

# School of Natural Sciences and Mathematics

## Physics (BS)

Degree Requirements (120 semester credit hours)

### Four-Year Degree Plan (Example)

This is an example only. Please see advisor to develop individual four-year plan.

Freshman Year			
Fall Semester	SCH	Spring Semester	SCH
<a href="#">CHEM 1311</a> General Chemistry I <sup>2 3 5</sup> or <a href="#">CHEM 1315</a> Honors Freshman Chemistry I <sup>2 3 5</sup>	3	<a href="#">CHEM 1312</a> General Chemistry II <sup>3 5</sup> or <a href="#">CHEM 1316</a> Honors Freshman Chemistry II <sup>3 5</sup>	3
<a href="#">CHEM 1111</a> General Chemistry Lab I <sup>2 3 5</sup> or <a href="#">CHEM 1115</a> Honors Freshman Chemistry Laboratory I <sup>2 3 5</sup>	1	<a href="#">CHEM 1112</a> General Chemistry Lab II <sup>3 5</sup> or <a href="#">CHEM 1116</a> Honors Freshman Chemistry Laboratory II <sup>3 5</sup>	1
<a href="#">HIST 1301</a> U.S. History Survey to Civil War <sup>2</sup>	3	<a href="#">HIST 1302</a> U.S. History Survey from the Civil War <sup>2 8</sup>	3
<a href="#">MATH 2413</a> Differential Calculus <sup>2 3 7</sup>	4	<a href="#">MATH 2414</a> Integral Calculus <sup>2 3 7 8</sup>	4
<a href="#">PHYS 2303</a> Contemporary Physics <sup>6</sup>	3	<a href="#">PHYS 2325</a> Mechanics <sup>2 4 7 9</sup> and <a href="#">PHYS 2125</a> Physics Laboratory I <sup>2 6</sup> or <a href="#">PHYS 2421</a> Honors Physics I - Mechanics and Heat <sup>2 9 10</sup>	4
<a href="#">PHYS 1100</a> The Fun of Physics	1		
<a href="#">UNIV 1010</a> Freshman Seminar <sup>1</sup>	0		
<a href="#">NATS 1101</a> Natural Sciences and Mathematics Freshman Seminar <sup>1</sup>	1		
	16		15
Sophomore Year			
Fall Semester	SCH	Spring Semester	SCH
<a href="#">MATH 2415</a> Calculus of Several	4	<a href="#">MATH 2420</a> Differential Equations with	4

Variables <sup>2 3</sup>		Applications <sup>6</sup>	
<a href="#">MATH 2418</a> Linear Algebra <sup>6</sup>	4	<a href="#">PHYS 3411</a> Theoretical Physics	4
<a href="#">PHYS 2326</a> Electromagnetism and Waves <sup>2 4 8 9</sup>	3-4	<a href="#">PHYS 3427</a> Electronics with Laboratory	4
or <a href="#">PHYS 2422</a> Honors Physics II - Electromagnetism and Waves <sup>2 9</sup>		<a href="#">PHYS 4311</a> Thermodynamics and Statistical Mechanics	3
<a href="#">PHYS 2126</a> Physics Laboratory II <sup>6</sup>	1		
<a href="#">RHET 1302</a> Rhetoric <sup>2 3</sup>	3		
	15-16		15
Junior Year			
<b>Fall Semester</b>	<b>SCH</b>	<b>Spring Semester</b>	<b>SCH</b>
<a href="#">GOVT 2305</a> American National Government <sup>2</sup>	3	<a href="#">GOVT 2306</a> State and Local Government <sup>2</sup>	3
<a href="#">PHYS 3330</a> Numerical Methods in Physics and Computational Techniques	3	<a href="#">PHYS 3312</a> Classical Mechanics	3
<a href="#">PHYS 3416</a> Electricity and Magnetism	4	<a href="#">PHYS 4373</a> Physical Measurements Laboratory	3
<a href="#">PHYS 4301</a> Quantum Mechanics I	3	<a href="#">PHYS 4302</a> Quantum Mechanics II	3
<a href="#">COMM 1311</a> Survey of Oral and Technology-based Communication <sup>2</sup>	3	<a href="#">HUMA 1301</a> Exploration of the Humanities <sup>2</sup>	3
	16		15
Senior Year			
<b>Fall Semester</b>	<b>SCH</b>	<b>Spring Semester</b>	<b>SCH</b>
<a href="#">PHYS 4352</a> Concepts of Modern Physics	3	<a href="#">PHYS 4328</a> Optics	3
<a href="#">PHYS Guided Elective</a>	3	<a href="#">PHYS Guided Elective</a>	3
<a href="#">Free Elective</a>	3	<a href="#">Free Elective</a>	6-7
<a href="#">ARTS 1301</a> Exploration of the Arts <sup>2</sup>	3		
<a href="#">PSY 2301</a> Introduction to Psychology <sup>2</sup>	3		
	15		12-13

**NOTES:**

<sup>1</sup> Incoming freshmen must enroll and complete requirements of UNIV 1010 and the corresponding school-related freshman seminar course. Students, including transfer students, who complete their core curriculum at UT Dallas must take UNIV 2020.

<sup>2</sup> Curriculum Requirements can be fulfilled by other approved courses from accredited institutions of higher education. The courses listed are recommended as the most efficient way

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to satisfy both Core Curriculum and Major Requirements at UT Dallas.

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3 One semester credit hour of Calculus is counted as Major Preparatory credit; three semester credit hours are counted in Core Curriculum. Students may choose either calculus sequence (MATH 2413 and MATH 2414 and MATH 2415) or (MATH 2417 and MATH 2419 and MATH 2451).

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4 Counted in Core Curriculum Science.

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5 Counted in Core Curriculum in Component Area Option.

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6 Indicates a prerequisite class to be completed before enrolling for upper-division classes.

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7 MATH 2413 or MATH 2417 is a prerequisite for PHYS 2325 and MATH 2414 or MATH 2419 is a corequisite for PHYS 2325

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8 MATH 2414 or MATH 2419 is a prerequisite for PHYS 2326.

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9 PHYS 2421 Honors Physics I is a recommended substitution for PHYS 2325. (Requires a minimum grade of B+ in either MATH 2413 or MATH 2417)

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10 PHYS 2422 Honors Physics II is a recommended substitution for PHYS 2326.

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11 PHYS 2422 Honors Physics II may be electively substituted for PHYS 2326.

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51 Hours of upper division courses (course numbers beginning with 3 or greater) are required for all degrees.

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Be sure to check prerequisites of Level 2 courses

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120 semester credit hours required for graduation

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Research Experiences for Undergraduates (REUs) during the summer are highly recommended for Physics majors planning to continue their education in graduate school, whether in physics or another discipline. Formal REU programs exist at many universities, national laboratories, and even overseas, and usually offer a stipend typical of a graduate teaching assistantship. Announcements for REU programs usually appear online in December and application deadlines usually range from late January to early March. Requirements vary, but students are often eligible if they have completed their freshman year.

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**This plan is a resource tool only; it does not replace your degree plan or academic advising.**

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