

# UTEP College of Science: Bachelor of Science Degree Plan

## Physics

### UNIVERSITY CORE CURRICULUM for this MAJOR

A maximum of 66 hours may be transferred from two-year institutions to UTEP degree programs

	COURSE NAME	UTEP	EPCC
<b>A</b>	<b>General Education</b>		
	(Minimum "C" grades required)		
<b>1</b>	<b>Communication (6 credits)</b>		
	Rhetoric & Composition I	RWS 1301	ENGL 1301
	Rhetoric & Composition II	RWS 1302	ENGL 1302
	Rhetoric, Composition, & Communication	RWS 1601	no equivalent
	Expository English Composition for Speakers of ESL	ESOL 1311	no equivalent
	Expository English Composition for Speakers of ESL	ESOL 1312	no equivalent
	Written and Oral Communication	COMM 1611	no equivalent
<b>2</b>	<b>Mathematics (PreCalculus plus 7 or 8 additional credits)</b>		
	PreCalculus	MATH 1508	MATH 1314 & 2413
	Calculus I	MATH 1411	MATH 2412
	Calculus II	MATH 1312	2314
<b>3</b>	<b>Life and Physical Sciences (8 credits)</b>		
	General Chemistry I - Laboratory for Chem 1305	CHEM 1305-1105	CHEM 1311-1111
	General Chemistry II - Laboratory for Chem 1306	CHEM 1306-1106	CHEM 1312- 1112
<b>4</b>	<b>Language, Philosophy, &amp; Culture (3 credits) - choose 1 course</b>		
	English Literature (to 1700's)	ENGL 2311	ENGL 2322
	English Literature (1700's - Modern)	ENGL 2312	ENGL 2323
	Inro to American Fiction	ENGL 2313	ENGL 2324
	Introduction to American Drama	ENGL 2314	ENGL 2343
	Introduction to American Poetry	ENGL 2318	no equivalent
	World History to 1500	HIST 2301	HIST 2321
	World History since 1500	HIST 2302	HIST 2322
	Introduction to Philosophy	PHIL 1301	PHIL 1301
	Introduction to Ethics	PHIL 2306	PHIL 2306
	Making of the Other Americas	FREN 2322	no equivalent
	Introduction to Religious Studies	RS 1301	no equivalent
	Seeing & Naming: Conversations	SPAN 2340	no equivalent
	Introduction to Women's Studies	WS 2300	no equivalent
	Global Feminisms	WS 2350	no equivalent
<b>5</b>	<b>Creative Arts (3 credits) - choose 1 course</b>		
	Art Appreciation	ART 1300	ARTS 1301
	History of Art I (Pre-Renaissance Art History)	ARTH 1305	ARTS 1303
	History of Art II (Renaissance & Modern Art History)	ARTH 1306	ARTS 1304
	Dance Appreciation	DANC 1304	DANC 2303
	Introduction to Art of Motion/Film	FILM 1390	DRAM 2366
	Introduction to Music History	MUSL 1321	MUSI 1307
	Music Appreciation	MUSL 1324	MUSI 1306
	Jazz to Rock	MUSL 1327	MUSI 1310
	Introduction to Theater	THEA 1313	DRAM 1310

