

Bachelor of Science in Biochemistry and Molecular Biology

2020-2021 Degree Completion Plan

Important: This degree plan is effective for those starting this degree program in fall 2020 through summer 2021. This degree plan will remain in effect for students who do not break enrollment or who do not change degree programs, concentrations, or cognates.

GENERAL EDUCATION/

Communication & Information Literacy (13 hours) Fixed Communication & Information Literacy (13 hours) Major Foundational Courses (19-27 hours) Maj	FOUNDAT	IONAL SKILLS REQUIREMENTS	(44-47	hours)	<u>)</u>					
ENGL 101 Composition & Rhetoric 3	Course		Hrs	Sem	Grade	Course		<u>Hrs</u>	Sem	Grade
NQR 101	Communica	ation & Information Literacy (13 hou	1 1 1			Major Found	lational Courses (19-27 hours)			
Communications Elective 3	ENGL 101	Composition & Rhetoric	3			BIOL 224	General Biology I ^{4,5}	4		
Information Literacy Elective 3	INQR 101	Inquiry 101	1			CHEM	4,5,6	4		
Information Literacy Elective 3		Communications Elective	3			CHEM	4,5,7	4		
MATH 201		Information Literacy Elective	3			MATH 126	Elementary Calculus for Business & Sci ^{4,4}	5		
Technological Solutions & Quantitative Reasoning (4-7 hours)\forall PHYS 201 General Physics I\forall		Information Literacy Elective	3			or MATH 131	Calculus & Analytic Geometry I4,5	3-4		
UNIV 101 Foundational Skills 1 PHYS 201 General Physics I ^{4,5} MATH Math Elective (MATH 114 or higher) 3 or PHYS 231 University Physics II ^{4,5} Technology Competency ² 0-3 PHYS 232 University Physics II ^{4,5} or PHYS 232 University Physics II ^{4,5} or PHYS 232 University Physics II ^{4,5} or PHYS 232 University Physics II ^{4,5} 4 PHYS 232 University Physics II ^{4,5} Technology Competency ³ 4 PHYS 232 University Physics II ^{4,5} or PHYS 232 University Physics II ^{4,5} Technology Competency ³ 4 PHYS 232 University Physics II ^{4,5} Technology Competency ³ 4 PHYS 232 University Physics II ^{4,5} Technology Competency ³ 4 PHYS 232 University Physics II ^{4,5} Technology Competency ³ 4 PHYS 232 University Physics II ^{4,5} Technology Competency ³ 4 PHYS 232 University Physics II ^{4,5} Technology II ^{4,5} Technology II Physical II ^{4,5} Technology II Physical II ^{4,5} Technology II Physical Competency II Physical Chemistry II Physical						MATH 201	Introduction to Probability & Statistics ^{4,5}			
UNIV 101 Foundational Skills	Technological Solutions & Quantitative Reasoning (4-7 hours) ¹					or MATH 211	Introduction to Statistical Analysis ^{4,5}	3		
Technology Competency2	_		•			PHYS 201	General Physics I ^{4,5}			
Ogr PHYS 232 University Physics II⁴⁵⁵ 4 Critical Thinking (8 hours)¹ RLGN 105 Intr Bwww/Contemp Moral Issues³ 2 MAJOR RSCH 201 Research 201 3 Core (55 hours) Critical Thinking Elective 3 BCHM 451 Biochemistry I 4 BCHM 452 Biochemistry II 4 4 Civic & Global Engagement (5 hours)¹ BIOL 225 General Biology II EVAN 101 Evangelism & Christian Life³ 2 or BIOL 301 Genetics 4 BIOL 303 Microbiology 4 4 Social & Scientific Inquiry (6 hours)¹ BIOL 400 Biology Seminar 1 1 Natural Science Elective 3 BIOL 415 Cell Biology 4 4 Social Science Elective 3 BIOL 455 Molecular Techniques 3 3 5 Chistianity & Contexts (8 hours)¹ CHEM 301 Organic Chemistry I 4 4 Christianity & Contexts (8 hours)¹ CHEM 302 Organic Chemistry II 4 4	MATH	Math Elective (MATH 114 or higher)	3			or PHYS 231	University Physics I ^{4,5}	4		
