PH 114	1	General Physics Lab I	Coreq: PH 111	FSM
			PH 112	3	General Physics w/Calculus II	MA 172, PH 111, Coreq: 115	FSM
			PH 115	1	General Physics Lab II	Coreq: PH 112	FSM
					Biology - 4 hours		
			BYS 119	4	Principles of Biology	None	FSM
					History, Social & Behavioral Sciences, Humaities & Fine Arts - 18 hours		
				3	History	HY 103, HY 104, HY 221, or HY 222	FSM
				3	Literature	EH 207 or EH 208	FSM
				3	Fine Art	ARH 100, ARH 101, ARH 103, CM 122, MU 100, or ARS 160	FSM
				3	Social & Behavioral Science	For more information on HSBS/HFA Requirements: http://www.uah.edu/images/colleges/engineering/CUE2%20Files/Forms/HSBS_HFA_Requirements.pdf	FSM
				3	Sequence Course		FSM
				3	HSBS/HFA		FSM
					Engineering Core - 12 hours		
			CE 271	3	Statics	PH 111, Prereq w/Con: MA 201	FSM
			ISE 321	3	Engineering Economy	Sophomore Standing	FSM
			MAE 310	3	Fluid Mechanics I	MA 238, MAE/CE 271 & (MAE 111 or CPE 112 or CHE 198)	FSM
			MAE 341	3	Thermodynamics I	MA 201, CH 121, CH 125, PH 112	FSM
**	Class has required lab section				**Civil Engineering Option - 52 hours**		
			CE 101	1	Prelude to Civil Engineering	None	F
**			CPE 112	3	Intro to Computer Programming in Engineering	MA 113, MA 115 or Level III Placement, Coreq: CPE 112L	FSM
			CE 111	2	Civil Engineering Graphics	MA 112 or Level II Placement, Freshman CE Standing	FS
			CE 272	3	Dynamics	CPE 112, CE/MAE 271	FSM
			CE 284	2	Surveying	Prereq w/Con: CE 111, or Instr/Advsr Approval	F
			CE 321	3	Transportation Engineering & Design	CE 284, MA 171	S
**			CE 370	4	Mechanics of Materials	CPE 112, CE/MAE 271 , Coreq: CE 370L	FSM
			CE 372	3	Soil Mechanics	CE/MAE 370, Prereq w/Con: MAE 310	FS
			CE 373	1	Soil Mechanics Lab	Coreq: CE 372	FS
**			CE 380	3	Civil Engineering Materials	CE/MAE 370, Coreq: CE 380L	FS
			CE 381	3	Structural Analysis I	CE/MAE 272, CE/MAE 370	FM
			ISE 390	3	Probability & Engineering Statistics I	Prereq w/Con: MA 201	FSM
			CE 422	3	Traffic Engineering Design	CE 321	S
			CE 441	3	Hydraulic Engineering Design	MAE 310	S
			CE 449	3	Intro to Environmental Engineering	MAE 341, Prereq w/Con: MAE 310	F
			CE 483	3	Reinforced Concrete Design	CE 380, CE 381	F
			CE 484	3	Steel Design	CE 381, MA 244	F
			CE 485	3	Foundation Engineering	CE 372, CE 483	S
			CE 498	1	Civil Engineering Design I	CE 321, Prereq w/Con: CE 372 and CE 483, Senior Standing	F
**			CE 499	2	Civil Engineering Design II	CE 483, CE 498 Coreq: CE 499L (FE Review)	S
					Civil Engineering Electives - 6 hours		
Select One Concentration: Struc			CE 481	3	Structural Analysis II	CE 381	S
Struc			CE 487	3	Bridge Design	CE 483	S
Environ			CE 456	3	Water Quality Control Processes	CE 449	S
Environ			CE 457	3	Hydrology	MAE 310	F
Transp			CE 411	3	Intro to Geographical Information Systems	Senior Standing or Instructor Approval	F
Transp			CE 420	3	Urban Transportation Planning	CE 321	F
Gen			CE	3	Choose from CE 411, CE 412, CE 420, CE 456, CE 457, CE 458, CE 473, CE 481, CE 487		
Gen			CE	3			

All prerequisite classes must be completed with a "C-" or higher grade.
The Catalog is the final authority for all degree requirements.

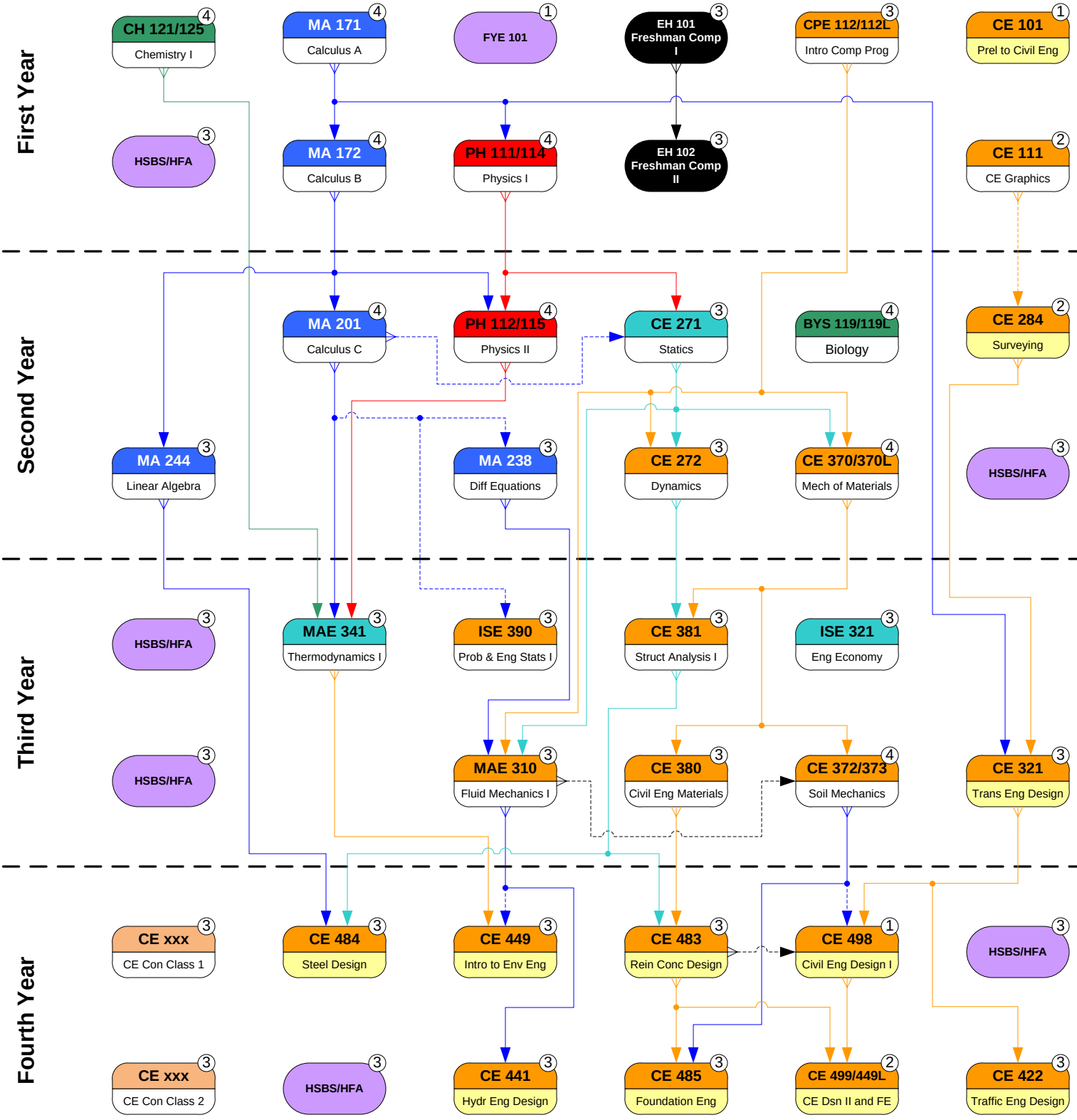
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Updated: 6/5/2014

Academic Flowchart

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Civil Engineering
2014/2015 (128 Hours)



Legend Updated: 8/28/14

- Mathematics
- Physics
- Chemistry / Biology
- Engineering Core
- Civil Engineering Option
- Electives
- Freshman Comp
- History, Social & Behavioral Science Humanity & Fine Art
- Offered only in semester listed
- (3) Credit Hours
- → Prerequisite
- ⇢ Prereq w/concurrency

Academic Pathways

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Civil Engineering
2014-2015 Plan

Curriculum Pathway	Research Pathway	Internship Pathway	Co-op Pathway

Required
Recommended

Miletone Year-1

[ ] 32 hours completed including:	[ ] Meet with Faculty to discuss pathway choices
MA 171, CH 121/125,CE 101,	[ ] Meet with Career Development
CPE 112, FYE 101, EH 101	[ ] Attend Career Services Workshop on Resume
MA 172, PH 111/114, CE 111,	[ ] Outline Resume
HSBS/HFA, EH 102	[ ] Participate in Career Fair

Milestone Year-2

[ ] 65 hours completed including:	[ ] Meet with Faculty for Undergraduate research opportunities
MA 201, PH 112/115,	[ ] Attend Career Services Workshop on Interviews
CE 284, CE 271, BYS 119	[ ] Professional Resume
MA 238, MA 238, CE 272,	[ ] Attend Career Fair
CE 370, HSBS/HFA	[ ] Co-op/Internship Offer (Summer Start)

SELECT ONE PATHWAY OPTION

Research Pathway | Intership Pathway | Co-op Pathway

Milestone Year-3

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 96 hours completed including:	[ ] 96 hours completed from Curriculum Pathway	[ ] Obtain Faculty Mentor
MAE 341, ISE 390, CE 381, ISE 321, HSBS/HFA	[ ] Summer Internship	[ ] 88 hours completed including:
MAE 310, CE 372, CE 373, CE 380, CE 321, HSBS/HFA		Work Semester (Summer)
[ ] Undergraduate Research		MAE 310, CE 272, CE 273, CE 380, ISE 321 (Fall)
[ ] Attend JUMP Information Session		Work Semester (Spring)
		MAE 341, ISE 390, CE 380 (Summer)
		[ ] 2 Semesters of Co-op

Milestone Year-4

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 128 hours completed including:	[ ] 128 hours completed from Curriculum Pathway	[ ] 101 hours completed including:
CE 449, CE 483, CE 498, CE 484, HSBS/HFA, CE Conc 1	[ ] Summer Internship	Work Semester (Fall)
CE 441, CE 422, CE 485, CE 499, HSBS/HFA, CE Conc 2	[ ] Senior Design Complete	CE 321, CE 441, CE Conc 1, HSBS/HFA, HSBS/HFA
[ ] Undergraduate Research Complete	[ ] Degree Complete	Work Semester (Summer)
[ ] Senior Design Complete	[ ] Begin Career or Graduate School	[ ] Experiential Learning complete
[ ] Degree Complete		[ ] Decision on Industry or Graduate School
[ ] Begin Career or Graduate School		

