

As of February 8, 2023

**2023-2024 Degree Map: B.S. Applied Physics**  
**School of Natural Sciences & Mathematics | Stockton University**  
**USC1 – 240 | (609) 652-4546**

This is a **suggested** plan of study for completion of this degree program. The **goal** of a Degree Map is to ensure that students graduate with no greater than 128 credits and in four years.

- All students should speak with their preceptor about their academic programs. Students are advised to reference their Degree Works for information about their program’s At-Some-Distance and Cognate courses.
- Transfer students may not need to take all courses in the plan; they should consult with an academic advisor.

<b>FIRST YEAR – FALL SEMESTER</b>	
[Optional] ASD or G-course <b>Optional Attributes:</b> W1 and A, H, I, R, and/or V	<b>4 credits</b>
PHYS 2220/25 Physics I w/lab <sup>1,2</sup> <b>Attribute:</b> Q1	<b>6 credits</b>
MATH 2215 Calculus I <b>Attribute:</b> Q1	<b>5 credits</b>
Subject: FRST or G-course <b>Attribute:</b> W1	<b>4 credits</b>
<b>Total Course Load as of First Year Fall Semester</b>	<b>19 credits</b>

<b>FIRST YEAR – SPRING SEMESTER</b>	
[Optional] ASD or G-course <b>Optional Attributes:</b> W1, W2, A, H, I, R, and/or V	<b>4 credits</b>
PHYS2230 Physics II w/lab <sup>1,2</sup> <b>Attribute:</b> Q1	<b>6 credits</b>
MATH 2216 Calculus II <b>Attribute:</b> Q1	<b>5 credits</b>
Subject: ASD or G-course <b>Attribute:</b> A, H, I, R, and/or V	<b>4 credits</b>
<b>First Year Credit Total Overall</b>	<b>38 credits</b>

<b>SECOND YEAR – FALL SEMESTER</b>	
ASD or G-course <b>Optional Attributes:</b> W1, W2, A, H, I, R, and/or V	<b>4 credits</b>
PHYS 3010 Physics III <sup>1</sup> [Fall only course] <b>Attribute:</b> Q1	<b>4 credits</b>
MATH 2217 Calculus III <b>Attribute:</b> Q1	<b>5 credits</b>
<b>Subject:</b> ASD or G-course <b>Attribute:</b> A, H, I, R, and/or V	<b>4 credits</b>
<b>Total Course Load as of Second Year Fall Semester</b>	<b>55 credits</b>

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<b>SECOND YEAR – SPRING SEMESTER</b>	
ASD or G-course <b>Optional Attributes:</b> W1, W2, A, H, I, R, and/or V	<b>4 credits</b>
PHYS 3110 Electronics <b>Attribute:</b> Q2, W2	<b>4 credits</b>
PHYS 3345 Math Methods for Engineering & Science <b>Attribute:</b> Q1	<b>4 credits</b>
Cognate Course <sup>3</sup>	<b>4 credits</b>
PHYS 2600 Physics Colloquium <sup>4</sup>	<b>4 credits</b>
PHYS 4620 Research Methods <sup>4</sup>	<b>0 credits</b>
<b>Second Year Credit Total Overall</b>	<b>75 credits</b>

<b>THIRD YEAR – FALL SEMESTER</b>	
ASD or G-course <b>Optional Attributes:</b> W1, W2, A, H, I, R, and/or V	<b>4 credits</b>
ASD or G-course <b>Optional Attributes:</b> W1, W2, A, H, I, R, and/or V	<b>4 credits</b>
PHYS 3390 Quantum Mechanics [Even Years] <b>OR</b> PHYS 3370 Electricity and Magnetism [Odd Years]	<b>4 credits</b>
Cognate Course <sup>3</sup>	<b>4 credits</b>
PHYS 2600 Physics Colloquium <sup>4</sup>	<b>0 credits</b>
PHYS 4620 Research Methods <sup>4</sup>	<b>0 credits</b>
PHYS 4800 Undergraduate Thesis <b>OR</b> PHYS 4900 Internship <sup>4</sup>	<b>0-4 credits</b>
<b>Total Course Load as of Third Year Fall Semester</b>	<b>91-95 credits</b>