	COURSE NAME	UTEP	EPCC
<b>6</b>	<b>American History (6 credits) - must take both</b>		
	History of the U.S. to 1865	HIST 1301	HIST 1301
	History of the U.S. since 1865	HIST 1302	HIST 1302
<b>7</b>	<b>Government/Political Science (6 credits)**</b>		
	Introduction to Politics	POLS 2310	GOVT 2305
	American Government & Politics	POLS 2311	GOVT 2306
<b>8</b>	<b>Social and Behavioral Sciences (3 credits) - choose 1 course</b>		
	Intro to Physical Anthropology & Archaeology	ANTH 1301	ANTH 2346
	Intro to Social & Cultural Anthropology	ANTH 1302	ANTH 2351
	Cultural Geography	ANTH 1310	no equivalent
	Introduction to Linguistics	ANTH 2320	no equivalent
	Economics for Engineers and Scientists	CE 2326	no equivalent
	Interpersonal Communication	COMM 2350	no equivalent
	Mass Media and Society	COMM 2372	COMM 1307
	Principles of Macroeconomics	ECON 2303	ECON 2301
	Principles of Microeconomics	ECON 2304	ECON 2301
	Introduction to Educational Psychology	EDPC 1301	no equivalent
	Action Research in Classrooms	EDU 1342	no equivalent
	Introduction to Linguistics	ENGL 2320	no equivalent
	Cultural Geography	GEOG 1310	no equivalent
	An Introduction to Linguistics	LING 2320	no equivalent
	Language Inside and Out: Select Topics	LING 2340	no equivalent
	Introduction to Psychology	PSYC 1301	PSYC 2301
	Introduction to Sociology	SOCI 1301	SOCI 1301
	Cultural Geography	SOCI 1310	no equivalent
<b>9</b>	<b>Component Area Option (6 credits) - choose 2 courses</b>		
	Introduction to Global Business	BUSN 1301	no equivalent
	Public Speaking	COMM 1301	SPCH 1315
	Business/Professional Communication	COMM 1302	SPCH 1321
	Intro-Computational Thinking	CS 1310	no equivalent
	Computer Programming Sci/Eng	CS 1320	no equivalent
	Scientific Inquiry	SCI 1301	no equivalent
	Seminar/Critical Inquiry	UNIV 1301	EDUC 1300

### IMPORTANT

- 1 It is recommended that both Political Science courses be completed at EPCC then transferred to UTEP or both be completed at UTEP.
- 2 All courses used to satisfy the core curriculum must be completed with a grade of "C" or better. This also applies to courses transferred from
- 3 No substitutions will be allowed in the Core Curriculum.

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**LOWER DIVISION COURSES for the MAJOR**

COURSE NAME			UTEP	EPCC	COURSE NAME			UTEP	EPCC
<b>B</b>	<b>MAJOR: Physics (45/30)</b>								
	<b>Physics Courses</b>						<b>D</b>	<b>Electives ( 12 Credits)</b>	
	Physics I (Introd. Mechanics)	<b>PHYS 2420</b>	<b>PHYS 2325-2125</b>				<i>Additional Semester Hous</i>		
	Physics II (Waves & Fields)	<b>PHYS 2421</b>	<b>PHYS 2326-2126</b>				<i>If possible select from the following:</i>		
	Thermal and Fluid Physics	<b>PHYS 2230</b>	no equivalent				PHYS 3359, PHYS 4353, PHYS 4370		
	Survey of Modern Physics	<b>PHYS 2325</b>	no equivalent						
	Vibrations and Waves	<b>PHYS 2210</b>	no equivalent						
	Physics Optics SPRING	<b>PHYS 3323</b>	no equivalent						
	Advanced Laboratory Practice 2 TIMES	<b>PHYS 3243</b>	no equivalent						
	Thermal Physics SPRING	<b>PHYS 3331</b>	no equivalent						
	Analytical Mechanics I FALL	<b>PHYS 3351</b>	no equivalent						
	Analytical Mechanics II SPRING	<b>PHYS 3352</b>	no equivalent						
	Electromagnetics I FALL	<b>PHYS 4341</b>	no equivalent						
	Electromagnetics II SPRING	<b>PHYS 4342</b>	no equivalent						
	Intro Quantum Mechanics FALL	<b>PHYS 4355</b>	no equivalent						
	Atoms, Molecules, & Solids	<b>PHYS 4356</b>	no equivalent						
	or Relativity, Nuclei & Particles	<b>PHYS 4357</b>	no equivalent						
	Physics Seminar	<b>PHYS 3280</b>	no equivalent						
<b>C</b>	<b>Required Mathematics Courses</b>								
	Calculus III	<b>MATH 2313</b>	<b>MATH 2315</b>						
	Differential Equations	<b>MATH 2326</b>	<b>MATH 2320</b>						
	Principles of Mathematics	<b>MATH 3335</b>	no equivalent						
	<i>At least two courses chosen from:</i>								
	Numerical Analysis	<b>MATH 4329</b>	no equivalent						
	Applied Analysis II	<b>MATH 4336</b>	no equivalent						
	Matrix Algebra	<b>MATH 3323</b>	no equivalent						

**IMPORTANT**

- 1 Upper division coursework = 3000 or 4000 level courses
- 2 Upper division coursework in the major or upper division electives are only available at UTEP (these are not offered at EPCC).