Milestone Year-5

Co-op Pathway
[ ] 128 hours completed including:
CE 498, CE 483, CE 449, CE 484, HSBS/HFA
CE 422, CE 499, CE 485, CE Conc 2, HSBS/HFA
[ ] Senior Design Complete
[ ] Degree Complete
[ ] Begin Career or Graduate School

Chemical Engineering Program 2014/2015 (129 Hours)

Student A# _____ **Student Name (Last, First MI)** _____

Semester, Transfer or AP	Grade	Course Number	Cr Hrs	Course Title	Prerequisites, Corequisites and/or Prerequisites with Concurrency	Offered: F=Fall S=Spring M=Summer
				English - 6 hours		
		EH 101	3	Freshman Composition I	Placement	FSM
		EH 102	3	Freshman Composition II	EH 101	FSM
				Mathematics - 15 hours		
		MA 171	4	Calculus A	MA 113 or MA 115 or Level III Placement	FSM
		MA 172	4	Calculus B	MA 171	FSM
		MA 201	4	Calculus C	MA 172	FSM
		MA 238	3	Applied Differential Equations	Prereq w/Con: MA 201	FSM
				Chemistry - 18 hours		
		CH 121	3	General Chemistry I	Plcmt or CH 101, MA 113 or 115, Prereq w/Con: MA 171, Coreq: CH 125	FSM
		CH 125	1	General Chemistry Lab I	Coreq: CH 121	FSM
		CH 123	3	General Chemistry II	CH 121, Prereq w/Con: CH 126	FSM
		CH 126	1	General Chemistry Lab II	Coreq: CH 123	FSM
		CH 331	3	Organic Chemistry I	CH 123, CH 126	FSM
		CH 335	1	Organic Chemistry Lab I	Prereq w/Con: CH 331	FSM
		CH 332	3	Organic Chemistry II	CH 331	FSM
		CH 341	3	Physical Chemistry I	CH 123, MA 201, PH 112	F
				Physics - 8 hours		
		PH 111	3	General Physics w/Calculus I	MA 171, Coreq: 114	FSM
		PH 114	1	General Physics Lab I	Coreq: PH 111	FSM
		PH 112	3	General Physics w/Calculus II	MA 172, PH 111, Coreq: 115	FSM
		PH 115	1	General Physics Lab II	Coreq: PH 112	FSM
				Biology - 3 hours		
		BYS 311	3	Intro to Molecular Biological Systems	CH 331	S
				History, Social & Behavioral Sciences, Humaities & Fine Arts - 18 hours		
			3	History	HY 103, HY 104, HY 221, or HY 222	FSM
			3	Literature	EH 207 or EH 208	FSM
			3	Fine Art	ARH 100, ARH 101, ARH 103, CM 122, MU 100, or ARS 160	FSM
			3	Social & Behavioral Science	For more information on HSBS/HFA Requirements: http://www.uah.edu/images/colleges/engineering/CUE2%20Files/Forms/HSBS_HFA_Requirements.pdf	FSM
			3	Sequence Course		FSM
			3	HSBS/HFA		FSM
				Engineering Core - 12 hours		
		CHE 244	3	Intro to Chemical Engineering Systems	CH 123, PH 111, Prereq w/Con: CHE 198	S
		CHE 294	3	Nature & Properties of Materials	CH 121, PH 111	FM
		EE 213	3	Electrical Circuit Analysis I	PH 112, Prereq w/Con: MA 238 & (MA 244 or CHE 244)	FSM
		MAE 271	3	Statics	PH 111, Prereq w/Con: MA 201	FSM
				Chemical Engineering Option - 40 hours		
		CHE 197	2	Intro to Chemical Engineering Processes	Level II Math Placement or Coreq: MA 112	F
		CHE 198	2	Computational Tools for Chemical Engineers	CHE 197, Prereq w/Con: MA 113	S
		CHE 295	1	Nature & Properties of Materials Lab	Prereq w/Con: CHE 294	FM
		CHE 342	3	Transport Phenomena	CHE 244, Prereq w/Con: MAE 310	S
		CHE 344	3	Chemical Engineering Thermodynamics	CHE 244, CH 341	S
		MAE 310	3	Fluid Mechanics I	MA 238, MAE/CE 271 & (MAE 111 or CPE 112 or CHE 198)	FSM
		CHE 347	3	Quantitative Modeling for Chemical Engrs	CHE 198, CHE 244, MA 238	FM
		CHE 439	3	Unit Operations Lab I	CHE 295, Prereq w/Con: CHE 441, CHE 446	F
		CHE 440	2	Unit Operations Lab II	CHE 439, CHE 441, CHE 443	S
		CHE 441	3	Chemical Kinetics & Reactor Design	CHE 344, CHE 347	F
		CHE 443	3	Mass Transfer Operations	CHE 342, CHE 344, MAE 310	F
		CHE 445	3	Chemical Process Control	CHE 441	S
		CHE 446	3	Analysis & Design of Transport Equipment	CHE 342, Prereq w/Con: CHE 443	F
		CHE 448	3	Chemical Engineering Design	CHE 441, CHE 443, CHE 446, Prereq w/Con:CHE 445	S
		CHE 485	3	Process Safety and Toxicology	Prereq w/Con: CHE 448	S
				Chemical Engineering Electives - 9 hours		
Select One Concentration: Biotechnology		CH 361	3	General Biochemistry I	BYS 311, CH 332, CH 335	FSM
		CHE 460	3	Introduction to Bioprocess Engineering	CH 361	F
		CHE 461	3	Bioseparations	CHE 460	S
Materials Engineering		CH 440	3	Polymer Synthesis & Characterization	CH 331	F
		CHE 494	3	Applied Materials Engineering	CHE 294, CHE 344	S
		CHE 495	3	Polymer Engineering	CH 341, CH 440	F

All prerequisite classes must be completed with a "C-" or higher grade.
The Catalog is the final authority for all degree requirements.

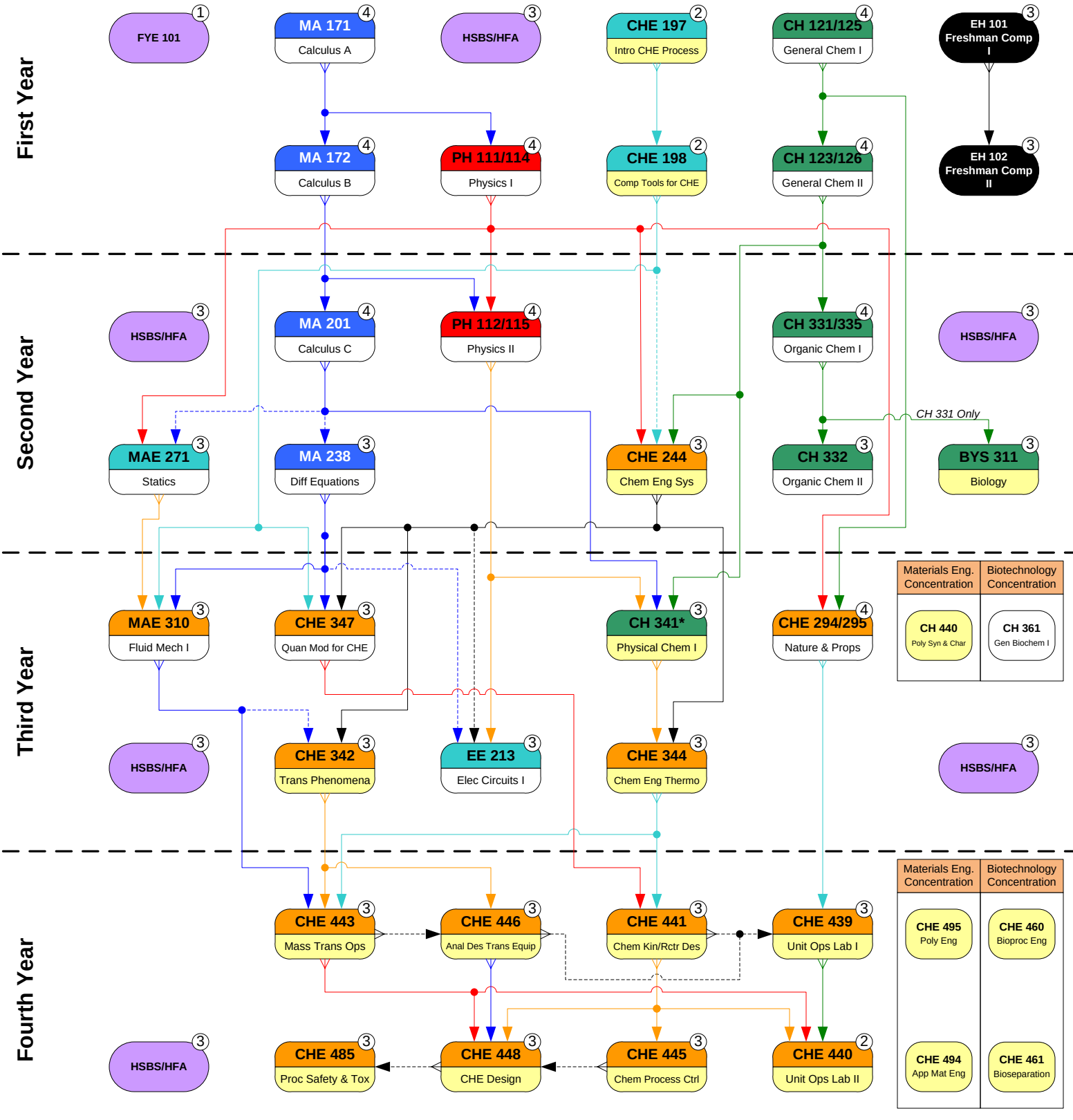
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Updated: 6/5/2014

Academic Flowchart

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Chemical Engineering
2014/2015 (129 Hours)



* Important for scheduling curriculum completion.

