The University of Texas Rio Grande Valley

Bachelor of Science (BS)

Physics *Concentration: Teacher Certification*

і н	Course #	Concentration: reacher (Min.	,	Prerequisite	Additional Notes
			Grade			
3	Choose 1	Communication (Core)	С	010	For all 010 courses: Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.	See General Education Core for more details. Options: ENGL 1301
4	MATH 2413	Calculus I	С	020	MATH 2412 with a grade of 'C' or better; or passing the Precalculus Exemption Test administered by the Department of Mathematics.	
3	Choose 1	American History (Core)		060		See General Education Core for more details. Options: HIST 1301 or HIST/MASC 2327
3	Choose 1	Social and Behavioral Sciences (Core)		080		See General Education Core for course options.
3	Choose 1	Creative Arts (Core)		050		See General Education Core for course options.
1	UTCH 1101	Inquiry Approaches to Teaching	с		Must be a Mathematics or Science Major.	A criminal background check will be required and a tuberculosis test may be required before the first field experience. Special permission from a UTeach co-director is required to enroll in UTCH 1101 and UTC 1102 concurrently.
	UNIV	1301 Learning Framework 1101 Academic and Career Success 1001 Living and Working by Design				As required, based on credit hours earned, TSI status, High school rar major declaration.
17 Sem	ester Total Hours	TOOT ENTING and WORKING BY DESIGN				
3	Choose 1	Communication (Core)		010	For all 010 courses: Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.	See General Education Core for more details. Options: ENGL 1302 or ENGL 1305
4	MATH 2414	Calculus II	С		MATH 2413 with a grade of 'C' or better.	
4	PHYS 2425	Physics for Scientists and Engineers I		030/090	MATH 2413 and concurrent enrollment in MATH 2414.	
3	Choose 1	American History (Core)		060		See General Education Core for more details. Options: HIST 1302 or HIST/MASC 2328
3	CSCI 1380	Computer Science I		090	Concurrent enrollment or credit for MATH 1314 or higher level mathematics course.	
1	UTCH 1102	Inquiry-Based Lesson Design	с		UTCH 1101 with a grade of "C"	Students will begin developing their UTeach Portfolio. May be taken concurrently with UTCH 3301.
18 Sem	ester Total Hours					
чн	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
4	MATH 2415	Calculus III			MATH 2414 with a grade of 'C' or better.	
3	Choose 1	Language, Philosophy & Culture (Core)		040		See General Education Core for course options.
4	PHYS 2426	Physics for Scientists and Engineers II		030/090	PHYS 2425.	
3	PHYS 2327	Physics for Scientists and Engineers III			PHYS 2425. Students may take this course concurrently with PHYS 2426.	See General Education Core for more details.
3	HYS/BIOL 3330 or MATE 3321	Functions and Modeling			A grade of 'C' or better in the following: MATH 2413 and UTCH 1102.	UTeach requirement
	ester Total Hours					
3	MATH 3341	Differential Equations			MATH 2414 and MATH 2318 with a grade of 'C' or better.	
3	MATE/PHIL 3317	Perspective in Mathematics and Science				UTeach requirement
4	PHYS 3402	Modern Physics			PHYS 2426 and PHYS 2327.	Physics core requirement.
3	UTCH 3301	Knowing and Learning in Mathematics and Science	С		UTCH 1101 and UTCH 1102 with a grade of "C" or better or concurrent enrollment with UTCH 1102 with consent of UTeach Advisor.	UTeach requirement
3	POLS 2305	U.S. Federal Government & Politics		070		See General Education Core for more details.
1	Choose 1	Integrative/Experiential Learning Option (Core)		090		See General Education Core for course options.
47.0	ester Total Hours				Must apply to Teacher Education Program.	

Symbols Ke

Critical ('!'): sequence sensitive course.

Minimum Grade: A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S - Satisfactory.

General Education Core (GEC) Sections: 010 - Communication; 020 - Mathematics; 030 - Life and Physical Sciences; 040 - Language, Philosophy & Culture; 050 - Creative Arts; 060 - American History; 070 -Government/Political Science; 080 - Social and Behavioral Sciences; 090 - Applied Communication and Literacies; 090 - Humanities; 090 - Leadership; 090 - Science Labs; 090 - Interdisciplinary; 090 -Technologies; 090 - Language Diversity & Writing.

