BS in Physics to MS or ME in Materials Science and Engineering Fast Track

About This Program

Bachelor of Science in Physics to Master of Science or Master of Engineering in Materials Science and Engineering Fast Track enables outstanding senior undergraduate physics students to receive dual undergraduate and graduate course credit for six or nine hours of coursework. These designated graduate courses satisfy both bachelor's and master's degree requirements if they are completed within the last 15 hours of the undergraduate degree program. Students should refer to the Materials Science and Engineering section of the graduate catalog for detailed requirements of a master's degree in Materials Science and Engineering. This program presentation includes both undergraduate and graduate requirements. The undergraduate degree will be conferred immediately upon completion of the undergraduate degree requirements.

ASSOCIATED PROGRAMS

For detailed information about the programs associated with this Fast Track, refer to their individual degree pages.

Physics BS (https://catalog.uta.edu/science/physics/undergraduate/physics-bs/)

Materials Science and Engineering ME (https://catalog.uta.edu/engineering/materialsscience/graduate/material-science-engr-me/)

Materials Science and Engineering MS (https://catalog.uta.edu/engineering/materialsscience/graduate/material-science-engr-ms/)

Admissions Criteria

An interested undergraduate student should apply to the program when within 30 hours of completing the Physics BS. The student must have completed at least 30 hours at UT Arlington, achieving a GPA of a least 3.0 in those courses, and have an overall GPA of 3.0 or better in all college courses. Additionally, the student must meet the following requirements.

- Complete PHYS 3313 and PHYS 3321 with a minimum GPA of 3.3 in these courses, and a grade of B or better in each course.

For automatic admission to the graduate program the student must meet the following requirements.

- Complete MSE 5300 and two of the following: any MSE graduate course, PHYS 5307, PHYS 5328, or PHYS 5330.
- Earn B or better in all graduate courses intended for both undergraduate and graduate credit.
- Maintain UTA undergraduate cumulative GPA of 3.0 or above.

Curriculum

Physics BS Foundations		
Complete the Physics BS foundations per catalog.		73
Physics Specialiation		
PHYS 2311	MATHEMATICAL METHODS OF PHYSICS	3
PHYS 3313	INTRODUCTION TO MODERN PHYSICS [1]	3
PHYS 3183	MODERN PHYSICS LABORATORY	1
PHYS 3321	INTERMEDIATE ELECTRICITY AND MAGNETISM [1]	3
PHYS 4117	INDIVIDUAL LEARNING BY SEMINAR	1
PHYS 4315	THERMODYNAMICS AND STATISTICAL MECHANICS	3
PHYS 4319	ADVANCED MECHANICS	3
PHYS 4324	ADVANCED ELECTRICITY AND MAGNETISM	3
PHYS 4326	INTRODUCTION TO QUANTUM MECHANICS	3
Select 14 hours of PHYS electives approved by an undergraduate advisor or the chair of the Department of Physics		14
MSE 5330	CORROSION SCIENCE AND ENGINEERING [2]	3
Select 2 from the following: [2]		6
Any MSE graduate course.		
PHYS 5307	QUANTUM MECHANICS I	
PHYS 5328	SURFACE PHYSICS	
PHYS 5330	PHYSICS OF SEMICONDUCTOR PROCESSING AND CHARACTERIZATION	
Masters programs in Material Science and Engineering		

Complete requirements for Master of Science or Master of Engineering in Material Science and Engineering per catalog.	21
Total Hours	**140**

1 For admission to the fast track, students must complete these with a minimum cumulative GPA of 3.3 and a grade of B or better in each course.
2 These course will count for both undergraduate and graduate degrees.

Program Completion

CONTINUATION

If at any time an undergraduate fast track student falls below the 3.000 GPA requirements or earns a grade below B in a graduate course intended for both undergraduate and graduate credit, the student will be obliged to leave the program immediately and will not be allowed to take additional graduate courses as an undergraduate. If a student does not complete at least two graduate courses with B or better, any graduate credits earned with a grade of C or better will be applied only to the undergraduate degree. Graduate courses used for credit in the undergraduate program cannot be applied towards a graduate degree.

BENEFITS

A student who successfully completes the BS fast track will be automatically admitted to graduate study. The student will not be required to take the Graduate Record Examination, complete an application for graduate admission, or pay an application fee. For more details about the specifics of the fast track program, contact the undergraduate advisor or graduate advisor.

COURSE ENROLLMENT CLEARANCE

Students must obtain clearance each semester from the graduate advisor and undergraduate advisor for all graduate courses that will be used to satisfy undergraduate degree requirements.

TIME LIMIT TO BEGIN GRADUATE STUDIES

A student may take off one long semester plus a summer after receiving the undergraduate degree before starting as a graduate student. An application for graduate admission must be completed and approved before post-baccalaureate studies can begin. A student returning after a longer delay will have to apply as a regular student, completing a full application, paying all fees and meeting all admission requirements.

Advising Resources

Location:

Science Hall 328 C

Email:

kaycee.nikses@uta.edu

Phone:

817-272-9686

Web:

Schedule an Appointment (https://www.uta.edu/academics/schools-colleges/science/departments/physics/advising/)