Legend Updated: 8/28/14

- Mathematics
- Physics
- Chemistry / Biology
- Engineering Core
- Chemical Engineering Option
- Electives
- Freshman Comp
- History, Social & Behavioral Science Humanity & Fine Art
- Offered only in semester listed
- (3) Credit Hours
- → Prerequisite
- ⇢ Prereq w/concurrency

Academic Pathways

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Chemical Engineering
2014-2015 Plan

Curriculum Pathway	Research Pathway	Internship Pathway	Co-op Pathway

Required
Recommended

Miletone Year-1

[ ] 34 hours completed including:	[ ] Meet with Faculty to discuss pathway choices
MA 171, CH 121/125,CHE 197,	[ ] Meet with Career Development
HSBS/HFA, FYE 101, EH 101	[ ] Attend Career Services Workshop on Resume
MA 172, PH 111/114, CHE 198,	[ ] Outline Resume
CH 123/126, EH 102	[ ] Participate in Career Fair

Milestone Year-2

[ ] 64 hours completed including:	[ ] Meet with Faculty for Undergraduate research opportunities
MA 201, PH 112/115,	[ ] Attend Career Services Workshop on Interviews
CH 331/335, HSBS/HFA	[ ] Professional Resume
MA 238, CH 332, MAE 271	[ ] Attend Career Fair
BYS 311, CHE 244, HSBS/HFA	[ ] Co-op/Internship Offer (Summer Start)

SELECT ONE PATHWAY OPTION

Research Pathway | **Intership Pathway** | **Co-op Pathway**

Milestone Year-3

Research Pathway

[ ] 99 hours completed including:
MAE 310, CHE 347, CH 341,
CHE 294, CHE 295, CHE Conc 1
EE 213, CHE 342, CHE 344,
HSBS/HFA, HSBS/HFA
[ ] Undergraduate Research
[ ] Attend JUMP Information Session

Internship Pathway

[ ] 99 hours completed from Curriculum Pathway
[ ] Summer Internship

Co-op Pathway

[ ] Obtain Faculty Mentor
[ ] 90 hours completed including:
Work Semester (Summer)
CHE 347, CH 341, CHE 294,
CHE 295, CHE Conc 1 (Fall)
Work Semester (Spring)
MAE 310, CHE 344,
HSBS/HFA, HSBS/HFA (Summer)
[ ] 2 Semesters of Co-op

Milestone Year-4

Research Pathway

[ ] 128 hours completed including:
CHE 443, CHE 446, CHE 441,
CHE 439, CHE Conc 2
CHE 485, CHE 448, CHE 445
CHE 440, CHE Conc 3, HSBS/HFA
[ ] Undergraduate Research Complete
[ ] Senior Design Complete
[ ] Degree Complete
[ ] Begin Career or Graduate School

Internship Pathway

[ ] 128 hours completed from Curriculum Pathway
[ ] Summer Internship
[ ] Senior Design Complete
[ ] Degree Complete
[ ] Begin Career or Graduate School

Co-op Pathway

[ ] 100 hours completed including:
Work Semester (Fall)
CHE 342, EE 213,
HSBS/HFA, HSBS/HFA (Spring)
Work Semester (Summer)
[ ] Experiential Learning complete
[ ] Decision on Industry or Graduate School

Milestone Year-5

Co-op Pathway

[ ] 129 hours completed including:
CHE 433, CHE 446, CHE 441
CHE 439, CHE Conc 2
CHE 485, CHE 448, CHE 445,
CHE 440, HSBS/HFA, CHE Conc 3
[ ] Senior Design Complete
[ ] Degree Complete
[ ] Begin Career or Graduate School

6/4/2014

Computer Engineering Program 2014/2015 (128 Hours)

Student A# _____ Student Name (Last, First MI) _____

	Semester, Transfer or AP	Grade	Course Number	Cr Hrs	Course Title	Prerequisites, Corequisites and/or Prerequisites with Concurrency	Offered: F=Fall S=Spring M=Summer
					English - 6 hours		
			EH 101	3	Freshman Composition I	Placement	FSM
			EH 102	3	Freshman Composition II	EH 101	FSM
					Mathematics - 18 hours		
			MA 171	4	Calculus A	MA 113 or MA 115 or Level III Placement	FSM
			MA 172	4	Calculus B	MA 171	FSM
			MA 201	4	Calculus C	MA 172	FSM
			MA 238	3	Applied Differential Equations	Prereq w/Con: MA 201	FSM
			MA 244	3	Introduction to Linear Algebra	MA 172	FSM
					Chemistry - 4 hours		
			CH 121	3	General Chemistry I	Plcmt or CH 101, MA 113 or 115, Prereq w/Con: MA 171, Coreq: CH 125	FSM
			CH 125	1	General Chemistry Lab I	Coreq: CH 121	FSM
					Physics - 8 hours		
			PH 111	3	General Physics w/Calculus I	MA 171, Coreq: 114	FSM
			PH 114	1	General Physics Lab I	Coreq: PH 111	FSM
			PH 112	3	General Physics w/Calculus II	MA 172, PH 111, Coreq: 115	FSM
			PH 115	1	General Physics Lab II	Coreq: PH 112	FSM
					History, Social & Behavioral Sciences, Humaities & Fine Arts - 18 hours		
				3	History	HY 103, HY 104, HY 221, or HY 222	FSM
				3	Literature	EH 207 or EH 208	FSM
				3	Fine Art	ARH 100, ARH 101, ARH 103, CM 122, MU 100, or ARS 160	FSM
				3	Social & Behavioral Science	For more information on HSBS/HFA Requirements: http://www.uah.edu/images/colleges/engineering/CUE2%20Files/Forms/HSBS_HFA_Requirements.pdf	FSM
				3	Sequence Course		FSM
				3	HSBS/HFA		FSM
**	Class has required lab section				**Engineering Core - 12 hours**		
**			CPE 112	3	Intro to Computer Programming in Engineering	MA 113, MA 115 or Level III Placement, Coreq: CPE 112L	FSM
			EE 202	3	Intro to Digital Logic Design	CPE 112, EE 100	FSM
			EE 213	3	Electrical Circuit Analysis I	PH 112, Prereq w/Con: MA 238 & (MA 244 or CHE 244)	FSM
			CPE 381	3	Fundamentals of Signals & Sys for Comp Engrs	EE 213, MA 238	FS
					Computer Science - 6 hours		
			CS 214	3	Intro to Discrete Structures	CPE 112, MA 171	FSM
			CS 317	3	Design & Analysis of Algorithms	CS 214, CPE 212, MA 244	FSM
**	Class has required lab section				**Computer Engineering Option - 47 hours**		
**			EE 100	3	Fund of Computer, Electrical & Optical Eng	Prereq w/Con: MA 112, Coreq: EE 100L	FSM
			CPE 212	3	Fundamentals of Software Engineering	CPE 112	FS
			CPE 221	3	Computer Organization	EE 202	FSM
			CPE 322	3	Digital Hardware Design Fundamentals	CPE 221, Coreq: CPE 324	S
			CPE 324	1	Digital Hardware Design Lab	Coreq: CPE 322	S
			EE 315	3	Introduction to Electronic Analysis and Design	EE 213	FSM
			EE 316	1	Electronic Measurements & Devices Design Lab	Prereq w/Con: EE 315	FS
			CPE 323	3	Intro to Embedded Computer Systems	CPE 221, Coreq: CPE 325	FS
			CPE 325	1	Lab Component of Intro of CE 323	Coreq: CPE 323	FS
			CPE 353	3	Software Design & Engineering	CPE 212, Prereq w/Con: CS 317	F
			EE 384	1	Digital Signal Processing Laboratory	CPE 381 or Prereq w/Con:EE 383	FS
Select One			EE 385	3	Random Signals and Noise	CPE 381 or EE 382	FSM
			ISE 390	3	Probability & Engineering Statistics I	Prereq w/Con: MA 201	FSM
			CPE 431	3	Intro to Computer Architecture	CPE 322, CPE 323	F
			CPE 434	3	Operating Systems	CPE 221, CPE 353, Coreq: CPE 435	F
			CPE 435	1	Operating Systems Lab	Coreq: CPE 434	F
			CPE 448	3	Introduction to Computer Networks	CPE 112, CPE 221, Coreq: CPE 448L	FS
			CPE 453	3	Senior Software Studio	CS 317, CPE 353	S
			CPE 495	3	Computer Engineering Design I	CPE 323, CPE 353, EE 315	F
			CPE 496	3	Computer Engineering Design II	CPE 495	S
					Computer Engineering Electives - 9 hours		
				3		300 - level or above approved by advisor.	
				3			
				3			

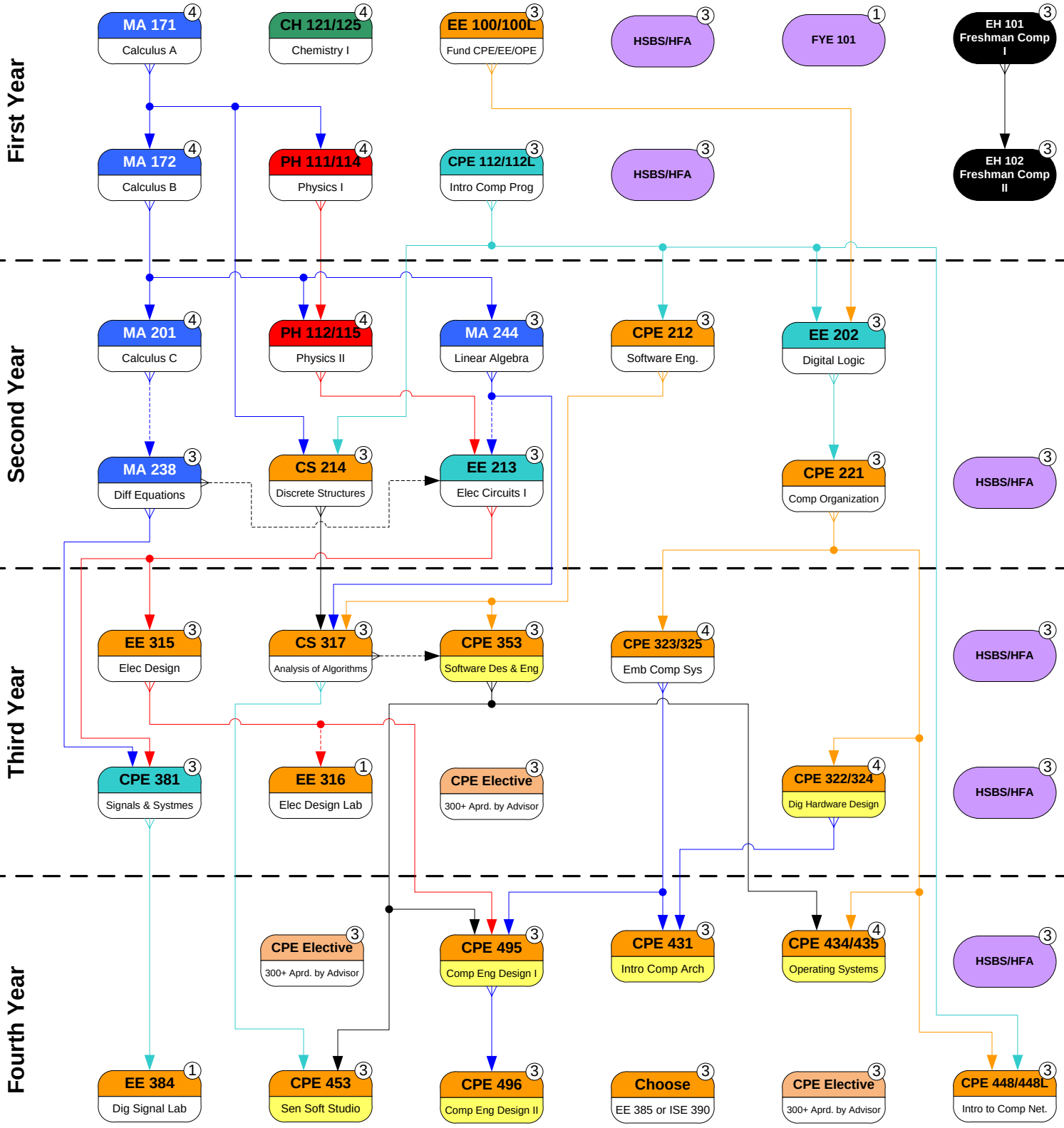
All prerequisite classes must be completed with a "C-" or higher grade.
The Catalog is the final authority for all degree requirements.

