Biomedical Engineering and Mechanical Engineering **Name:**

Honors Track 1 Curriculum Check Sheet - Effective FA 18 and after **Program Total Credits = 159**

COURSE	COURSE NAME (PREREQS (";" DENOTES "AND")	TERM	CR	COURSE	COURSE NAME (PREREQS (";" DENOTES "AND")	TERM	CR
1st Year Fall				**1st Year Spring**			
BIOM 100	Overview of Biomedical Engineering	F	1	LIFE 102	Attributes of Living Systems	F, S, SS	4
CHEM 111	General Chemistry I (MATH 118 or 141 or 155 or 160 or 161 or 229 or 261; CHEM 105 or an appropriate score in the chemistry preparation module)	F, S, SS	4	MATH 161	Calculus for Physical Scientists II (MATH 124; MATH 159 or 160)	F, S, SS	4
CHEM 112^	General Chemistry Lab I (CHEM 111 or 117 or conc.)	F, S, SS	1	MECH 105	Mechanical Engineering Problem Solving (MECH 103; MATH 160; PH 141 or conc.)	F, S	3
MATH 160	Calculus for Physical Scientists I (**MATH 124 and 126 (B or better**))	F, S, SS	4	PH 141	Physics for Scientists and Engineers I (MATH 126 or conc.; MATH 155 or 159 or 160 or conc.)	F, S, SS	5
MECH 103	Introduction to Mechanical Engineering	F,S	3				
HONR 192	Honors First Year Seminar	F	4				
		Total	**17**			**Total**	**16**
2nd Year Fall				**2nd Year Spring**			
BIOM 200	Fundamentals of Biomedical Engineering (BIOM 100 or conc.; LIFE 102; MATH 160)	F	2	CIVE 261^	Engineering Mechanics: Dynamics (CIVE 260)	F, S, SS	3
CIVE 260^	Engineering Mechanics: Statics (MATH 159 or 160; PH 141)	F, S, SS	3	MATH 340^	Intro to Ordinary Differential Equations (MATH 255 or 261)	F, S, SS	4
MATH 261^	Calculus for Physical Scientists III (MATH 161)	F, S, SS	4	MECH 200 A	Introduction to Manufacturing Processes: Lecture	F, S	2
				MECH 200 B	Introduction to Manufacturing Processes: Lab	F, S	1
MECH 201	Engineering Design I (MECH 105)	F, S, SS	2	MECH 231	Engineering Experimentation (MECH 105; PH 142)	F, S	3
PH 142	Physics for Scientists and Engineers II (MATH 161 or 255 or 271 or conc.; PH 141)	F, S	5	HONR 193	Honors Seminar (HONR 192)	S	3
		Total	**16**			**Total**	**16**
3rd Year Fall				**3rd Year Spring**			
CIVE 360	Mechanics of Solids (CIVE 260)	F, S	3	BIOM 300	Problem-Based Learning BME Lab (BIOM 101 or BIOM 200 or (BIOM 100; CBE 205; MECH 262); MATH 340 or 345)	S	4
MECH 202	Engineering Design II (MECH 200 or conc.; MECH 201)	F, S	3	BMS 300	Principles of Human Physiology (BZ 101 or 110 or LIFE 102; CHEM 103 or 107 or 111)	F, S, SS	4
MECH 337	Thermodynamics (MATH 261; PH 141)	F, S	4	MECH 324	Dynamics of Machines (CIVE 261; MATH 340 or conc.)	F, S	4
MECH 342^	Mechanics & Thermodynamics of Flow Processes (MATH 340; MECH 337 or conc.; PH 141)	F, S	3	HONR 292 OR 293	Honors Seminar -- Knowing in Arts & Humanities OR -- Knowing Across Cultures (HONR 193)	F, S	3
STAT 315	Statistics for Engineers and Scientists (MATH 155 or 160)	F, S, SS	3				
		Total	**16**			**Total**	**15**
4th Year Fall				**4th Year Spring**			
BIOM 441	Biomechanics and Biomaterials (CIVE 360; MECH 342; MECH 324 or conc.; MECH 331 or conc.; BMS 300 or conc.)	F	3	CHEM 113	General Chemistry II (CHEM 107 or 111 or 117; MATH 124 or MATH 141, 155, 160, 161, 229, 261 or conc.)	F, S, SS	3
BME BE	BME Broad Elective	F, S, SS	3	MECH 301 A	Engineering Design III; Finite Element Analysis	F, S	1
				MECH 301 B	Engineering Design III: Computational Fluid Dynamics	F, S	1
ECE 204	Intro to Electrical Engineering (MATH 161; PH 142)	F, S	3	MECH 307	Mechatronics and Measurement Systems (CIVE 261; ECE 204; MATH 340; MECH 231)	F, S	4
MECH 325	Machine Design (CIVE 360)	F, S	3	MECH 344	Heat and Mass Transfer (MECH 342)	F, S	3
MECH 331 A	Introduction to Engineering MaterialsL Lecture	F, S	3	HONR 392	Honors Seminar (HONR 193)	F, S	3
MECH 331 B	Introduction to Engineering Materials: Lab	F, S	1				
		Total	**15**			**Total**	**15**
5th Year Fall				**5th Year Spring**			
BIOM 486A	Biomedical Design Practicum: Capstone Design I (BIOM 300; (BIOM 421; CBE 320; CBE 442) or (BIOM 431; ECE 311; ECE 332; ECE 342) or (BIOM 441; MECH 301; MECH 307)	F	4	BIOM486B	Biomedical Design Practicum: Capstone Design II (BIOM 486A; CBE 451 or ECE 312 or (MECH 325; MECH 344) or PH 353)	S	4
BME-TE	BME Technical Elective _____	F, S, SS	3	HONR 492	Honors Senior Seminar (HONR 392)	F, S	3
HONR 399	Pre-Thesis - Honors	F, S	1	HONR 499	Senior Honors Thesis (HONR 399)	F, S, SS	3
MECH 338	Thermal/Fluid Sciences Lab (MECH 337; MECH 342; MECH 344 or conc.)	F, S	1	BME-TE	BME Technical Elective _____	F, S, SS	3
CHEM 245	Fundamentals of Organic Chemistry (CHEM 107 or 113)	F, S, SS	4	ME-TE	MECH Technical Elective _____	F, S	3
Advanced Writing	CHEM 301 or CO300 or CO301B or JTC 300 or LB 300 (CO150, HONR193)	F, S, SS	3				
		Total	**16**			**Total**	**16**

Please note that curricula can change; be sure to check with your advisors regularly to ensure you are on track.

Track 1 Honors Program Required Courses in BLUE:

* HONR 192, 193, 292 (or 293), 392, 399, 492, 499
* One 200 or 300 level honors course in major (3 credits)
* One 300 or 400 level honors course in major (3 credits)

^ Honors Sections offered in these regular classes.

Key:

"conc." = concurrent enrollment Term: F = Fall, S = Spring, SS = Summer Session

Grey indicates Biomedical Engineering courses

Light green indicates labs

Red indicates exceptionally time-consuming/difficult courses

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