## **B.S. in PHYSICS**Suggested 4-Year Academic Flowchart



Undated 3/10/2020 FRESHMAN SOPHOMORE JUNIOR SENIOR Spring Spring Spring Spring General Physics General Physics General Physics Modern Physics Modern Physics Classical Thermal Quantum Electromagnetic Technical Technical Mechanics I Fields & Waves I Elective Physics I Mechanics I Elective PHYS 301 (4) PHYS 408 (4) PHYS 133 (4)2 PHYS 211 (4) PHYS 212 (4) PHYS 302 (4) PHYS 405 (4)  $(3-4)^4$ PHYS 141 (4)2 PHYS 132 (4)2  $(4)^4$ PHYS 131 or 141 o MATH 141 w/min C HNRS 131, 141, 0 (PHYS 132: 133: (PHYS 131 or 141: (PHYS 212: 302: (PHYS 133; MATH (PHYS 211) MATH 241; MATH (PHYS 211) 320 or 322; MATH MATH 142 or 182† MATH 241: Recom 142. Recom: MATH 304 or PHYS 320 MATH 242 or 244) 242 or 244) 241; 242 or 244) [B1 & B3] Methods of Differential Technical Technical Calculus I Calculus II Calculus III Calculus IV Linear Algebra 1 Senior Project I Senior Project II Theoretical Equations I Elective Elective Physics II Physics I MATH 141 (4) MATH 142 (4)1 MATH 143 (4)1 MATH 241 (4) MATH 206 (4) MATH 242 (4) PHYS 320 (4) PHYS 321 (4)  $(4)^4$ PHYS 461 (2) PHYS 462 (2) (4)4 MATH 142 w/min C (MATH 206 and MATH 142 w/min C PHYS 211: MATH or Instr. Consent) (PHYS 320) (MATH 143) (MATH 143) Instructor Consen Instructor Consen ΓB41 [GE Elective] Quantum Quantum Gen Chem for Gen Chem for Electronics and Physics on the Technical Technical Physics **Physics** Physical Science Physical Science Instrumentation Computer Elective Elective Laboratory I Laboratory II & Engineering I & Engineering II PHYS 341 (2) PHYS 206 (4) PHYS 202 (4) PHYS 340 (2)  $(3-4)^4$ (2)4 CHEM 124 (4)2 CHEM 125 (4)2 PHYS 206: 212: & GE (4) GE (4) (PHYS 133 and (PHYS 133; and ne: PHYS 202, CSC (PHYS 340) ATH 118; Recom MATH 143) (CHEM 124) MATH 241 or 244 101, 231, or 234) HS chemistry) Expository Writing ENGL 133/134 (4)\*\* [A2] GE (4) \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* \*\* Can be taken anytime during Freshman Year Oral Communication COMS 101/102 (4)\*\* [A1] Free Elective Elective Can be taken anytime during Freshman Year Graduation Writing Requirement GWR\* Reasoning, Argumentation, & Writing [A3] GE (4) COMS 126; COMS/ENGL 145; ENGL 148; PHIL 126 (4)\*\* (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior (Completion of GE A2 with a C- or better) year) 16 16 15-16 12 13-14 12-16 16 16 14 TOTAL: 180

## Notes:

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

- \* Refer to current catalog for prerequisites.
- \*\* One course from each of the following GE areas must be completed: A1, A2, A3, B2, Upper-Division B, C1, C2, Lower-Division C Elective, Upper-Division C, D1, D2 (8), Upper-Division D, E, and a GE Elective. Upper-Division B, Upper-Division C, and Upper-Division D should be taken only after Junior standing is reached (90 units). Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requirement (GWR).

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.

- † Course can be taken previously or concurrently.
- <sup>1</sup> Calculus workshops (Math 151, 152, 153) are recommended for elective credit. They require concurrent enrollment in the associated section of Ca
- $^{2}$  Supplemental Workshops (SCM 150) recommended in your first year. These courses will count for elective credit.
- 3 8 total units of elective credit required for the major. Electives can be taken at anytime. MATH 151 & SCM 150 workshops recommended.
- <sup>4</sup> Complete 20 units of Advanced Physics Electives. Select 9 units of 300-400 level electives in PHYS/ASTR/GEOL/MATH/STAT/DATA/CSC, or CSC 101, 231, 234, 235 (excludes ASTR 324, CSC 302, CSC 310). Select an additional 11 units of 300-400 level PHYS prefix courses, or ASTR 444, with at least 2 courses (Laboratory Technical Elective) from PHYS 323, 342, 357, 417, 422, 423, 452, ASTR 444<sup>5</sup>. Total combined elective credit in PHYS 400, PHYS 404, ASTR 400, ASTR 404, GEOL 400, and GEOL 404 limited to 8 units, with a maximum of 2 units per quarter.

## Legend: Course Title Course # (Units) (Prerequisite) General Ed. (60) Free Electives (8)

<sup>&</sup>lt;sup>5</sup> ASTR 444 can be used only once in the Advanced Physics Electives. If used to meet the Laboratory Technical Elective, excess units will go into Physics or Breadth