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Academic Flowchart

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Computer Engineering
2014/2015 (128 Hours)



Legend Updated: 8/28/14

- Mathematics
- Physics
- Chemistry / Biology
- Engineering Core
- Computer Engineering Option
- Electives
- Freshman Comp
- History, Social & Behavioral Science
  Humanity & Fine Art
- Offered only in semester listed
- (3) Credit Hours
- → Prerequisite
- ⇢ Prereq w/concurrency

Academic Pathways

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Computer Engineering
2014-2015 Plan

Curriculum Pathway	Research Pathway	Internship Pathway	Co-op Pathway

Required
Recommended

Miletone Year-1

[ ] 33 hours completed including:	[ ] Meet with Faculty to discuss pathway choices
MA 171, CH 121/125, EE 100,	[ ] Meet with Career Development
HSBS/HFA, FYE 101, EH 101	[ ] Attend Career Services Workshop on Resume
MA 172, PH 111/114, CPE 112,	[ ] Outline Resume
HSBS/HFA, EH 102	[ ] Participate in Career Fair

Milestone Year-2

[ ] 65 hours completed including:	[ ] Meet with Faculty for Undergraduate research opportunities
MA 201, PH 112/115, MA 244,	[ ] Attend Career Services Workshop on Interviews
EE 202, CPE 212	[ ] Professional Resume
MA 238, EE 213, CS 214	[ ] Attend Career Fair
CPE 221, HSBS/HFA	[ ] Co-op/Internship Offer (Summer Start)

SELECT ONE PATHWAY OPTION

Research Pathway | Intership Pathway | Co-op Pathway

Milestone Year-3

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 96 hours completed including:	[ ] 96 hours completed from Curriculum Pathway	[ ] Obtain Faculty Mentor
EE 315, CS 317, CPE 353,	[ ] Summer Internship	[ ] 90 hours completed including:
CPE 323, CPE 325, HSBS/HFA		Work Semester (Summer)
CPE 381, EE 316, CPE 322,CPE 324,		CPE 381, CS 317, CPE 353,
CPE Elec, Free Elec, HSBS/HFA		CPE 323, CPE 325 (Fall)
[ ] Undergraduate Research		Work Semester (Spring)
[ ] Attend JUMP Information Session		EE 315, EE 385/ISE 390,
		HSBS/HFA, HSBS/HFA (Summer)
		[ ] 2 Semesters of Co-op

Milestone Year-4

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 128 hours completed including:	[ ] 128 hours completed from Curriculum Pathway	[ ] 103 hours completed including:
CPE 495, CPE 434, CPE 435,	[ ] Summer Internship	Work Semester (Fall)
CPE 431, CPE Elec, HSBS/HFA	[ ] Senior Design Complete	CPE 322, CPE 324, CPE Elec,
CPE 496, CPE 453, CPE 488,	[ ] Degree Complete	CPE 448, CPE 453 (Spring)
EE 384, CPE Elec, EE 385/ISE 390	[ ] Begin Career or Graduate School	Work Semester (Summer)
[ ] Undergraduate Research Complete		[ ] Experiential Learning complete
[ ] Senior Design Complete		[ ] Decision on Industry or Graduate School
[ ] Degree Complete		
[ ] Begin Career or Graduate School		

Milestone Year-5

Co-op Pathway
[ ] 128 hours completed including:
CPE 434, CPE 435, CPE 431,
CPE Elec, CPE 495
CPE 496, CPE Elec, CPE 384,
EE 316, HSBS/HFA
[ ] Senior Design Complete
[ ] Degree Complete
[ ] Begin Career or Graduate School

6/4/2014

Electrical Engineering Program 2014/2015 (128 Hours)

Student A# | Student Name (Last, First MI) | Offered: F=Fall S=Spring M=Summer

	Semester, Transfer or AP	Grade	Course Number	Cr Hrs	Course Title	Prerequisites, Corequisites and/or Prerequisites with Concurrency	Offered
					English - 6 hours		
			EH 101	3	Freshman Composition I	Placement	FSM
			EH 102	3	Freshman Composition II	EH 101	FSM
					Mathematics - 18 hours		
			MA 171	4	Calculus A	MA 113 or MA 115 or Level III Placement	FSM
			MA 172	4	Calculus B	MA 171	FSM
			MA 201	4	Calculus C	MA 172	FSM
			MA 238	3	Applied Differential Equations	Prereq w/Con: MA 201	FSM
			MA 244	3	Introduction to Linear Algebra	MA 172	FSM
					Chemistry - 4 hours		
			CH 121	3	General Chemistry I	Plcmt or CH 101, MA 113 or 115, Prereq w/Con: MA 171, Coreq: CH 125	FSM
			CH 125	1	General Chemistry Lab I	Coreq: CH 121	FSM
					Physics - 12 hours		
			PH 111	3	General Physics w/Calculus I	MA 171, Coreq: 114	FSM
			PH 114	1	General Physics Lab I	Coreq: PH 111	FSM
			PH 112	3	General Physics w/Calculus II	MA 172, PH 111, Coreq: 115	FSM
			PH 115	1	General Physics Lab II	Coreq: PH 112	FSM
			PH 113	3	General Physics w/Calculus III	MA 201, PH 112, Coreq: 116	FSM
			PH 116	1	General Physics Lab III	Coreq: PH 113	FSM
					History, Social & Behavioral Sciences, Humaities & Fine Arts - 18 hours		
				3	History	HY 103, HY 104, HY 221, or HY 222	FSM
				3	Literature	EH 207 or EH 208	FSM
				3	Fine Art	ARH 100, ARH 101, ARH 103, CM 122, MU 100, or ARS 160	FSM
				3	Social & Behavioral Science	For more information on HSBS/HFA Requirements: http://www.uah.edu/images/colleges/engineering/CUE2%20Files/Forms/HSBS_HFA_Requirements.pdf	FSM
				3	Sequence Course		FSM
				3	HSBS/HFA		FSM
					Engineering Core - 12 hours		
			EE 213	3	Electrical Circuit Analysis I	PH 112, Prereq w/Con: MA 238 & (MA 244 or CHE 244)	FSM
			ISE 321	3	Engineering Economy	Sophomore Standing	FSM
			EE 310	3	Solid State Fundamentals	PH 113, Prereq w/Con: MA 238	FS
			EE 382	3	Analytical Meth for Continuous Time Sys	EE 213, MA 238, MA 244	FSM
**	Class has required lab section				**Electrical Engineering Option - 43 hours**		
**			EE 100	3	Fund of Computer, Electrical & Optical Eng	Prereq w/Con: MA 112, Coreq: EE 100L	FSM
**			CPE 112	3	Intro to Computer Programming in Engineering	MA 113, MA 115 or Level III Placement, Coreq: CPE 112L	FSM
			EE 202	3	Intro to Digital Logic Design	CPE 112, EE 100	FSM
			EE 203	1	Digital Logic Design Lab	EE 202	FSM
			CPE 221	3	Computer Organization	EE 202	FSM
			EE 307	3	Electricity and Magnetism	EE 213	FSM
			EE 308	3	Electromagnetic Engineering	EE 307	FS
			EE 313	3	Electrical Circuit Analysis II	EE 213	FSM
			EE 315	3	Introduction to Electronic Analysis and Design	EE 213	FSM
			EE 316	1	Electronic Measurements & Devices Design Lab	Prereq w/Con: EE 315	FS
			CPE 323	3	Intro to Embedded Computer Systems	CPE 221, Coreq: CPE 325	FS
			CPE 325	1	Lab Component of Intro of CE 323	Coreq: CPE 323	FS
			EE 383	3	Analytical Meth for Mult and Discr Time Sys	EE 382	FSM
			EE 384	1	Digital Signal Processing Laboratory	CPE 381 or Prereq w/Con:EE 383	FS
			EE 385	3	Random Signals and Noise	CPE 381 or EE 382	FSM
			EE 386	3	Introduction to Control and Robotic Systems	CPE 381 or EE 382	FSM
			EE 494	3	EE Design Projects	EE 308, EE 310, EE 313, EE 315, EE 383, EE 385, EE 386, CPE 323, ISE 321	FS
					Electrical Engineering Electives - 12 hours		
				3	T1	Track: _____	
				3	T2	(Must take a 2 course track in one area.)	
				3		300 - level or above ECE course only	
				3		300 - level or above ECE course only	
					Technical Elective - 3 hours		
				3		200 - level or above Science or Engineering course	

All prerequisite classes must be completed with a "C-" or higher grade.
The Catalog is the final authority for all degree requirements.