Critical Thinking (8 hours)		Technology Competency ²	0-3			PHYS 202	General Physics II ^{4,5}			
RLGN 105						or PHYS 232	University Physics II ^{4,5}	4		
RLGN 105	Critical Thi	nking (8 hours) ¹								
Research 201 Research 201 3		<u> </u>	2			MAJOR				
BCHM 452 Biochemistry II 4	RSCH 201	Research 201	3				Core (55 hours)			
BIOL 225 General Biology II		Critical Thinking Elective	3			BCHM 451	Biochemistry I	4		
EVAN 101 Evangelism & Christian Life³ 2 or BIOL 317 Botany 4						BCHM 452	Biochemistry II	4		
EVAN 101 Evangelism & Christian Life³ 2	Civic & Global Engagement (5 hours) ¹				BIOL 225	General Biology II				
BIOL 303 Microbiology 4	EVAN 101	Evangelism & Christian Life ³	2			or BIOL 317	Botany	4		
Social & Scientific Inquiry (6 hours) ¹ Natural Science Elective Natural Science Elective Social Science Elective BIOL 400 Biology Seminar Cell Biology Molecular Techniques CHEM 301 Organic Chemistry I CHEM 302 Organic Chemistry II BIBL 105 Old Testament Survey CHEM 321 CHEM 321 CHEM 321 CHEM 321 CHEM 461 CHEM 461 CHEM 462 CHEM 462 CHEM 462 CHEM 463 CHEM 465 CHEM 465 CHEM 466		Cultural Studies Elective	3			BIOL 301	Genetics	4		
Natural Science Elective 3						BIOL 303	Microbiology	4		
Social Science Elective 3	Social & Sci	ientific Inquiry (6 hours) ¹				BIOL 400	Biology Seminar	1		
CHEM 301 Organic Chemistry I 4		Natural Science Elective	3			BIOL 415	Cell Biology	4		
Christianity & Contexts (8 hours)¹ CHEM 302 Organic Chemistry II 4 — BIBL 105 Old Testament Survey 2 CHEM 321 Analytical Chemistry 4		Social Science Elective	3			BIOL 455	Molecular Techniques	3		
BIBL 105 Old Testament Survey 2 CHEM 321 Analytical Chemistry 4						CHEM 301	Organic Chemistry I	4		
BIBL 105 Old Testament Survey 2 CHEM 321 Analytical Chemistry 4	Christianity	& Contexts (8 hours) ¹				CHEM 302	Organic Chemistry II	4		
THEO 201 Theology Survey I ³ 2 CHEM 462 Physical Chemistry II 3 THEO 202 Theology Survey II ³ 2 CHEM 465 Physical Chemistry I Lab 1 CHEM 466 Physical Chemistry II Lab 1 CRST 290 History of Life or CRST 390 Origins 3	•		2			CHEM 321	Analytical Chemistry	4		
THEO 202 Theology Survey II ³ 2 CHEM 465 Physical Chemistry I Lab 1 CHEM 466 Physical Chemistry II Lab 1 CHEM 466 Physical Chemistry II Lab 1 CRST 290 History of Life CRST 390 Origins 3	BIBL 110	New Testament Survey	2			CHEM 461	Physical Chemistry I	3		
CHEM 466 Physical Chemistry II Lab 1	THEO 201	Theology Survey I ³	2			CHEM 462	Physical Chemistry II	3		
CRST 290 History of Life or CRST 390 Origins 3	THEO 202	Theology Survey II ³	2			CHEM 465	Physical Chemistry I Lab	1		
<u>or CRST 390</u> Origins 3						CHEM 466	Physical Chemistry II Lab	1		
_						CRST 290	History of Life			
MATH 132 Calculus & Analytic Geometry II 4 4						or CRST 390	Origins	3		
						MATH 132	Calculus & Analytic Geometry II	4		

