

Texas A&M University Commerce

MS Physics with Teaching Emphasis – Fall 2021

Welcome to the Department of Physics & Astronomy. Here is some information that you might find helpful about the MS Physics with Teaching Emphasis (MPTE) program and what & how to register for classes.

PREREQUISITE COURSES

Students are expected to have completed PHYS 2425 University Physics 1, PHYS 2426 University Physics 2, MATH 2413 Calculus 1, and MATH 2414 Calculus 2 before beginning their courses in our program.

HOW TO TELL IF YOU ARE REQUIRED TO TAKE THE PREREQUISITE COURSES:

- Admitted students typically do not need to take the prerequisite courses.
- If you have already taken these courses or their equivalent as part of your undergraduate degree, you do not need to take these courses
- If you have teaching experience in physics, you do not need to take PHYS 2425 or PHYS 2426. If you have teaching experience in math, you do not need to take MATH 2413 or MATH 2414.
- If a student feels as if they are deficient in either area, they will be free to take any number of the courses. However, you will most likely have to take them at a local community college, as they are not typically offered online.

CORE COURSES

There are 6 core courses that you need to complete:

COURSE #	COURSE NAME	CREDITS
PHYS 530	Physics Math Methods for Educators	3
PHYS 531	Classical Mechanics for Educators	3
PHYS 532	Electricity and Magnetism for Educators	3
PHYS 561	Astronomy and Astrophysics for Educators	3

PHYS 535	Thermodynamics for Educators	3
PHYS 526	Quantum Universe for Educators	3

RESEARCH LITERATURE

There is a required capstone course PHYS 595 Research Literature. In this course, you will write a literature review on a topic in physics of your choosing.

TEACHING FIELD COURSES

The remaining 15 credit hours are electives. These electives can be in any STEM field or education. Some examples of recommended courses include:

PHYS 597 Computational Waves

EDCI/SED 597 What Teachers Need to Know about Classroom Assessment

ETEC 524 Intro to Educational Technology

MATH 501 Math Statistics I

MTE 556 Statistical Reasoning for Teachers

If you would like additional recommendations, contact your advisor robynne.lock@tamuc.edu.

<i>Components</i>	<i>Description</i>	<i>Credits</i>
<i>Core Courses</i>	6 core courses	18
<i>PHYS 595</i>	Research literature class	3
<i>Electives</i>	5 elective courses	15
<i>Total</i>		36

COMPREHENSIVE EXAM

WRITTEN COMPREHENSIVE EXAM:

- Comprehensive exam tests the six core courses.
- The Comprehensive Exam should be taken as soon as you have completed the core courses or in your last semester.
- You have two chances to take the comprehensive exam.
- Additional chance might be given through a petition (not guaranteed).