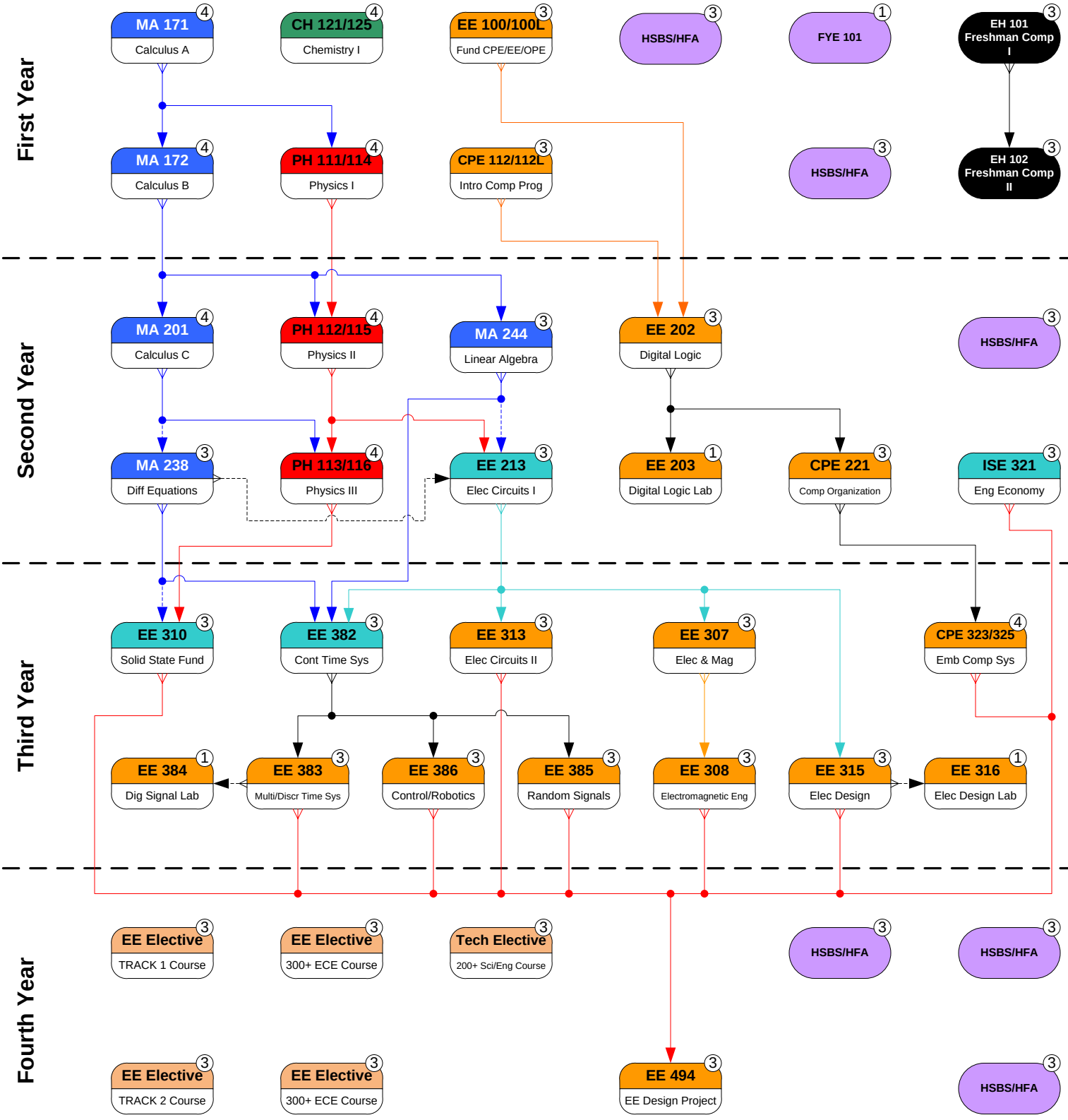
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Updated: 6/5/2014

Academic Flowchart

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Electrical Engineering
2014/2015 (128 Hours)



Legend Updated: 8/28/14

- Mathematics
- Physics
- Chemistry / Biology
- Engineering Core
- Electrical Engineering Option
- Electives
- Freshman Comp
- History, Social & Behavioral Science Humanity & Fine Art
- (3) Credit Hours
- Prerequisite
- Prereq w/concurrency

Academic Pathways

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Electrical Engineering
2014-2015 Plan

Curriculum Pathway	Research Pathway	Internship Pathway	Co-op Pathway

Required
Recommended

Miletone Year-1

[ ] 33 hours completed including:	[ ] Meet with Faculty to discuss pathway choices
MA 171, CH 121/125, EE 100, HSBS/HFA, FYE 101, EH 101	[ ] Meet with Career Development
	[ ] Attend Career Services Workshop on Resume
MA 172, PH 111/114, CPE 112, HSBS/HFA, EH 102	[ ] Outline Resume
	[ ] Participate in Career Fair

Milestone Year-2

[ ] 67 hours completed including:	[ ] Meet with Faculty for Undergraduate research opportunities
MA 201, PH 112/115, MA 244, EE 202, HSBS/HFA	[ ] Attend Career Services Workshop on Interviews
	[ ] Professional Resume
MA 238, PH 113/116, EE 213, CPE 221, EE 203, ISE 321	[ ] Attend Career Fair
	[ ] Co-op/Internship Offer (Summer Start)

SELECT ONE PATHWAY OPTION

Research Pathway

Intership Pathway

Co-op Pathway

Milestone Year-3

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 100 hours completed including:	[ ] 100 hours completed from Curriculum Pathway	[ ] Obtain Faculty Mentor
EE 310, EE 382, EE 313, EE 307, CPE 323, CPE 325	[ ] Summer Internship	[ ] 96 hours completed including:
		Work Semester (Summer)
EE 315, EE 383, EE 386, EE 385, EE 308, EE 384, EE 316		EE 310, EE 382, EE 313, EE 307, CPE 323, CPE 325 (Fall)
		Work Semester (Spring)
[ ] Undergraduate Research		EE 315, EE 383, EE 386, EE 385, EE 316 (Summer)
[ ] Attend JUMP Information Session		[ ] 2 Semesters of Co-op

Milestone Year-4

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 128 hours completed including:	[ ] 128 hours completed from Curriculum Pathway	[ ] 112 hours completed including:
EE Track 1, EE Elec, Tech Elec, HSBS/HFA, HSBS/HFA	[ ] Summer Internship	Work Semester (Fall)
	[ ] Senior Design Complete	EE 308, EE 384, EE Elec, EE Elec Tech Elec, HSBS/HFA (Spring)
EE Track 2, EE Elec, EE 494, HSBS/HFA, Free Elec	[ ] Degree Complete	Work Semester (Summer)
[ ] Undergraduate Research Complete	[ ] Begin Career or Graduate School	[ ] Experiential Learning complete
[ ] Senior Design Complete		[ ] Decision on Industry or Graduate School
[ ] Degree Complete		
[ ] Begin Career or Graduate School		

Milestone Year-5

Co-op Pathway
[ ] 128 hours completed including:
EE 494, EE Elec, EE Elec, HSBS/HFA, HSBS/HFA (Fall)
[ ] Senior Design Complete
[ ] Degree Complete
[ ] Begin Career or Graduate School

Industrial & Systems Engineering Program 2014/2015 (127 Hours)

Student A# _____ Student Name (Last, First MI) _____

	Semester, Transfer or AP	Grade	Course Number	Cr Hrs	Course Title	Prerequisites, Corequisites and/or Prerequisites with Concurrency	Offered: F=Fall S=Spring M=Summer
					English - 6 hours		
			EH 101	3	Freshman Composition I	Placement	FSM
			EH 102	3	Freshman Composition II	EH 101	FSM
					Mathematics - 18 hours		
			MA 171	4	Calculus A	MA 113 or MA 115 or Level III Placement	FSM
			MA 172	4	Calculus B	MA 171	FSM
			MA 201	4	Calculus C	MA 172	FSM
			MA 238	3	Applied Differential Equations	Prereq w/Con: MA 201	FSM
			MA 244	3	Introduction to Linear Algebra	MA 172	FSM
					Chemistry - 4 hours		
			CH 121	3	General Chemistry I	Plcmt or CH 101, MA 113 or 115, Prereq w/Con: MA 171, Coreq: CH 125	FSM
			CH 125	1	General Chemistry Lab I	Coreq: CH 121	FSM
					Physics - 8 hours		
			PH 111	3	General Physics w/Calculus I	MA 171, Coreq: 114	FSM
			PH 114	1	General Physics Lab I	Coreq: PH 111	FSM
			PH 112	3	General Physics w/Calculus II	MA 172, PH 111, Coreq: 115	FSM
			PH 115	1	General Physics Lab II	Coreq: PH 112	FSM
					Science Elective - 3 hours		
				3		BYS 119 or CH 123 or 300/400 level MA course	
					History, Social & Behavioral Sciences, Humaities & Fine Arts - 18 hours		
				3	History	HY 103, HY 104, HY 221, or HY 222	FSM
				3	Literature	EH 207 or EH 208	FSM
				3	Fine Art	ARH 100, ARH 101, ARH 103, CM 122, MU 100, or ARS 160	FSM
				3	Social & Behavioral Science	For more information on HSBS/HFA Requirements: http://www.uah.edu/images/colleges/engineering/CUE2%20Files/Forms/HSBS_HFA_Requirements.pdf	FSM
				3	Sequence Course		FSM
				3	HSBS/HFA		FSM
					Engineering Core - 12 hours		
			MAE 271	3	Statics	PH 111, Prereq w/Con: MA 201	FSM
			EE 213	3	Electrical Circuit Analysis I	PH 112, Prereq w/Con: MA 238 & (MA 244 or CHE 244)	FSM
			ISE 321	3	Engineering Economy	Sophomore Standing	FSM
			MAE 341	3	Thermodynamics I	MA 201, CH 121, CH 125, PH 112	FSM
**	Class has required lab section				**Industrial & System Engineering Option - 46 hours**		
**			CPE 112	3	Intro to Computer Programming in Engineering	MA 113, MA 115 or Level III Placement, Coreq: CPE 112L	FSM
Select One			CE 111	2	Civil Engineering Graphics	MA 112 or Level II Placement, Freshman CE Standing	FS
			MAE 111	3	Intro to Computational Tools	Prereq w/Con: MA 113	FSM
			ISE 124	3	Intro to Industrial & Systems Engineering	Prereq w/Con: MA 113	F
			ISE 324	3	Work Design	ISE 390	F
			ISE 327	3	Management Systems Analysis	ISE 390	S
			ISE 340	3	Operations Research	Prereq w/Con: ISE 390	F
**			MAE 370	4	Mechanics of Materials	MAE/CE 271, MA 244 & (MAE 111 or CPE 112), Coreq: MAE 370L	FSM
			ISE 390	3	Probability & Engineering Statistics I	Prereq w/Con: MA 201	FSM
			ISE 391	3	Probability & Engineering Statistics II	ISE 390	S
			ISE 423	3	Statistical Quality Control	Prereq w/Con: ISE 391	S
			ISE 428	3	Systems Analysis & Design I	ISE 124, ISE 321, ISE 340, ISE 391, Senior Standing	F
			ISE 429	3	Systems Analysis & Design II	ISE 428	S
			ISE 430	3	Manufacturing Systems and Facilities Design	Senior Standing	F
			ISE 433	3	Production & Inventory Control Systems	ISE 390	S
			ISE 447	3	Intro to Systems Simulation	CPE 112, ISE 391	F
					Industrial & Systems Engineering Electives - 9 hours		
				3	Choose from MA 385, ISE 402, ISE 403, ISE 426, ISE 437, or other upper-level courses approved by the Department. May select a maximum of 6 hours from the following: EH 301, ACC 211, MTK 301, MGT 363, or MGT 462.		
				3			
				3			
					Technical Elective - 3 hours		
				3		200-level or above Engineering or Science course	

All prerequisite classes must be completed with a "C-" or higher grade.