<b>THIRD YEAR – SPRING SEMESTER</b>	
ASD or G-course <b>Optional Attributes:</b> W1, W2, A, H, I, R, and/or V	<b>4 credits</b>
PHYS 3220 Classical Mechanics <b>Attribute:</b> Q2	<b>4 credits</b>
PHYS 3380 Thermal Physics [Odd Years] <b>OR</b> PHYS 3340 Optics [Even Years]	<b>4 credits</b>
Cognate Course <sup>3</sup>	<b>4 credits</b>
PHYS 2600 Physics Colloquium <sup>4</sup>	<b>0 credits</b>
PHYS 4620 Research Methods <sup>4</sup>	<b>0 credits</b>
PHYS 4800 Undergraduate Thesis <b>OR</b> PHYS 4900 Internship <sup>4</sup>	<b>0-4 credits</b>
<b>Third Year Credit Total Overall</b>	<b>107-111 credits</b>

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FOURTH YEAR – FALL SEMESTER	
ASD or G-course <b>Optional Attributes:</b> W1, W2, A, H, I, R, and/or V	<b>4 credits</b>
ASD or G-course <b>Optional Attributes:</b> W1, W2, A, H, I, R, and/or V	<b>4 credits</b>
PHYS 3370 Electricity and Magnetism [Odd Years] OR PHYS 3390 Quantum Mechanics [Even Years]	<b>4 credits</b>
Cognate Course <sup>3</sup>	<b>4 credits</b>
PHYS 2600 Physics Colloquium <sup>4</sup>	<b>0 credits</b>
PHYS 4620 Research Methods <sup>4</sup>	<b>0 credits</b>
PHYS 4800 Undergraduate Thesis OR PHYS 4900 Internship <sup>4</sup>	<b>0-4 credits</b>
<b>Total Course Load as of Fourth Year Fall Semester</b>	<b>123-131 credits</b>

FOURTH YEAR – SPRING SEMESTER	
ASD or G-course <b>Optional Attributes:</b> W1, W2, A, H, I, R, and/or V	<b>4 credits</b>
ASD or G-course <b>Optional Attributes:</b> W1, W2, A, H, I, R, and/or V	<b>4 credits</b>
PHYS 3340 Optics [Even Years] <sup>4</sup> OR PHYS 3380 Thermal Physics [Odd Years] <sup>4</sup>	<b>4 credits</b>
Cognate Course <sup>3</sup>	<b>4 credits</b>
PHYS 2600 Physics Colloquium <sup>4</sup>	<b>0 credits</b>
PHYS 4620 Research Methods <sup>4</sup>	<b>0 credits</b>
PHYS 4800 Undergraduate Thesis OR PHYS 4900 Internship <sup>4</sup>	<b>0-4 credits</b>
<b>Fourth Year Credit Total Overall</b>	<b>139-143 credits</b>

**Program Specific Notes**

- An overall GPA of 2.0 or better in all NAMS courses and a grade of "C" or better in each program and cognate course, is required.
- Odd Years: e.g., 2019, 2021. Even Years: e.g., 2020, 2022. So, a Spring Odd Years course would be offered in Spring 2019, for example.
- All Q's will be covered in degree courses. All *but* one W2 will be covered.
- <sup>1</sup> C or better in Physics I, II, and III is required to continue onto the intermediate and advanced physics courses.
- <sup>2</sup> Students transferring from other majors who have already taken Physics for Life Sciences (PHYS 2110 and PHYS 2120) may substitute PHYS I and PHYS II respectively, with approval from the Physics Program.
- <sup>3</sup> Two cognates *must be* of 2000 level or above. Three cognates *must be* of 3000 level or above, **AND** two *must be* from the following list:

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- PHYS 3120 Electrical Circuits
- PHYS 3030 Biomedical Physics
- PHYS 3350 Mathematical Physics
- PHYS 3240 Modeling and Simulation
- <sup>4</sup> Four (4) semesters of PHYS 2600 Physics Colloquium, four (4) semesters of PHYS 4620 Research Methods, and one (1) semester of PHYS 4800 Undergraduate Thesis **OR** PHYS 4900 Internship *must* be completed.