

**Mathematics**  
**Pure Math Option, 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 Mathematics:** 559-278-2992, Peters Business 381

	Freshman		Sophomore		Junior		Senior	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
Units	14	14-15	16-17	15-17	16-17	15-16	16	16-17
<b>Milestones</b>								
<b>General Education</b>	<b>A1 (3 Units)</b> Oral Communication *Must pass with a C or better	<b>E1 (3 Units)</b> Lifelong Understanding & Self Development	<b>A2 (3 Units)</b> Written Communication *Must pass with a C or better; ENGL 10 recommended	<b>B2 (3-4 Units)</b> Life Sciences	<b>C1/C2 (3-4 Units)</b> Arts or Humanities	<b>D3 (3 Units)</b> Social Science	<b>ID (3-4 Units)</b> Social, Political, & Economic Institutions *See footnote	<b>IB (3 Units)</b> Physical Universe & Its Life Forms
	<b>A3 (3 Units)</b> Critical Thinking *Must pass with a C or better			<b>C1 (3-4 Units)</b> Arts	<b>C2 (3-4 Units)</b> Humanities			<b>IC (3-4 Units)</b> Arts & Humanities
				<b>D1 (3 Units)</b> American History (HIST 11 or 12)	<b>D2 (3 Units)</b> American Government (PLSI 2)			
<b>Major</b>	<b>GE Area B4</b> <b>MATH 75 (4 Units)</b> Quantitative Reasoning *See course catalog for prerequisite requirements; see footnotes	<b>GE Area B1</b> <b>PHYS 4A (3 Units)</b> Physical Sciences [Pre-Req: GE B4; MATH 76 (may be taken concurrently)] *See footnotes	<b>MATH 77 (4 Units)</b> [Pre-Req: MATH 76]	<b>MATH 81 (3 Units)</b> [Pre-Req: MATH 77]	<b>MATH 152 (4 Units)</b> [Pre-Req: MATH 77]	<b>MATH 151 (4 Units)</b> [Pre-Req: MATH 111]	<b>MATH 171 (4 Units)</b> [Pre-Req: MATH 111]	<b>MATH Elective</b>

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Major	<b>CSCI 40 (4 Units)</b> [Pre-Req: ELM or College Intermediate Algebra (C or better); trigonometry]	<b>GE Area B3 PHYS 4AL (1 Unit) Lab</b> [Co-Req: PHYS 4A] *See footnotes	<b>MATH 111 (4 Units)</b> [Pre-Req: MATH 76]	<b>MATH 101 (4 Units)</b> [Prerequisite: MATH 70 or MATH 75, or MATH 75A and B] <b>OR</b> <b>MATH Elective</b>	<b>MATH Elective</b>	<b>MATH 191T (1 Unit)</b> [In Pure Math with permission]	<b>MATH 198 (3 Units)</b> [Prerequisites: Senior standing or permission of instructor; MATH 151, MATH 171, and MATH 152]	
		<b>MATH 101 OR MATH Elective OR Elective</b> *See footnotes	<b>MATH 107 (3 Units)</b> [Prerequisite: MATH 77 (may be taken concurrently)] <b>OR</b> <b>MATH Elective</b>			<b>MATH Elective</b>		
		<b>MATH 76 (4 Units)</b> [Pre-Req: MATH 75 or MATH 75A & B]						
Additional Graduation Requirements						<b>Elective</b>	<b>MI (3 Units) Multicultural/ International</b> * See footnotes	<b>Elective</b>
							<b>Elective</b>	<b>Elective</b>

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**FOOTNOTES:**

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

**MATH 75:** MATH 75A & B may be taken in lieu of MATH 75.

**PHYS 4A/4AL:** PHYS 4AL is not required for the Mathematics major. If students wish to include PHYS 4A as a General Education Breadth course, they must also take PHYS 4AL.

**MATH Elective (16-18 units):** Math Electives of the Pure Math Option select MATH 107 or MATH 114; MATH 128 or MATH 172; MATH 161 or MATH 165; MATH 191T; MATH 198; and one MATH Elective (3-4 unit mathematics course, upper division or graduate (excluding MATH 100, 133, 134, 137, 138, 139)

**Electives (9-12 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):** Consider taking ANTH 105W (UD GE MI) or ANTH 116W (UD GE ID) to satisfy your upper division Writing Skills Requirements. 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."

**Substitution:** 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.