B.S. in Biochemistry/Molecular Biology Enhanced Academic Plans

B.S. in Biochemistry/Molecular Biology - CWILT

Recommended Courses				
Fall Semester 1	**Interim Semester 1**	**Spring Semester 1**	**Career Planning and Preparation**	**R.E.A.L. Experience**
BIO 124 & BIO 124D Integrative Biology: Genes, Cells, Change and Integrative Biology: Genes, Cells, Change Lab	GES 160 Inquiry Seminar	BIO 128 & BIO 128D Integrative Biology: Metabolism, Energy, Biodiversity and Integrative Biology: Metabolism, Energy, Biodiversity Lab	PHASE 1: EXPLORE	Create your R.E.A.L. Portfolio
CHE 113 & CHE 113D (or CHE208/208D Accelerated General Chemistry/Lab)1, 3 General Chemistry IGeneral Chemistry I Lab		CHE 214 & CHE 215 (or elective if CHE208/208D was taken in fall)3 General Chemistry IIGeneral Chemistry II Lab	*Explore self, careers, & God's call*	Consider joining Sigma Zeta, or another club or ministry of interest
MAT 124M1 Calculus 1		MAT 125 Calculus 2	Take a Career Assessment	Consider finding a mentor
GES 140 Introduction to Wellbeing		GES 130 Christianity Western Culture	Research Careers: O*Net, Candid Careers, & informational interviews w/ Alums	
			Gain Experience: Part-time job; Campus Involvement (e.g. student club); Volunteering	
15	**3**	**16**		
MILESTONES: Consider study abroad options				
Recommended Courses				
Fall Semester 2	**Interim Semester 2**	**Spring Semester 2**	**Career Planning and Preparation**	**R.E.A.L. Experience**
CHE 224 & CHE 225 Organic Chemistry I and Organic Chemistry I Lab	BIB 101 Introduction to the Bible	CHE 226 & CHE 227 Organic Chemistry II and Organic Chemistry II Lab	PHASE 1&2: EXPLORE/EXPERIENCE	Continue adding artifacts and reflections to your R.E.A.L. Portfolio.
PHY 292 & PHY 292D General Physics I and General Physics I Lab		PHY 296 & PHY 297 General Physics II and General Physics II Lab	*Finalize major if necessary & begin gaining experience*	Consider taking a leadership position with a student club.
GES 125 Introduction to the Creative Arts		CHE 312 & CHE 313 Quantitative Analysis and Quantitative Analysis Lab	Create/update Resume & LinkedIn	Consider going on a spring break mission trip.
		Second Language (S) course*2	Build professional network (e.g. informational interviews)	
			Attend Spring Career Fair	
12	**3**	**16**	Obtain Internship or relevant job by summer	
MILESTONES: Consider doing an online course over the summer				
Recommended Courses				
Fall Semester 3	**Interim Semester 3**	**Spring Semester 3**	**Career Planning and Preparation**	**R.E.A.L. Experience**
BIO 332 & BIO 333 Genetics and Genetics Lab	Science, Technology and Society (K) course	BIO 354 & BIO 355 Cell Biology and Cell Biology Lab	PHASE 2: EXPERIENCE	Review your R.E.A.L. Portfolio and prepare to make it public.
BIO 388 & BIO 389 Biochemistry I and Biochemistry I Lab		CHE 396 & CHE 397 Biochemistry II and Biochemistry II Lab	*Use experiences to narrow down career choice & develop relevant skills*	Consider studying abroad.
CHE 344 & CHE 345 Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics, Kinetics, and Statistical Mechanics Lab		Biology or Chemistry Seminar/Research*4	Participate in Fall & Spring Recruiting to obtain an internship	Consider applying for a Student Leadership Position in Student Life.
THE 201 Christian Theology		Contemporary Western Life and Thought (L) course	Schedule a Mock Interview	Consider being a TA for a favorite class.
Biology or Chemistry Seminar/Research*4			Explore Grad Schools & Take Entrance Exams (e.g. GRE) if necessary	
			Expand Professional Network	
16	**3**	**12**		
MILESTONE: A minimum 3.2 GPA in your major is a good goal to strive for				
Recommended Courses				
Fall Semester 4	**Interim Semester 4**	**Spring Semester 4**	**Career Planning and Preparation**	**R.E.A.L. Experience**
Biology or Chemistry Seminar/Research*4	Interim Off	BIO 396 & BIO 397 Molecular Biology and Molecular Bio	PHASE 3: EXECUTE	Continue updating your public R.E.A.L. Portfolio with relevant experiences and reflection.
Elective (BIO224/225 recommended)		Biology or Chemistry Seminar/Research*4	*Execute an effective job or grad school search*	Consider mentoring an underclassman.
World Cultures (U) course		Comparative Systems (G) course	Participate in Fall and Spring Recruiting	
Interpreting Biblical Themes (J) course		Contemporary Christian Issues (P) course	Apply for Graduate School if necessary	
Leisure and Lifetime Sports (Q) course		Elective	Expand Professional Network	
Cross Cultural Experience (Z) course		Artistic Experience (A) course		
12-15	**0**	**14-17**		

Total Credits: 122-128

1. This program assumes a student will use CHE 113D and MAT 124M to meet the general education laboratory science and Mathematics requirements.
2. Students must complete through the second semester of a first year language course or equivalent.
3. CHE 208/CHE 208D is a one-semester course that meets the requirements for CHE 113/CHE 113D and CHE 214/CHE 215. Students taking CHE 208/CHE 208D may choose an elective in the spring of their freshmen year.
4. Choose either the Biology Seminar/Research series (BIO 339, BIO 495, BIO 496, BIO 499) or Chemistry Seminar/Research series (CHE 395, CHE 490 and CHE 494). Students pursuing the ACS-accredited B.S. must complete the chemistry series.

