SAN LUIS OBISPO

B.S. in MATHEMATICS (Pure Mathematics Concentration)

Suggested 4-Year Academic Flowchart

Updated 6/7/2022

| FRESHMAN | | | SOPHOMORE | | | JUNIOR | | | SENIOR | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------|
| Fall | Winter | Spring | Fall | Winter | Spring | Fall | Winter | Spring | Fall | Winter | Spring |
| Calculus I MATH 141 (4) * [B4] | Calculus II MATH 142 (4) (MATH 141 w/min Cor Instr. Consent) [GE Elective] | Calculus III MATH 143 (4) (MATH 142 w/min Cor Instr. Consent) | Calculus IV MATH 241 (4) (MATH 143) | Linear Algebra I MATH 206 (4) (MATH 143) | Differential Equations I MATH 242 (4) (MATH 206 & 241) | Introduction to Analysis I MATH 412 (4) (MATH 306) | Introduction to Analysis II MATH 413 (4) (MATH 412) | Depth/MATH Elective (4) ³ | Abstract Algebra I MATH 481 (4) (MATH 306 or MATH 341) | Abstract Algebra II MATH 482 (4) (MATH 481) | Depth/MATH Elective (4) ³ |
| | | Fundamentals of Computer Science I CSC/CPE 101 (4) ¹ * | Orientation to Mathematics Major MATH 202 (1) (MATH 143) | Methods of Proof in Mathematics MATH 248 (4) | Linear Algebra II MATH 306 (4) (MATH 206 or 244; 241; 248 w/min C-, or Instr Consent) | Combinatorial Math MATH 334 (4) (GE Areas A & B4 W/min C·; CSC 248. MATH 206. or [Upper-Div B] | MATH / STAT Elective (4) ⁴ | MATH Elective (4) ² * | Senior Project Select One: MATH 459 or MATH 460 or MATH 461 & 462 (4) * | Topology I MATH 440 (4) (MATH 412. Coreq: MATH 481) | |
| [A1] Expository Writing [Stock 101/102 (4)** [Math 141 w/mir Core; Math 1 Core; Math 1 | | | General Physics I PHYS 141 (4)¹ (MATH 141 w/min C-; Coreq: MATH 142 or 182; Recom: HS physics) | General Physics II or III PHYS 142 or 143 (4) ¹ * [B1 & B3] | MATH Elective (4) ² * | Complex Analysis I MATH 410 (4) (MATH 242, or MATH 241 and 244) | Depth/MATH Elective (4) ³ | MATH Elective (4) ² * | MATH Elective (4) ² * | | |
| Reasoning, Argumentation, & Writing [A3] COMS 126, 145, ENGL 145, 147, ES 145, PHIL 126, or WGQS 145 (4)** (Completion of GE A2 with a C- or better) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years. GE (4) GE (4) GE (4) | | | | | GE (4) | Free Elective | GE (4) | GE (4) | GE (4) | GE (4) | GE (4) ** |
| ** | Free Elective | (4) | Free Elective (4) | ** | ** | Graduation Writing Requirement GWR* (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year) | | | ** | Free Elective (2) | ** |
| 16 | 13 | 16 | 13 | 16 | 16 | 16 | 16 | 16 | 16 | 14 | 12 |
| | | | | | | | | | | TOTAL: | 180 |

Notes:

MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET

Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requiren

USCP requirement can be satisfied by some (but not all) courses within GE categories: Upper-Division B, C1, Upper-Division C, D1, D2, Upper-Division D, or E.

<u>Legend:</u>



^{*} Refer to current catalog for prerequisites.

^{**}One course from each of the following GE areas must be completed: A1, A2, A3, B2, C1, C2, Lower-Division C Elective, Upper-Division C, D1, D2, Upper-Division D, Lower-Division E, F, and GE Elective. Upper-Division C and Upper-Division D should be taken only after Junior standing is reached (90 units).

¹ The PHYS/CSC course sequences may be taken in either order depending on your interests.

² Math Electives must include 16 units from the following: MATH 304, 335, 341, 344, 350, 404, 406, 411, 414, 416, 418, 435, 437, 451, 452, 453, 459 or 460, 461 and 462, 470, 475, 483, 531, 541; STAT 425.

³ Depth Work must include 12 units from of the following: MATH 406, 411, 414, 435, 483.

 $^{^{\}rm 4}$ Choose one course from the following: MATH 350; STAT 301, 305.