

**Tuskegee University Chemical  
Engineering Curriculum  
Biochemical Engineering Option**

**Freshman Year**

<u>1<sup>st</sup> Semester</u>			<u>2<sup>nd</sup> Semester</u>		
OREN 100	Orientation	1	OREN 101	Orientation	1
MATH 207	Calculus I	4	MATH 208	Calculus II	4
ENGL 101	English Comp.	3	ENGL 102	English Comp.	3
CHEM 231	General Chem. I	4	CHEM 232	General Chem. II	4
CHEM 233	General Chem. Lab. I	1	CHEM 234	General Chem. Lab. II	1
	Historical Analysis	3	CENG 110	Intro. Chem. Eng.	1
			PHED	Physical Education	1
				Soc. Behavioral	3
		<b>16</b>			<b>18</b>

**Sophomore Year**

<u>1<sup>st</sup> Semester</u>			<u>2<sup>nd</sup> Semester</u>		
PHYS 310	Gen. Physics I	3	CENG 250	Chem. Eng. Thermo. I	3
PHYS 313	Gen. Physics Lab. I	1	CENG 220	Fluid Mechanics	3
CENG 210	Matl. & Eneg. Balances	4	PHYS 311	Gen. Physics II	3
MATH 209	Calculus III	4	MATH 307	Differential Equations	3
MENG 237	Eng. Prob. & Stat.	3		Humanities	3
PHED	Physical Education	1		Soc. Behavioral	3
	Humanities	2			
		<b>18</b>			<b>18</b>

**Junior Year**

<u>1<sup>st</sup> Semester</u>			<u>2<sup>nd</sup> Semester</u>		
CENG 310	Heat Transfer	3	CENG 380	Mass Transfer	3
CENG 350	Chem. Eng. Thermo. II	3	CENG 360	Chem. Reaction Eng.	3
CENG 320	Unit Operations Lab. I	1	CENG 390	Eng. Ethics & Society	3
CHEM 320	Organic Chem. I	3	CHEM 307	Quant. Analysis	3
CHEM 322	Organic Chem. Lab. I	2	CHEM 308	Quant. Analysis Lab	2
CSCI 205/229	Fortran/C <sup>++</sup> prog.	3		Historical Analysis	3
PHYS 314	Gen. Physics Lab II	1			
		<b>16</b>			<b>17</b>

**Senior Year**

<u>1<sup>st</sup> Semester</u>			<u>2<sup>nd</sup> Semester</u>		
CENG 430	Process Control & Instr.	3	CENG 440	Process Control Lab	1
CENG 470	Plant Design	4	CENG 490	Senior Design Project	3
CENG 441	EIT Review	0	EENG 380	Principles of Elec. Eng.	3
CENG 400	Intro. biochem Eng.	3	EENG 380L	Elec. Eng. Lab	1
			CENG 420	Unit Operations Lab. II	1
BIOL 230	Cell & Gen. Biology	3	CENG 415	Bioseparation Eng.	3
			BIOL 301	Gen. Microbiology	3
		<b>13</b>			<b>15</b>

**Total Degree Hours = 131**

5/2026