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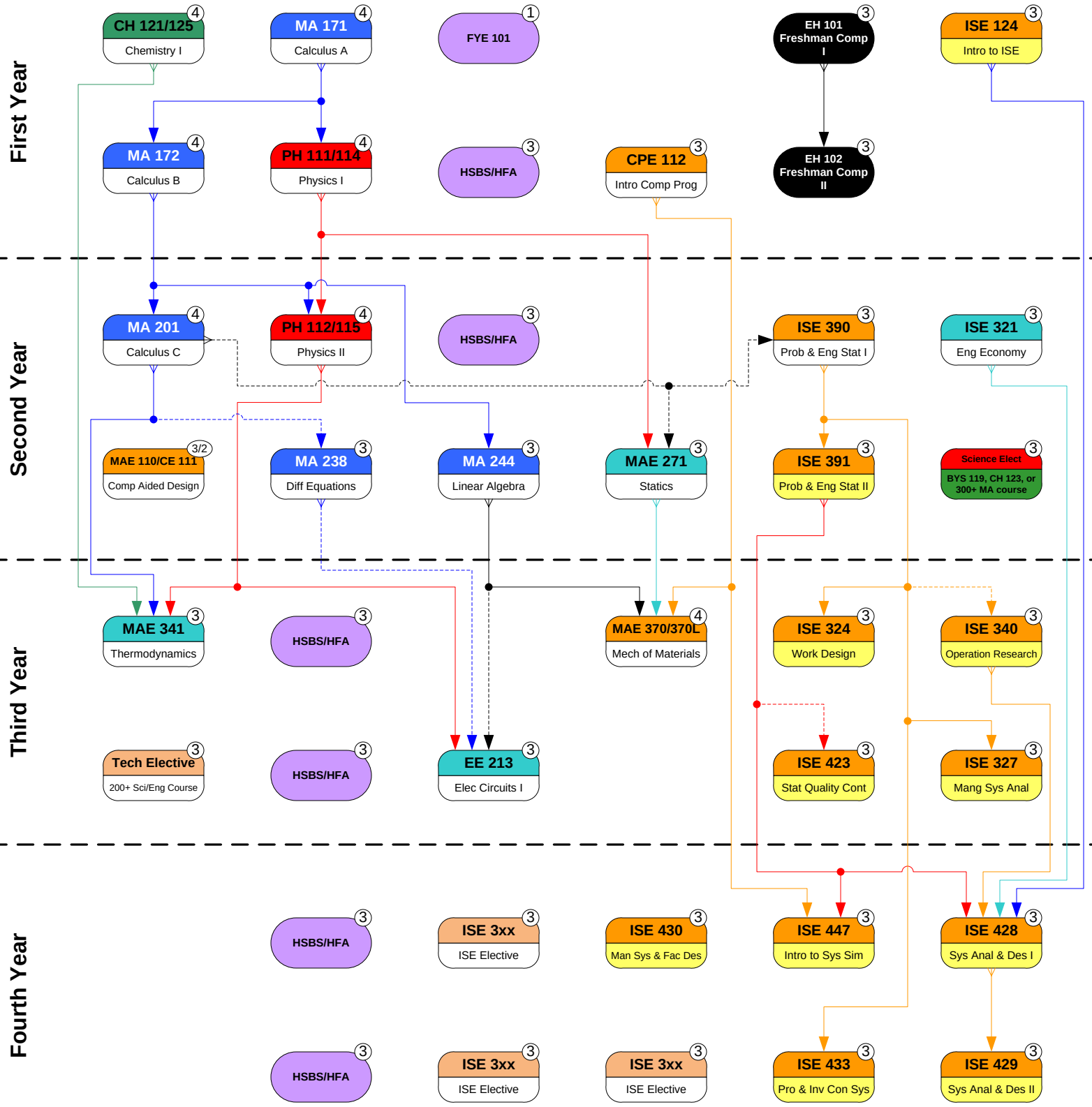
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Academic Flowchart

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Industrial & Systems Engineering
2014/2015 (127 Hours)



Legend Updated: 8/28/14

- Mathematics
- Physics
- Chemistry / Biology
- Engineering Core
- Industrial & Systems Engineering Option
- Electives
- Freshman Comp
- History, Social & Behavioral Science Humanity & Fine Art
- Offered only in semester listed
- (3) Credit Hours
- Prerequisite
- Prereq w/concurrency

Academic Pathways

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Industrial & Systems Engineering
2014-2015 Plan

Curriculum Pathway	Research Pathway	Internship Pathway	Co-op Pathway

Required
Recommended

Miletone Year-1

[ ] 32 hours completed including:	[ ] Meet with Faculty to discuss pathway choices
MA 171, CH 121/125, FYE 101, EH 101, ISE 124, HSBS/HFA	[ ] Meet with Career Development [ ] Attend Career Services Workshop on Resume
MA 172, PH 111/114, CPE 112, EH 102, HSBS/HFA	[ ] Outline Resume [ ] Participate in Career Fair

Milestone Year-2

[ ] 64 hours completed including:	[ ] Meet with Faculty for Undergraduate research opportunities
MA 201, PH 112/115, ISE 390, ISE 321, Sci Elec	[ ] Attend Career Services Workshop on Interviews [ ] Professional Resume
MA 238, MAE 271, ISE 391, MA 244, MAE/CE 111	[ ] Attend Career Fair [ ] Co-op/Internship Offer (Summer Start)

SELECT ONE PATHWAY OPTION

Research Pathway | **Intership Pathway** | **Co-op Pathway**

Milestone Year-3

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 95 hours completed including:	[ ] 95 hours completed from Curriculum Pathway	[ ] Obtain Faculty Mentor
MAE 341, ISE 340, ISE 324, MAE 370, HSBS/HFA	[ ] Summer Internship	[ ] 91 hours completed including:
EE 213, ISE 423, ISE 327, HSBS/HFA, Tech Elec		Work Semester (Summer)
[ ] Undergraduate Research		ISE 340, ISE 324, ISE Elec, HSBS/HFA
[ ] Attend JUMP Information Session		Work Semester (Spring)
		EE 213, MAE 341, MAE 370, HSBS/HFA
		[ ] 2 Semesters of Co-op

Milestone Year-4

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 127 hours completed including:	[ ] 127 hours completed from Curriculum Pathway	[ ] 103 hours completed including:
ISE 430, ISE 447, ISE 428, ISE Elec, HSBS/HFA	[ ] Summer Internship	Work Semester (Fall)
ISE 429, ISE 433, ISE Elec, ISE Elec, HSBS/HFA	[ ] Senior Design Complete	ISE 423, ISE 327, Tech Elec, HSBS/HFA
[ ] Undergraduate Research Complete	[ ] Degree Complete	Work Semester (Summer)
[ ] Senior Design Complete	[ ] Begin Career or Graduate School	[ ] Experiential Learning complete
[ ] Degree Complete		[ ] Decision on Industry or Graduate School
[ ] Begin Career or Graduate School		

Milestone Year-5

Co-op Pathway
[ ] 127 hours completed including:
ISE 447, ISE 428, ISE 430, HSBS/HFA
ISE 429, ISE 433, ISE Elec, ISE Elec
[ ] Senior Design Complete
[ ] Degree Complete
[ ] Begin Career or Graduate School

6/4/2014

Mechanical Engineering Program 2014/2015 (129 Hours)

Student A# | Student Name (Last, First MI)

	Semester, Transfer or AP	Grade	Course Number	Cr Hrs	Course Title	Prerequisites, Corequisites and/or Prerequisites with Concurrency	Offered: F=Fall S=Spring M=Summer
					English - 6 hours		
			EH 101	3	Freshman Composition I	Placement	FSM
			EH 102	3	Freshman Composition II	EH 101	FSM
					Mathematics - 18 hours		
			MA 171	4	Calculus A	MA 113 or MA 115 or Level III Placement	FSM
			MA 172	4	Calculus B	MA 171	FSM
			MA 201	4	Calculus C	MA 172	FSM
			MA 238	3	Applied Differential Equations	Prereq w/Con: MA 201	FSM
			MA 244	3	Introduction to Linear Algebra	MA 172	FSM
					Chemistry - 4 hours		
			CH 121	3	General Chemistry I	Plcmt or CH 101, MA 113 or 115, Prereq w/Con: MA 171, Coreq: CH 125	FSM
			CH 125	1	General Chemistry Lab I	Coreq: CH 121	FSM
					Physics - 8 hours		
			PH 111	3	General Physics w/Calculus I	MA 171, Coreq: 114	FSM
			PH 114	1	General Physics Lab I	Coreq: PH 111	FSM
			PH 112	3	General Physics w/Calculus II	MA 172, PH 111, Coreq: 115	FSM
			PH 115	1	General Physics Lab II	Coreq: PH 112	FSM
					Science Elective - 4 hours		
				3		Choose from BYS 119, CH 123/126, or PH 113/116	FSM
				1			FSM
					History, Social & Behavioral Sciences, Humaities & Fine Arts - 18 hours		
				3	History	HY 103, HY 104, HY 221, or HY 222	FSM
				3	Literature	EH 207 or EH 208	FSM
				3	Fine Art	ARH 100, ARH 101, ARH 103, CM 122, MU 100, or ARS 160	FSM
				3	Social & Behavioral Science	For more information on HSBS/HFA Requirements: http://www.uah.edu/images/colleges/engineering/CUE2%20Files/Forms/HSBS_HFA_Requirements.pdf	FSM
				3	Sequence Course		FSM
				3	HSBS/HFA		FSM
					Engineering Core - 12 hours		
			MAE 271	3	Statics	PH 111, Prereq w/Con: MA 201	FSM
			MAE 341	3	Thermodynamics I	MA 201, CH 121, CH 125, PH 112	FSM
			EE 213	3	Electrical Circuit Analysis I	PH 112, Prereq w/Con: MA 238 & (MA 244 or CHE 244)	FSM
			ISE 321	3	Engineering Economy	Sophomore Standing	FSM
**	Class has required lab section				**Mechanical Engineering Option - 53 hours**		
**			MAE 100	2	Intro to Mechanical Engineering	Prereq w/Con: MA 113, Coreq: MAE 100L	FS
			MAE 111	3	Intro to Computational Tools	Prereq w/Con: MA 113	FSM
			MAE 272	3	Dynamics	MAE/CE 271 & (MAE 111 or CPE 112)	FSM
**			MAE 284	3	Numerical Methods	MA 244 & (MAE 111 or CPE 112); Prereq w/Con: MA 238 & Coreq: MAE 284L	FSM
			MAE 310	3	Fluid Mechanics I	MA 238, MAE/CE 271 & (MAE 111 or CPE 112 or CHE 198)	FSM
**			MAE 311	3	Principles of Measurement & Instrumentation	EE 213 & (MAE 100 or 200), Coreq: MAE 311L	FSM
			MAE 342	3	Thermodynamics II	MAE 341, MA 238, Prereq w/Con: MAE 284	FSM
**			MAE 364	4	Kinematics & Dynamics of Machines	MAE 111, MAE/CE 272, Coreq: MAE 364L	FS
**			MAE 370	4	Mechanics of Materials	MAE/CE 271, MA 244 & (MAE 111 or CPE 112), Coreq: MAE 370L	FSM
			MAE 378	3	Materials & Manufacturing Processes	MAE/CE 370	FSM
**			MAE 450	4	Intro to Heat and Mass Transfer	MAE 284, MAE 310, MAE 311, MAE 341, Coreq: MAE 450L	FS
			MAE 455	3	Design of Thermal Systems	MAE 342, MAE 450, Recommended: MAE 490	SM
			MAE 466	3	Mechanics & Design of Machine Elements	MAE 364, MAE/CE 370	FM
			MAE 488	3	Analysis of Engineering Systems	EE 213, MAE/CE 272, MAE 284	FSM
			MAE 489	3	Computer-Aided Engineering Analysis	MAE/CE 370, Prereq w/Con: MAE 284	FS
			MAE 490	3	Intro to Engineering Design	ISE 321, MAE 310, MAE 311, MAE 341, MAE 370, (MAE 364 & MAE 387) or (MAE 200 & MAE 371)	FSM
Select One			MAE 491	3	Product Realization	MAE 490 & Senior Standing	FS
			MAE 492	3	Mission Design & Development	MAE 490 & Senior Standing	S
			MAE 493	3	Rocket Design	MAE 490 & Senior Standing	S
			MAE 494	3	Aircraft Design	MAE 490 & Senior Standing	S
					Technical Elective - 6 hours		
				3		300 - level or above Science or Engineering course	
				3			