2021-2022

	i Course #	Course Title	Min. GEC Grade	Prerequisite	Additional Notes
з	PHYS 3305	Classical Mechanics		PHYS 2426 and MATH 2415.	Physics core requirement.
4	PHYS 3411	Math Methods for Physics I		MATH 3341	Physics core requirement.
3	PHYS 3303	Thermodynamics		MATH 2415 and PHYS 2426 and PHYS 2327	Physics core requirement.
3	UTCH 3302	Classroom Interactions	с	(a) University grade point average of at least 2.75, (b) UTCH 1102 with a grade of 'C' or better, (c) UTCH 3301 with a grade of 'C' or better, and (d) admission to the Teacher Education Program.	UTeach requirement
YEAR	POLS 2306	Texas Government & Politics	070		See General Education Core for more details.
	6 Semester Total Hours				
3	xxxx x3xx	Free Elective			
з	PHYS 4305	Statistical Mechanics		PHYS 3303 and PHYS 3311.	Physics core requirement.
	PHYS 4101	Senior Laboratory Research		Consent of instructor.	Physics core requirement.
s	READ 4305	Disciplinary Literacy in Content Area Classrooms			
з	UTCH 3303	Project-Based Instruction	с	(a) University grade point average of at least 2.75, (b) UTCH 3302 with a grade of "C".	UTeach requirement
1	3 Semester Total Hours				
	Course #	Course Title	Min. GEC Grade	Prerequisite	Additional Notes
- +		Course Trite Optics	Min. GEC Grade	Prerequisite MATH 2415 and PHYS 2426 and PHYS 2327.	Additional Notes Physics core requirement.
	PHYS 3304		Min. GEC Grade		
3	PHYS 3304	Optics	Min. GEC Grade	MATH 2415 and PHYS 2426 and PHYS 2327.	Physics core requirement.
3	 PHYS 3304 PHYS 3301 PHYS 4303 	Optics Electromagnetic Theory I	Min. GEC	MATH 2415 and PHYS 2426 and PHYS 2327. MATH 2415 and PHYS 2426.	Physics core requirement. Physics core requirement.
00 100 101 101	 PHYS 3304 PHYS 3301 PHYS 4303 PHYS 4300 	Optics Electromagnetic Theory I Quantum Mechanics I	Mite: GEC	MATH 2415 and PHYS 2426 and PHYS 2327. MATH 2415 and PHYS 2426. PHYS 3305 and PHYS 3311. Senior standing in the Physics Degree Program and consent of a supervising faculty	Physics core requirement. Physics core requirement. Physics core requirement.
UKTHYEAR FALL CO CO CO CO CO CO CO	 PHYS 3304 PHYS 3301 PHYS 4303 PHYS 4300 	Optics Electromagnetic Theory I Quantum Mechanics I Undergraduate Research	Min: GEC Grade	MATH 2415 and PHYS 2426 and PHYS 2327. MATH 2415 and PHYS 2426. PHYS 3305 and PHYS 3311. Senior standing in the Physics Degree Program and consent of a supervising faculty member.	Physics core requirement. Physics core requirement. Physics core requirement. Capstone
UKTHYEAR FALL CO CO CO CO CO CO CO	 PHYS 3304 PHYS 3301 PHYS 4303 PHYS 4300 BIOL/MATE 4392 Semester Total Hours 	Optics Electromagnetic Theory I Quantum Mechanics I Undergraduate Research	Mile GEC Grade Grade C	MATH 2415 and PHYS 2426 and PHYS 2327. MATH 2415 and PHYS 2426. PHYS 3305 and PHYS 3311. Senior standing in the Physics Degree Program and consent of a supervising faculty member.	Physics core requirement. Physics core requirement. Physics core requirement. Capstone
FOURTHYEAR FAUL T	PHYS 3304 PHYS 3301 PHYS 4303 PHYS 4300 BIOL/MATE 4392 Semester Total Hours	Optics Electromagnetic Theory I Quantum Mechanics I Undergraduate Research Research Methods		MATH 2415 and PHYS 2426 and PHYS 2327. MATH 2415 and PHYS 2426. PHYS 3305 and PHYS 3311. Senior standing in the Physics Degree Program and consent of a supervising faculty member. Grade C or better in the following: MATH 2413 and UTCH 1102. (a) University grade point average of at least 2.75, (b) UTCH 3303 with a grade of "C" or better, (c) concurrent enrollment with UTCH 4601, (d) successful completion of PPR and	Physics core requirement. Physics core requirement. Physics core requirement. Capstone UTeach requirement

Note

This program leads to a profession which requires an occupational license as defined under Texas Occupations Code 58.001. This requires that all applicants seeking to become licensed must undergo a criminal background check prior to licensure. Students in this program should check with the College of Education and P-16 Integration on the requirements for a criminal background check prior to student teaching.

Major Admission Requirements

Admission to the Teacher Education Program at the Office of Educator Preparation and Accountability is required for completion of teacher certification requirements with the undergraduate degree. All admission requirements are in accordance to Texas Administrative Code rules §227.10 and the HEA Title II accountability requirements. All applicants must meet the current certification requirements in effect at the time of application, regardless of the catalog year of degree. plan.

Major Progression Requirements

Teacher Education Program progression requirements include GPA, course grades, certification courses, benchmarks/key assessments and testing. Admission to the College of Education and P-16 Integration is required for participation in Apprentice Teaching and Seminar (UTCH 4101, 4601). Students unable to be admitted to UTCH 4601 and UTCH 4101 will be required to substitute 7 hours, as recommended by advisor. A Physics Major with Physics/Mathematics (7-12) Teacher Certification would initially focus on the Math prerequisites courses (support courses listed above), in taking the PHYS 2425/2426 course sequence, and in taking the UTCH 1101 and UTCH 1102 course sequence.

120 TOTAL HOURS

(42) Advanced minimum credit hours

Approved: Saturday, October 23, 2021 Revised: Saturday, October 23, 2021