

**Honors Track 1 Curriculum Checksheet**

159 Credits

1 <sup>st</sup> Year Fall				1 <sup>st</sup> Year Spring			
COURSE	NAME (PREREQS)	TERM*	CR	COURSE	NAME (PREREQS)	TERM*	CR
MATH160	Calculus for Physical Scientists I (MATH 124 (B or better); MATH 126 (B or better))	F, S, SS	4	CHEM 113	Gen Chem II (CHEM 107 or 111 or 117; MATH 124 or MATH 141, 155, 160, 161, 229, 261 or conc.)	F, S, SS	3
CBE 101	Chem and Biological Engineering I (CBE 160 or conc.)	F,S	3	CHEM 114	General Chemistry Lab II (CHEM 112; CHEM 113 or MATH 161 <sup>^</sup> )	F, S, SS	1
CBE 160	MATLAB for Chemical and Biological Engineers	F, S	1	PH 141	Calc for Physical Sci II (MATH 124; MATH 159 or 160)	F, S, SS	4
CHEM 111	General Chemistry I (MATH 118 or 141 or 155 or 160 or 161 or 229 or 261)	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
CHEM 112	General Chem Lab I (CHEM 111 or 117 or conc.)	F, S, SS	1	LIFE 102 <sup>^</sup>	Attributes of Living Systems	F, S, SS	4
HONR 192	Honors First Year Seminar	F	4				
<b>Total</b>				<b>Total</b>			
				<b>17</b>			

2nd Year Fall				2nd Year Spring			
BIOM 101	Introduction to Biomedical Engineering	F	3	HONR 193	Honors Seminar (HONR 192)	S	3
CBE 201	Material and Energy Balances (CBE 101 or 160 or MATH 151 or conc.; CHEM 111; LIFE 102 or conc.; PH 141 or conc.)	F	3	CBE 210	Thermodynamic Process Analysis (CBE 201; MATH 261 or conc.)	S	3
CHEM 345 <sup>^</sup>	Organic Chemistry I (CHEM 113 and CHEM 114)	F	4	CHEM 346 <sup>^</sup>	Organic Chemistry II (CHEM 345)	S	4
CBE 205	Introduction to Biological Engineering (CBE 101; CBE 160; LIFE 102)	F	3	MATH 340 <sup>^</sup>	Introduction to Ordinary Differential Equations (MATH 255 or 261)	F, S, SS	4
MATH 261 <sup>^</sup>	Calculus for Physical Scientists III (MATH 161)	F, S, SS	4				
<b>Total</b>				<b>Total</b>			
				<b>17</b>			

3rd Year Fall				3rd Year Spring			
BMS 300	Principles of Human Physiology (BZ 101 or 110 or LIFE 102; CHEM 103 or 107 or 111)	F, S, SS	4	BIOM 300	Principles of Human Physiology (BZ 101 or 110 or LIFE 102; CHEM 103 or 107 or 111)	S	4
CBE 310	Molecular Concepts and Applications (CBE 210; MATH 340)	F	3	CBE 332	Heat and Mass Transfer Fundamentals (CBE 330; CBE 331 - change pending)	S	3
CBE 330	Process Simulation (CBE 210; MATH 340)	F	3	CBE 320	Chem and Bio Reactor Design (CBE 310 & 330)	S	3
CBE 331	Momentum Transfer and Mechanical Separations (CBE 210; MATH 340)	F	3	CBE 493	Professional Development Seminar	S	1
LIFE 210 <sup>^</sup> & LIFE 211 <sup>^</sup>	Introductory Eukaryotic Cell Biology (LIFE 102; CHEM 111; CHEM 112) NOTE: LIFE 211 (1 cr recitation) is required and only needed if LIFE 210 is taken as an Honors course	F	4	PH 142	Physics for Scientists and Engineers II (PH 141; MATH 161 or 255 or 271 or conc.)	F,S	5
<b>Total</b>				<b>Total</b>			
				<b>17</b>			

4th Year Fall				4th Year Spring			
BC 351	Principles of Biochemistry (BZ 110 or 120 or LIFE 102; CHEM 245 or 341 or 345)	F, S, SS	4	BIOM 422	Kinetics of Biomolecular and Cellular Systems (BIOM 421 or CBE 320)	S	3
BIOM 421	Transport Phenomena in BME (BMS 300; CBE 332 or MECH 344)	F	3	CBE 443	Chemical and Biological Engineering Lab II (CBE 442 - change pending)	S	2
CBE 333	Chemical & Biological Engineering Transfer Laboratory (CBE 332 - change pending)	F	2	HONR 292 OR 293	Honors Seminar -- Knowing in Arts & Humanities OR -- Knowing Across Cultures (HONR 193)	F, S	3
CBE 442	Separation Processes (CBE 332)	F	4	MECH 262	Engineering Mechanics (MATH 161; PH 141)	S	4
CBE 451	Chemical and Biological Engineering Desgn I (CBE 320; CBE 442 or conc.)	F	3	CBE 430 <sup>^</sup>	Process Control & Instrumentation (CBE 320 & 442)	S	3
<b>Total</b>				<b>Total</b>			
				<b>16</b>			

5th Year Fall				5th Year Spring			
BIOM 486A	Biomedical Design Practicum: Capstone Design I (BIOM 300; BIOM 330 or BIOM 441 or ECE 441)	F	4	BIOM 486B	Biomedical Design Practicum: Capstone Design II (BIOM 486A)	S	4
HONR 392	Honors Seminar (HONR 193)	F, S	3	BME-TE	BME Technical Elective _____		3
HONR 499	Senior Honors Thesis (HONR 399) -- counts as a CBE-TE	F, S, SS	3	Advanced Writing	CHEM 301 or CO300 or CO301B or JTC 300 or LB 300 (CO150, HONR193)	F, S, SS	3
STAT 315	Statistics for Engineers and Scientists (MATH 155 or 160)	F, S, SS	3	HONR 492	Honors Senior Seminar (HONR 392)	F, S	3
HONR 399	Pre-Thesis - Honors	F, S	1				
CBE-TE	CBE Technical Elective _____		2				
<b>Total</b>				<b>Total</b>			
				<b>16</b>			

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

**Track 1 Honors Program Required Courses in BLUE:**

- \* HONR 192, 193, 292 (or 293), 392, 492, 399, 499
- \* One 200 or 300 honors course in major
- \* One 300 or 400 honors course in major
- <sup>^</sup> 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
- Must have at least a "C" in BOLDED courses