

**Biology, B.S. (120 Units)**

Valid for Catalog Years: 2018/2019 to 2019/2020

\*Official planning guide approved by the College of Science & Math

For assistance or to schedule an advising appointment, please contact the

CSM Advising and Resources Center at 559-278-4150, Science I 136

Department of Biology:  
559-278-2001, Science I 106

	Freshman		Sophomore		Junior		Senior	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
Units	15	15-16	14-15	15-16	16-20	16-18	15-19	14-18
<b>Milestones</b>								
<b>General Education</b>	<b>A2 (3 Units)</b> Written Communication *Must pass with a C or better	<b>A1 (3 Units)</b> Oral Communication *Must pass with a C or better	<b>C2 (3-4 Units)</b> Humanities	<b>D1 (3 Units)</b> American History	<b>D2 (3 Units)</b> American Government	<b>D3 (3 Units)</b> Social Science	<b>E1 (3 Units)</b> Lifelong Understanding & Self Development	<b>IC (3-4 Units)</b> Arts & Humanities
	<b>A3 (3 Units)</b> Critical Thinking *Must pass with a C or better	<b>C1 (3-4 Units)</b> Arts			<b>IB (3 Units)</b> Physical Universe & Its Life Forms	<b>C1/C2 (3-4 Units)</b> Arts or Humanities	<b>ID (3-4 Units)</b> Social, Political, & Economic Institutions	
<b>Major</b>	<b>GE Area B1</b> <b>CHEM 1A</b> <b>(3 Units)</b> Physical Sciences [Pre-Req: High school chemistry. May be taken concurrently: GE B4; CHEM 1AL] *Not open to students with credit in CHEM 1B	<b>GE Area B2</b> <b>BIOL 1A</b> <b>(4 Units)</b> Life Sciences	<b>CHEM 128A</b> <b>(3 Units)</b> [Pre-Req: CHEM 1B or 8 (C or better) or instructor permission] <b>or</b> <b>CHEM 8</b> <b>(3 Units)</b> [Pre-Req: CHEM 1B or 3A]	<b>CHEM 129A</b> <b>(2 Units)</b> [Pre-Req: CHEM 8 or 128A (C or better; may be taken concurrently)]	<b>CHEM 150</b> <b>(3 Units)</b> [Pre-Req: CHEM 3B, 8, or 128A & 128B] <b>or</b> <b>CHEM 155A</b> <b>(3 Units)</b> [Pre-Req: CHEM 128B]	<b>BIOL 103</b> <b>(3 Units)</b> [Pre-Req: BIOL 102; CHEM 150 or 155A]	<b>Diversity Course</b> <b>(3-4 Units)</b> *See course catalog for details	<b>BIOL 105</b> <b>(3 Units)</b> [Pre-Req: BIOL 101, 102, 103; Senior standing or instructor permission]
	<b>GE Area B3</b> <b>CHEM 1AL</b> <b>(2 Units)</b> Lab [Pre-Req: CHEM 1A (may be taken concurrently)]	<b>CHEM 1B</b> <b>(3 Units)</b> [Pre-Req: CHEM 1A & 1AL (both passed with a C or better); CHEM 1BL (may be taken concurrently)]	<b>PHYS 2A</b> <b>(4 Units)</b> [Pre-Req: DS 71, MATH 75, MATH 70, or department permission]	<b>PSYCH 42</b> <b>(4 Units)</b> <b>or</b> <b>MATH 101</b> <b>(4 Units)</b> [Pre-Req: MATH 70, 75, or MATH 75A & B] *No credit if taken after MATH 108	<b>BIOL 101</b> <b>(4 Units)</b> [Pre-Req: BIOL 1A, 1B; PSYCH 42 or MATH 101; MATH 70 or equivalent recommended]	<b>BIOL 104</b> <b>(1 Unit)</b> [Pre-Req: BIOL 102; BIOL 103 (may be taken concurrently)]	<b>Physiology Course</b> <b>(3-4 Units)</b> *See course catalog for details	<b>Other Laboratory Course</b> <b>(2-4 Units)</b> *See course catalog for details