Graduation Requirements

120 Total Hours

2.0 Overall grade point average

30 Hours must be upper-level courses (300-400 level)

Grade of 'C' Minimum required for all upper-level courses in the major

25% Of major taken through Liberty University

30 Hours must be completed through Liberty University

Grad App Submission of Degree Completion Application must be completed within the last semester of a student's anticipated graduation date

CSER All requirements must be satisfied before a degree will be awarded

Notes

All applicable prerequisites must be met

FREE ELECTIVES (0-2 hours)

¹Refer to the list of approved general education electives at www.liberty.edu/gened before enrolling in foundational skills requirements

²All students must pass the Computer Assessment OR complete applicable INFT course; refer to www.liberty.edu/computerassessment for more information

³Students transferring in 45 or more UG credit hours will have the requirements of RLGN 105 and EVAN 101 waived; Students transferring in 60 or more UG credit hours will also have the requirements of THEO 201 and THEO 202 waived

⁴MATH 131, 211, PHYS 231 and 232 are strongly recommended

⁵Courses may also fulfill select General Education Requirements. Please refer to the list of approved general education electives at www.liberty.edu/gened

⁶Choose CHEM 121 <u>OR</u> CHEM 131 and 135

Choose CHEM 122 OR CHEM 132 and 136

Suggested Course Sequence on second page

Revised: 06.01.2020 Effective: Catalog Term 2020-40

SUGGESTED COURSE SEQUENCE

FRESHMAN YEAR

First Semester		Second Semester										
ENGL 101	3	RLGN 105		2								
INQR 101	1	CHEM Elective(s) ⁴		4								
UNIV 101	1	Information Literacy Elective ¹		3								
Natural Science Elective ¹ [BIOL 224]	4	BIOL 225 <u>or</u> 317		4								
CHEM Elective(s) ²	4	MATH 132		4								
MATH 126 <u>or</u> 131 ³	3-4	CSER		0								
CSER	<u>0</u>		Total	17								
Total	16-17											
SOPHOMORE YEAR												
EVAN 101	2	Communications Elective ¹		3								
RSCH 201	3	Critical Thinking Elective ¹		3								
MATH Elective ¹ [MATH 201 or 211 ³]	3	Technology Competency ⁵		0-3								
BIOL 301	4	BIOL 415		4								
CHEM 301	4	CHEM 302		4								
CSER	0	CSER		0								
Total	<u>s</u> 16	OBLIK	Total	14-17								
JUNIOR YEAR												
Information Literacy Elective ¹	3	THEO 201		2								
PHYS 201 or 231 ³	4	PHYS 202 <u>or</u> 232 ³		4								
BCHM 451	4	BCHM 452		4								
CHEM 321	4	BIOL 400		1								
CSER	0	BIOL 455		3								
Total	<u>-</u> 15	CSER		0								
			Total	14								
SENIOR YEAR												
BIBL 110	2	BIBL 105		2								
THEO 202	2	Cultural Studies Elective ¹		3								
Social Sciences Elective ¹	3	BIOL 303		4								
CHEM 461	3	CHEM 462		3								
CHEM 465	3	CHEM 466		1								
CRST 290 or CRST 390	3	CSER		0								
CSER	<u>0</u>		Total	13								
Total	16			-								
Notes												

All applicable prerequisites must be met

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¹Refer to the list of approved general education electives at www.liberty.edu/gened before enrolling in foundational skills requirements ²Choose CHEM 121 OR CHEM 131 and 135

 $^{^3} MATH\ 131,\ 211,\ PHYS\ 231$ and 232 are strongly recommended

⁴Choose CHEM 122 *OR* CHEM 132 and 136

⁵All students must pass the Computer Assessment OR complete applicable INFT course; refer to www.liberty.edu/computerassessment for more information