All prerequisite classes must be completed with a "C-" or higher grade.

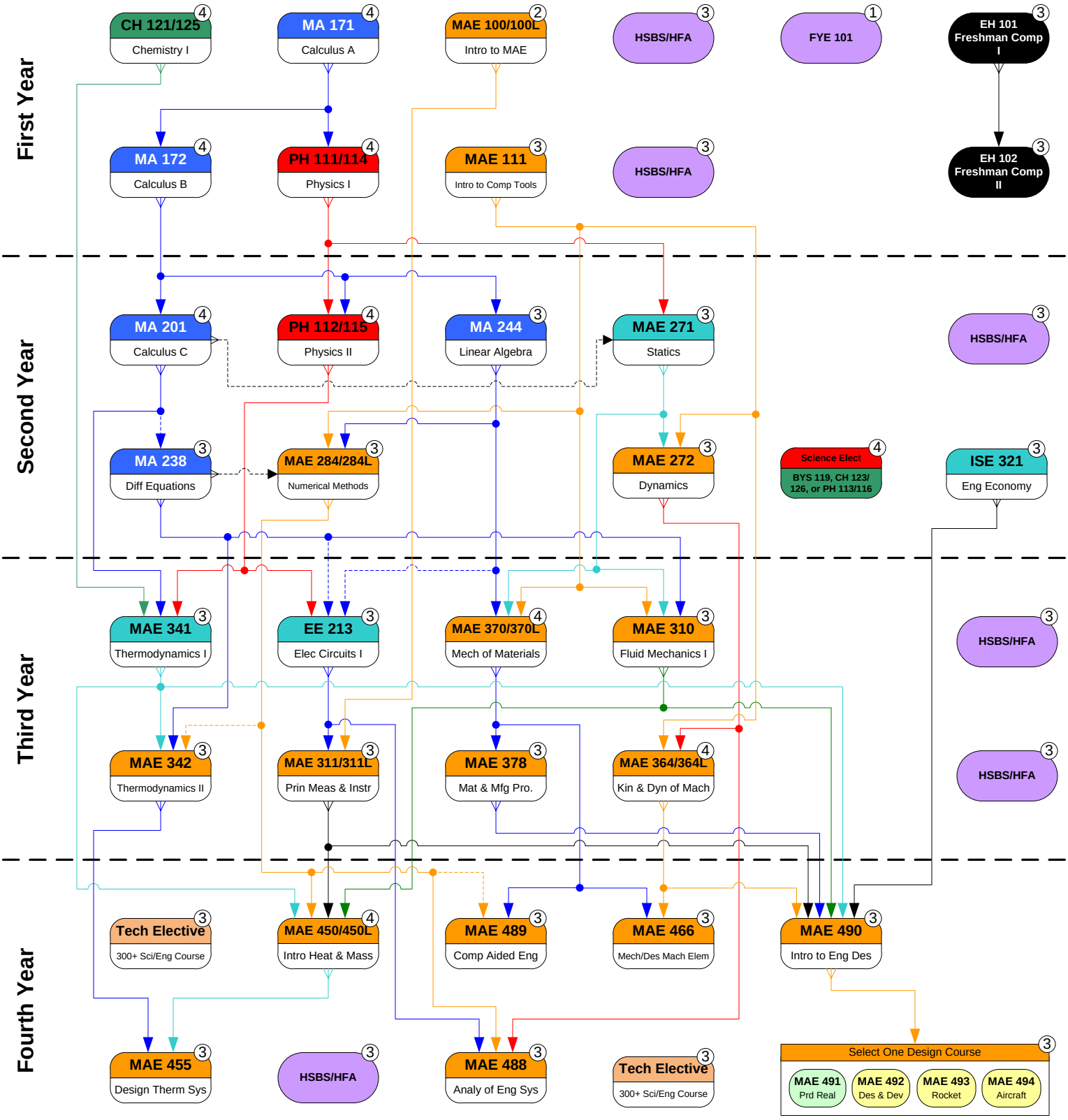
The Catalog is the final authority for all degree requirements.

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Academic Flowchart

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Mechanical Engineering
2014/2015 (129 Hours)



Legend Updated: 9/18/14

- Mathematics
- Physics
- Chemistry / Biology
- Engineering Core
- Mechanical Engineering Option
- Electives
- Freshman Comp
- History, Social & Behavioral Science Humanity & Fine Art
- Offered only in semester listed
- (3) Credit Hours
- Prerequisite
- Prereq w/concurrency

Academic Pathways

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Mechanical Engineering
2014-2015 Plan

Curriculum Pathway	Research Pathway	Internship Pathway	Co-op Pathway

Required
Recommended

Miletone Year-1

[ ] 34 hours completed including:	[ ] Meet with Faculty to discuss pathway choices
MA 171, CH 121/125, MAE 100, HSBS/HFA, FYE 101, EH 101	[ ] Meet with Career Development
	[ ] Attend Career Services Workshop on Resume
MA 172, PH 111/114, MAE 111, HSBS/HFA, EH 102	[ ] Outline Resume
	[ ] Participate in Career Fair

Milestone Year-2

[ ] 66 hours completed including:	[ ] Meet with Faculty for Undergraduate research opportunities
MA 201, PH 112/115, MA 244, MAE 271, HSBS/HFA	[ ] Attend Career Services Workshop on Interviews
	[ ] Professional Resume
MA 238, MAE 284, Sci Elec, MAE 272, ISE 321	[ ] Attend Career Fair
	[ ] Co-op/Internship Offer (Summer Start)

SELECT ONE PATHWAY OPTION

Research Pathway | Intership Pathway | Co-op Pathway

Milestone Year-3

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 98 hours completed including:	[ ] 98 hours completed from Curriculum Pathway	[ ] Obtain Faculty Mentor
MAE 341, EE 213, MAE 370, MAE 310, HSBS/HFA	[ ] Summer Internship	[ ] 93 hours completed including:
		Work Semester (Summer)
MAE 342, MAE 311, MAE 378, MAE 364, HSBS/HFA		MAE 341, MAE 364, MAE 310, MAE 370 (Fall)
[ ] Undergraduate Research		Work Semester (Spring)
[ ] Attend JUMP Information Session		EE 213, MAE 311, MAE 342, MAE 378 (Summer)
		[ ] 2 Semesters of Co-op

Milestone Year-4

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 129 hours completed including:	[ ] 129 hours completed from Curriculum Pathway	[ ] 118 hours completed including:
MAE 450, MAE 489, MAE 466, MAE 490, Tech Elec	[ ] Summer Internship	Work Semester (Fall)
	[ ] Senior Design Complete	MAE 490, MAE 450, MAE 489, Tech Elec (Spring)
MAE 455, MAE 488, MAE 49x, Tech Elec, HSBS/HFA	[ ] Degree Complete	MAE 488, MAE 455, MAE 466, HSBS/HFA (Summer)
[ ] Undergraduate Research Complete	[ ] Begin Career or Graduate School	[ ] Experiential Learning complete
[ ] Senior Design Complete		[ ] Decision on Industry or Graduate School
[ ] Degree Complete		
[ ] Begin Career or Graduate School		

Milestone Year-5

Co-op Pathway
[ ] 129 hours completed including:
MAE 49x, Tech Elec, HSBS/HFA, HSBS/HFA (Fall)
[ ] Senior Design Complete
[ ] Degree Complete
[ ] Begin Career or Graduate School

Optical Engineering Program 2013/2014 (128 Hours)