Most financial aid packages stipulate 12 credits/semester; Minnesota state grants reduced when credit load falls below 15 credits/semester. (Interim credits may be split between fall and spring for state grant purposes only.)

B.S. in Biochemistry/Molecular Biology Enhanced Academic Plans

B.S. in Biochemistry/Molecular Biology - Humanities

Recommended Courses				
Fall Semester 1	**Interim Semester 1**	**Spring Semester 1**	**Career Planning and Preparation**	**R.E.A.L. Experience**
CHE 113 & CHE 113D (or CHE208/208D Accelerated General Chemistry/Lab)1, 3 General Chemistry IGeneral Chemistry I Lab	GES 147 Humanities II: Renaissance and Reformation	BIO 128 & BIO 128D Integrative Biology: Metabolism, Energy, Biodiversity and Integrative Biology: Metabolism, Energy, Biodiversity Lab	PHASE 1: EXPLORE	Create your R.E.A.L. Portfolio
BIO 124 & BIO 124D Integrative Biology: Genes, Cells, Change and Integrative Biology: Genes, Cells, Change Lab		CHE 214 & CHE 215 (or elective if CHE208/208D was taken in the fall)3General Chemistry IIGeneral Chemistry II Lab	*Explore self, careers, & God's call*	Consider joining Sigma Zeta, or another club or ministry of interest
MAT 124M1 Calculus 1		MAT 125 Calculus 2	Take a Career Assessment	Consider finding a mentor
GES 145 Humanities I: Greco-Roman through Middle Ages		GES 244 Humanities III: European Enlightenment and American Culture to 1877	Research Careers: O*Net, Candid Careers, & informational interviews w/ Alums	
			Gain Experience: Part-time job; Campus Involvement (e.g. student club); Volunteering	
16	**4**	**16**		
MILESTONES: Consider study abroad options				
Recommended Courses				
Fall Semester 2	**Interim Semester 2**	**Spring Semester 2**	**Career Planning and Preparation**	**R.E.A.L. Experience**
CHE 224 & CHE 225 Organic Chemistry I and Organic Chemistry I Lab	GES 140 Introduction to Wellbeing	CHE 226 & CHE 227 Organic Chemistry II and Organic Chemistry II Lab	PHASE 1&2: EXPLORE/EXPERIENCE	Continue adding artifacts and reflections to your R. E.A.L. Portfolio.
PHY 292 & PHY 292D General Physics I and General Physics I Lab		PHY 296 & PHY 297 General Physics II and General Physics II Lab	*Finalize major if necessary & begin gaining experience*	Consider taking a leadership position with a student club.
GES 246 Humanities IV: Modern and Contemporary Western Culture		CHE 312 & CHE 313 Quantitative Analysis and Quantitative Analysis Lab	Create/update Resume & LinkedIn	Consider going on a spring break mission trip.
		Second Language (S) course*2	Build professional network (e.g. informational interviews)	
			Attend Spring Career Fair	
12	**3**	**16**	Obtain Internship or relevant job by summer	
MILESTONES: Consider doing an online course over the summer				
Recommended Courses				
Fall Semester 3	**Interim Semester 3**	**Spring Semester 3**	**Career Planning and Preparation**	**R.E.A.L. Experience**
BIO 332 & BIO 333 Genetics and Genetics Lab	Science, Technology and Society (K) course	BIO 354 & BIO 355 Cell Biology and Cell Biology Lab	PHASE 2: EXPERIENCE	Review your R.E.A.L. Portfolio and prepare to make it public.
BIO 388 & BIO 389 Biochemistry I and Biochemistry I Lab		CHE 396 & CHE 397 Biochemistry II and Biochemistry II Lab	*Use experiences to narrow down career choice & develop relevant skills*	Consider studying abroad.
CHE 344 & CHE 345 Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics, Kinetics, and Statistical Mechanics Lab		Biology or Chemistry Seminar/Research*4	Participate in Fall & Spring Recruiting to obtain an internship	Consider applying for a Student Leadership Position in Student Life.
THE 201 Christian Theology		Contemporary Western Life and Thought (L) course	Schedule a Mock Interview	Consider being a TA for a favorite class.
Biology or Chemistry Seminar/Research*4			Explore Grad Schools & Take Entrance Exams (e. g. GRE) if necessary	
			Expand Professional Network	
16	**3**	**12**		
MILESTONE: A minimum 3.2 GPA in your major is a good goal to strive for				
Recommended Courses				
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Biology or Chemistry Seminar/Research*4	Interim Off	BIO 396 & BIO 397 Molecular Biology and Molecular Bio	PHASE 3: EXECUTE	Continue updating your public R.E.A.L. Portfolio with relevant experiences and reflection.
Elective (BIO224/225 recommended)		Biology or Chemistry Seminar/Research*4	*Execute an effective job or grad school search*	Consider mentoring an underclassman.
World Cultures (U) course		Comparative Systems (G) course	Participate in Fall and Spring Recruiting	
Interpreting Biblical Themes (J) course		Contemporary Christian Issues (P) course	Apply for Graduate School if necessary	
Leisure and Lifetime Sports (Q) course		Elective	Expand Professional Network	
Cross Cultural Experience (Z) course		Artistic Experience (A) course		
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