

Name _____

Student ID _____

Date _____

2020-21 DDEP Chemistry (Chemical Physics Concentration)/Biomedical Engineering Checklist

GENERAL EDUCATION

I. Foundational Intellectual Skills (12-13 hours)

- FYS110 First Year Seminar
 ENG112 Writing and Community
 COM101 Public Speaking
 Mathematics (MAT230)

II. Knowledge Acquisition (19-20 hours)

- Science with lab (CHE151)
 HUM210 Meaning Through Culture
 PHL130 Human Nature & Person
 Foreign Language

One course from each group A and B:

Group A

- EGR327 Engineering Economics
 ECN200 Introductory Economics

Group B

- PSY101 General Psychology
 PSY220 Human Growth and Development
 GST200 Introduction to Gender Studies
 SOC101 Introduction to Sociology
 SOC175 Introduction to Anthropology

III. Faith, Ethics, and Foundation (6 hours)

- THL105 Introduction to Theology
 Second Approved THL

IV. Greater Depth Cluster

Fulfilled by major requirements

Required Supporting Courses

- TCM360 Communication in Engineering Practice
 PHY201 Mechanics I
 PHY202 Heat, Electricity, and Optics

Total Earned General Education Hours _____

CHEMISTRY MAJOR REQUIREMENTS

<input type="checkbox"/> MAT 230 Calculus I	4
<input type="checkbox"/> MAT 231 Calculus II	4
<input type="checkbox"/> MAT 305 Calculus III	4
<input type="checkbox"/> MAT 310 Linear Algebra	3
<input type="checkbox"/> MAT 315 Differential Equations	3
<input type="checkbox"/> CHE 151 General Chemistry I	4
<input type="checkbox"/> CHE 152 General Chemistry II	4
<input type="checkbox"/> CHE 300 Analytical Chemistry	5
<input type="checkbox"/> CHE 305 Organic Chemistry I	4
<input type="checkbox"/> CHE 325 Physical Chemistry I	4
<input type="checkbox"/> CHE 326 Physical Chemistry II	4
<input type="checkbox"/> CHE 425 Advanced Physical Chemistry	3
<input type="checkbox"/> CHE 490 Senior Seminar	3
<input type="checkbox"/> CHE 498 Directed Research	2
<input type="checkbox"/> PHY 212 Modern Physics	4
<input type="checkbox"/> BIO 151 General Biology	4
<input type="checkbox"/> BIO 204 Cell Biology	4

BIOMEDICAL ENGINEERING MAJOR REQUIREMENTS

<input type="checkbox"/> ENR195 Intro to the Engineering Profession	1
<input type="checkbox"/> EGR196 Intro to Engineering	3
<input type="checkbox"/> CST171 Procedural Programming	3
<input type="checkbox"/> BME 222/224 Biomeasurements	4
<input type="checkbox"/> BME 241/243 Biomechanics	4
<input type="checkbox"/> BME 302 Prof Develop and Design in BME	1
<input type="checkbox"/> BME 322 Probability and Stats for BME	3
<input type="checkbox"/> BME 331 Biosignals and Systems	3
<input type="checkbox"/> BME 334 Biomedical Computing	3
<input type="checkbox"/> BME 352/354 Cell and Tissue Behaviors and Properties and Lab	4
<input type="checkbox"/> BME 381/383 Implantable Materials & Biological Responses	4
<input type="checkbox"/> BME 388 Applied Biomechanics	3
<input type="checkbox"/> BME 411 Quantitative Physiology	3
<input type="checkbox"/> BME 442 Biofluid and Biosolid Mechanics	3
<input type="checkbox"/> BME 461 Transport Processes in BME	3
<input type="checkbox"/> BME 491 BME Design I	3
<input type="checkbox"/> BME 492 BME Design II	3
<input type="checkbox"/> Technical Elective	3
<input type="checkbox"/> Technical Elective	3
<input type="checkbox"/> TCM 218 Technical Report Writing	1
<input type="checkbox"/> TCM 359 Tech Data Reporting and Presentation	1

Total Earned Major Hours _____

**2020-21 Dual-Degree Engineering Major
 B.S. Chemistry with concentration in Chemical Physics
 & B.S. Biomedical Engineering
 Sample Five-Year Plan**

Year One					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hours	Requirement Category	Course	Credit Hours
First Year Seminar	FYS 110	3	Major	MAT 231	4
Major	MAT 230	4	Major	BIO151	4
Major	CHE151	4	Major	PHY201	4
Major	EGR196	3	Major	CHE 152	4
Major	EGR195	1			
General Education	COM101	3			
Semester Hours	18		Semester Hours	16	
Cumulative Hours	18		Cumulative Hours	34	
Year Two					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hours	Requirement Category	Course	Credit Hours
Major	MAT 305	4	Major	PHY212	4
Major	PHY202	4	Major	MAT315	3
Major	CHE305	4	Major	CST171	4
Major	BIO204	4	General Education	ENG112	3
Major	MAT211	2	General Education	EGR327	3
Semester Hours	18		Semester Hours	17	
Cumulative Hours	52		Cumulative Hours	69	
Year Three					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hours	Requirement Category	Course	Credit Hours
Major	CHE300	5	Major	BME 352/354	4
Major	BME 241/243	4	Major	BME 222/224	4
Major	CHE 325	4	Major	CHE 326	4
Major	MAT310	3	General Education	PHL 130	3
Major	TCM 218	1	General Education	THL105	3
Semester Hours	17		Semester Hours	18	
Cumulative Hours	86		Cumulative Hours	104	
Year Four					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hours	Requirement Category	Course	Credit Hours
Major	BME 381/383	4	Major	BME 322	3
Major	BME 331	3	Major	BME 302	2
Major	CHE 498	2	Major	BME 388	3
Major	TCM 359	1	Major	BME 402	1
Major	Tech Elective	3	Major	BME 442	3
Major	BME 334	3	General Education	For. Lang.	4
Semester Hours	16		Semester Hours	16	
Cumulative Hours	120		Cumulative Hours	136	

Name _____

Student ID _____

Date _____

2020-21 DDEP Chemistry (Chemical Physics Concentration)/Biomedical Engineering Checklist

Year Five					
Fall Semester			Spring Semester		
Requirement Category	Course	Credit Hours	Requirement Category	Course	Credit Hours
<i>Major</i>	<i>BME 491</i>	3	<i>Major</i>	<i>BME 492</i>	3
Major	CHE 490	3	<i>Major</i>	<i>Technical Elective</i>	3
Major	CHE 425	3	<i>Major</i>	<i>Technical Elective</i>	3
<i>Major</i>	<i>BME 411</i>	3	General Education	HUM200	3
<i>General Education</i>	<i>PSY 101</i>	3	General Education	Second Theology	3
<i>Major</i>	<i>BME 461</i>	3			
Semester Hours	18		Semester Hours	15	
Cumulative Hours	154		Cumulative Hours	169	

*A minimum 2.0 cumulative GPA and a minimum 2.0 major GPA are required for graduation, so monitor your GPA closely. To meet degree requirements, some disciplines require higher grades in each course or a higher cumulative GPA

This plan is only a sample and will vary by student and course availability.

Courses listed in italics indicate courses taken at IUPUI.