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	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
Units	15	15-16	14-15	15-16	16-20	16-18	15-19	14-18
Major	<b>GE Area B4 MATH 70 or MATH 75 (4 Units)</b> Quantitative Reasoning *Must pass with a C or better; see course catalog for prerequisite requirements; see footnotes	<b>CHEM 1BL (2 Units)</b> [Pre-Req: CHEM 1B (may be taken concurrently)]	<b>BIOL 1B (3 Units)</b> [Pre-Req: BIOL 1A; first-time enrollees must take BIOL 1BL concurrently]		<b>BIOL 102 (3 Units)</b> [Pre-Req: BIOL 1A, 1B]	<b>Additional Upper Division Course (3-4 Units)</b> *See course catalog for details	<b>Additional Upper Division Course (3-4 Units)</b> *See course catalog for details	<b>Additional Upper Division Course (3-4 Units)</b> *See course catalog for details
			<b>BIOL 1BL (1 Unit)</b> [Pre-Req: First-time enrollees must take BIOL 1B concurrently]			<b>Additional Upper Division Course (3-4 Units)</b> *See course catalog for details		
Additional Graduation Requirements				<b>Elective</b> *CHEM 128B recommended	<b>UDWS (0-4 Units)</b> *Upper Division Writing Exam OR "W" Course (must pass with a C or better)			<b>MI (3 Units)</b> Multicultural/International
				<b>Elective</b> *PHYS 2B recommended				

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	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
<b>Units</b>	<b>15</b>	<b>15-16</b>	<b>14-15</b>	<b>15-16</b>	<b>16-20</b>	<b>16-18</b>	<b>15-19</b>	<b>14-18</b>

**FOOTNOTES:**

**Prerequisites/Corequisites:** Other restrictions may apply. Please see your course catalog for detailed prerequisite/corequisite requirements.

**Grade Requirements:** CR/NC grading is not permitted in the Biology major.

**General Education:** Units in this area may be used toward a double major or minor (see Double Major or departmental minor). Consult the appropriate department chair, program coordinator, or faculty adviser for additional information.

**MATH 70:** cannot be used to fulfill GE Area B4 if taken prior to Spring 2014.

**Electives (0-6 units):** Units in this area may be used toward a double major or minor. Students must earn a minimum of 120 units total to graduate. The number of required elective units may vary, depending on the amount of units earned from major and GE courses.

**Upper Division Writing Skills requirement (UDWS):** All undergraduate students must demonstrate competency in writing skills by passing the Upper Division Writing Exam (UDWE) or by obtaining a C or better in an approved upper division writing course, identified by the letter "W."

**Substitutions:** If substitutions/exceptions/waivers are made for any major courses that also meet GE and/or the Multicultural/International graduation requirement, the student is responsible for completing additional courses to satisfy the respective areas (GE and/or MI). This also includes the upperdivision writing requirement.

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General Education	<b>A2 (3 Units)</b> Written Communication *Must pass with a C or better	<b>A1 (3 Units)</b> Oral Communication *Must pass with a C or better	<b>C2 (3-4 Units)</b> Humanities	<b>D1 (3 Units)</b> American History	<b>D2 (3 Units)</b> American Government	<b>D3 (3 Units)</b> Social Science	<b>E1 (3 Units)</b> Lifelong Understanding & Self Development	<b>MI (3 Units)</b> Multicultural/International
	<b>A3 (3 Units)</b> Critical Thinking *Must pass with a C or better	<b>C1 (3-4 Units)</b> Arts			<b>IB (3 Units)</b> Physical Universe & Its Life Forms	<b>C1/C2 (3-4 Units)</b> Arts or Humanities	<b>ID (3-4 Units)</b> Social, Political, & Economic Institutions	<b>IC (3-4 Units)</b> Arts & Humanities
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	<b>GE Area B3</b> <b>CHEM 1AL (2 Units)</b> Lab [Pre-Req: CHEM 1A (may be taken concurrently)]	<b>CHEM 1B (3 Units)</b> [Pre-Req: CHEM 1A & 1AL (both passed with a C or better); CHEM 1BL (may be taken concurrently)]	<b>PHYS 2A (4 Units)</b> [Pre-Req: DS 71, MATH 75, MATH 70, or department permission]	<b>PSYCH 42 (4 Units)</b> <b>or</b> <b>MATH 101 (4 Units)</b> [Pre-Req: MATH 70, 75, or MATH 75A & B] *No credit if taken after MATH 108	<b>BIOL 101 (4 Units)</b> [Pre-Req: BIOL 1A, 1B; PSYCH 42 or MATH 101; MATH 70 or equivalent recommended]	<b>BIOL 104 (1 Unit)</b> [Pre-Req: BIOL 102; BIOL 103 (may be taken concurrently)]	<b>Physiology Course (3-4 Units)</b> *See course catalog for details	<b>Other Laboratory Course (2-4 Units)</b> *See course catalog for details

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			<b>BIOL 1BL (1 Unit)</b> [Pre-Req: First-time enrollees must take BIOL 1B concurrently]			<b>Additional Upper Division Course (3-4 Units)</b> *See course catalog for details		
Electives				<b>Elective</b> *CHEM 128B recommended	<b>UDWS (0-4 Units)</b> *Upper Division Writing Exam OR "W" Course (must pass with a C or better)			
				<b>Elective</b> *PHYS 2B recommended				

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