Student A# _____ Student Name (Last, First MI) _____

	Semester, Transfer or AP	Grade	Course Number	Cr Hrs	Course Title	Prerequisites, Corequisites and/or Prerequisites with Concurrency	Offered: F=Fall S=Spring M=Summer
					English - 6 hours		
			EH 101	3	Freshman Composition I	Placement	FSM
			EH 102	3	Freshman Composition II	EH 101	FSM
					Mathematics - 18 hours		
			MA 171	4	Calculus A	MA 113 or MA 115 or Level III Placement	FSM
			MA 172	4	Calculus B	MA 171	FSM
			MA 201	4	Calculus C	MA 172	FSM
			MA 238	3	Applied Differential Equations	Prereq w/Con: MA 201	FSM
			MA 244	3	Introduction to Linear Algebra	MA 172	FSM
					Chemistry - 4 hours		
			CH 121	3	General Chemistry I	Plcmt or CH 101, MA 113 or 115, Prereq w/Con: MA 171, Coreq: CH 125	FSM
			CH 125	1	General Chemistry Lab I	Coreq: CH 121	FSM
					Physics - 12 hours		
			PH 111	3	General Physics w/Calculus I	MA 171, Coreq: 114	FSM
			PH 114	1	General Physics Lab I	Coreq: PH 111	FSM
			PH 112	3	General Physics w/Calculus II	MA 172, PH 111, Coreq: 115	FSM
			PH 115	1	General Physics Lab II	Coreq: PH 112	FSM
			PH 113	3	General Physics w/Calculus III	MA 201, PH 112, Coreq: 116	FSM
			PH 116	1	General Physics Lab III	Coreq: PH 113	FSM
					History, Social & Behavioral Sciences, Humaities & Fine Arts - 18 hours		
				3	History	HY 103, HY 104, HY 221, or HY 222	FSM
				3	Literature	EH 207 or EH 208	FSM
				3	Fine Art	ARH 100, ARH 101, ARH 103, CM 122, MU 100, or ARS 160	FSM
				3	Social & Behavioral Science	For more information on HSBS/HFA Requirements: http://www.uah.edu/images/colleges/engineering/CUE2%20Files/Forms/HSBS_HFA_Requirements.pdf	FSM
				3	Sequence Course		FSM
				3	HSBS/HFA		FSM
**	Class has required lab section				**Engineering Core - 12 hours**		
**			CPE 112	3	Intro to Computer Programming in Engineering	MA 113, MA 115 or Level III Placement, Coreq: CPE 112L	FSM
			EE 213	3	Electrical Circuit Analysis I	PH 112, Prereq w/Con: MA 238 & (MA 244 or CHE 244)	FSM
			EE 310	3	Solid State Fundamentals	PH 113, Prereq w/Con: MA 238	FS
			ISE 321	3	Engineering Economy	Sophomore Standing	FSM
					Electrical Engineering Requirements - 22 hours		
			EE 100	3	Fund of Computer, Electrical & Optical Eng	Prereq w/Con: MA 112, Coreq: EE 100L	FSM
			EE 202	3	Intro to Digital Logic Design	CPE 112, EE 100	FSM
			EE 203	1	Digital Logic Design Lab	EE 202	FSM
			EE 315	3	Introduction to Electronic Analysis and Design	EE 213	FSM
			EE 316	1	Electronic Measurements & Devices Design Lab	Prereq w/Con: EE 315	FS
			EE 382	3	Analytical Meth for Continuous Time Sys	EE 213, MA 238, MA 244	FSM
			EE 383	3	Analytical Meth for Mult and Discr Time Sys	EE 382	FSM
			EE 384	1	Digital Signal Processing Laboratory	CPE 381 or Prereq w/Con:EE 383	FS
			EE 385	3	Random Signals and Noise	CPE 381 or EE 382	FSM
			EE 412	1	Independent Research	Senior Standing	FSM
					Optical Engineering Option - 33 hours		
**			EE 307	3	Electricity and Magnetism	EE 213	FSM
			EE 308	3	Electromagnetic Engineering	EE 307	FS
			EE 313	3	Electrical Circuit Analysis II	EE 213	FSM
			OPE 451	3	Optoelectronics	Prereq w/Con: EE 307, EE 315	F
			OPE 453	3	Laser Systems	EE 307	F
			OPE 454	3	Optical Fiber Communications	EE 307 or PH 432	F
			OPE 456	3	Photonics Lab	OPE 451	S
			OPE 459	3	Optical Engineering Design I	ISE 321, Prereq w/Con: OPE 456	F
			OPE 460	3	Optical Engineering Design II	OPE 459	S
			OPT 341	3	Geometrical Optics	PH 113, Prereq w/Con: (PH 305 or MA 244)	F
			OPT 342	3	Physical Optics	OPT 341	S
					Optical Engineering Elective - 3 hours		
				3		300 - level or above approved by advisor.	

All prerequisite classes must be completed with a "C" or higher grade.

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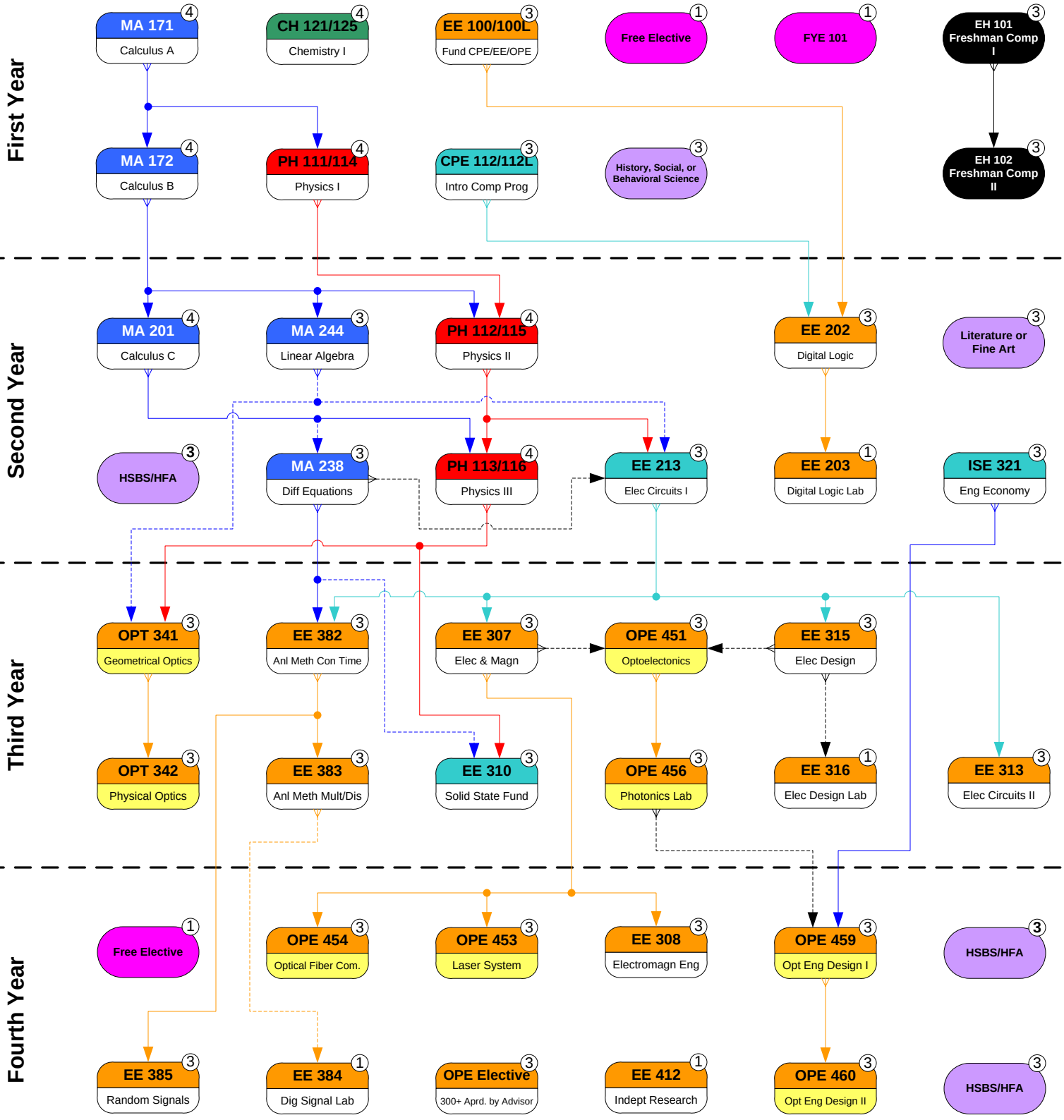
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Academic Flowchart

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Optical Engineering
2014/2015 (128 Hours)



Legend Updated: 8/28/14

- Mathematics
- Physics
- Chemistry / Biology
- Engineering Core
- Optical Engineering Option
- Electives
- Freshman Comp
- History, Social & Behavioral Science
  Humanity & Fine Art
- Offered only in semester listed
- (3) Credit Hours
- → Prerequisite
- ⇢ Prereq w/concurrency

Academic Pathways

COLLEGE OF ENGINEERING
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Optical Engineering
2014-2015 Plan

Curriculum Pathway	Research Pathway	Internship Pathway	Co-op Pathway

Required
Recommended

Miletone Year-1

[ ] 33 hours completed including:	[ ] Meet with Faculty to discuss pathway choices
MA 171, CH 121/125, EE 100, HSBS/HFA, FYE 101, EH 101	[ ] Meet with Career Development
	[ ] Attend Career Services Workshop on Resume
MA 172, PH 111/114, CPE 112, HSBS/HFA, EH 102	[ ] Outline Resume
	[ ] Participate in Career Fair

Milestone Year-2

[ ] 67 hours completed including:	[ ] Meet with Faculty for Undergraduate research opportunities
MA 201, PH 112/115, MA 244, EE 202, HSBS/HFA	[ ] Attend Career Services Workshop on Interviews
	[ ] Professional Resume
MA 238, PH 113/116, EE 213, EE 203, ISE 321, HSBS/HFA	[ ] Attend Career Fair
	[ ] Co-op/Internship Offer (Summer Start)

SELECT ONE PATHWAY OPTION

Research Pathway | Intership Pathway | Co-op Pathway

Milestone Year-3

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 98 hours completed including:	[ ] 98 hours completed from Curriculum Pathway	[ ] Obtain Faculty Mentor
OPE 451, EE 382, EE 315, EE 307, OPT 341	[ ] Summer Internship	[ ] 91 hours completed including:
		Work Semester (Summer)
EE 313, EE 383, EE 310, OPE 456, EE 316, OPT 342		OPT 341, OPE 451, EE 307, EE 315 (Fall)
		Work Semester (Spring)
[ ] Undergraduate Research		EE 382, EE 310, EE 313, HSBS/HFA (Summer)
[ ] Attend JUMP Information Session		[ ] 2 Semesters of Co-op

Milestone Year-4

Research Pathway	Internship Pathway	Co-op Pathway
[ ] 128 hours completed including:	[ ] 128 hours completed from Curriculum Pathway	[ ] 112 hours completed including:
OPE 454, OPE 453, EE 308, OPE 459, HSBS/HFA	[ ] Summer Internship	Work Semester (Fall)
	[ ] Senior Design Complete	OPT 342, EE 383, OPE 456, HSBS/HFA (Spring)
EE 385, EE 384, EE 412, OPE 460, OPE Elec, HSBS/HFA	[ ] Degree Complete	Work Semester (Summer)
	[ ] Begin Career or Graduate School	[ ] Experiential Learning complete
[ ] Undergraduate Research Complete		[ ] Decision on Industry or Graduate School
[ ] Senior Design Complete		
[ ] Degree Complete		
[ ] Begin Career or Graduate School		

Milestone Year-5

Co-op Pathway
[ ] 128 hours completed including:
OPE 454, OPE 453, EE 308, OPE 459
EE 385, EE 384, OPE Elec, EE 412, OPE 460, EE 316
[ ] Senior Design Complete
[ ] Degree Complete
[ ] Begin Career or Graduate School

6/4/2014