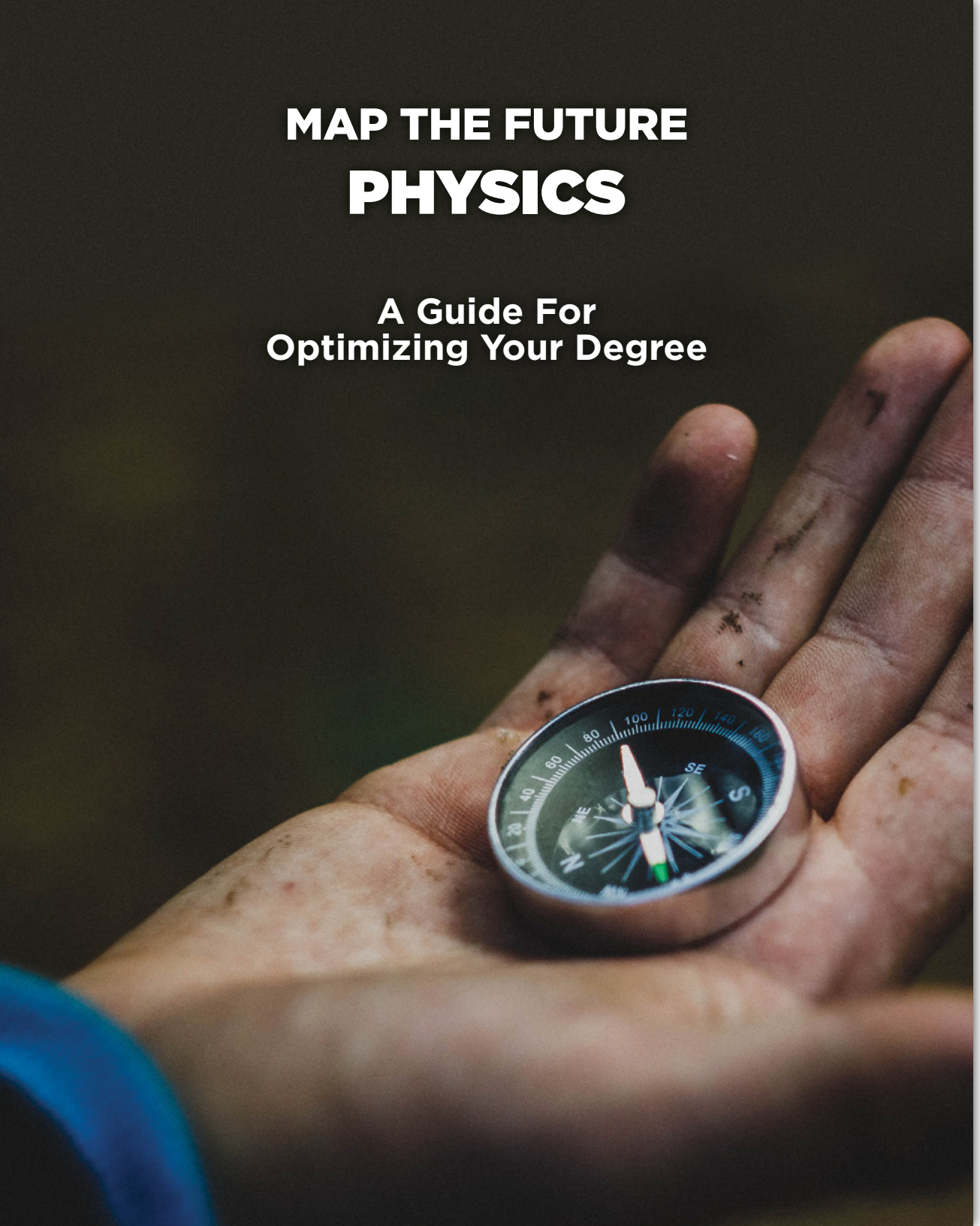
MAP THE FUTURE
PHYSICS

A Guide For Optimizing Your Degree



This career map provides a general blueprint of how to navigate your under-graduate program. The map highlights quality experiences to supplement your coursework and identify academic milestones for years one through four.

Take advantage of the rich resources the university and Chattanooga community have to offer as you prepare for post-college years. During your time here, forge connections, participate in organizations and utilize exploratory learning options to gain real-world experiences outside of the classroom.

THE UNIVERSITY OF TENNESSEE CHATTANOOGA

ABOUT THE COLLEGE OF ARTS AND SCIENCES

Our mission is to provide an environment for intellectual curiosity and a foundation for life-long learning, thinking, reflection and growth. We do this by: equipping students with transferable skills, encouraging cultural and intellectual diversity and advancing knowledge through research and creative activities.

Small classes, careful advising and personal attention make our commitment work for students majoring in the fine arts, the humanities, the sciences and behavioral sciences, and for students preparing for professional study through a liberal education.

YOUR PHYSICS DEGREE

We prioritize undergraduate research to generate new knowledge for the sciences and enrich the education of our students. Our department provides a solid foundation in basic concepts and theories as well as dynamic laboratory experiences. Modern curriculum is offered through the use of state-of the-art scientific equipment, computer resources and quality instruction. By placing an emphasis on public service, we not only provide technical support to area industries and institutions but enhance local pre-college instruction through activities designed to assist teachers and students.

Physics

Physicists are problem solvers; analytical thinking is an integral part of their daily life. Our students graduate with a comprehensive skill-set and knowledge that is not just confined to the study of physics but highly applicable for any area of engineering as well. Our graduates are highly employable as professionals, teachers and they excel in a number of graduate programs.

Students choose from the following concentrations.

Physics: For students interested in graduate school.
Biophysics: Ideal for students wanting to follow a pre-health track
STEM: For students interested in teaching.

utc.edu/physics

SCHOLARSHIPS

Physics Scholarship

Awarded to physics majors and minors whose application is selected by the physics faculty.

Jane and Lawrence Akers Scholarship

per academic year.

Harry Deuberry Physics Scholarship

awarded to a rising junior or senior physics student.

Harriet and Karel Hujer Award

variable amounts awarded to physics majors interested in astronomy, physics and mathematics.

Clarence Jones Prize Scholarship

per academic year.

Harold Marlowe Scholarship Award

per academic year awarded to a successful physics major whose nomination is supported by the department head.

Physics Summer Research Grants

Clarence Jones Observatory

Just down the road from campus, the UTC Clarence Jones Observatory regularly hosts open lectures and planetarium shows, providing the campus and community with opportunities to experience the wonders of space.

EXPERIENTIAL LEARNING

UTC emphasizes opportunities for meaningful learning experiences inside and outside of the classroom. From conducting original research to exciting internships and community outreach initiatives, physics students take advantage of resources on campus and in Chattanooga.

INTERNSHIPS AND OUTREACH

Our students regularly participate in local outreach projects and prestigious internships including:

Creative Discovery Museum
Tennessee Student Environmental Alliance
Oak Ridge National Laboratory
Unilever
National Science Foundation Research Experience for Undergraduates

SUMMER UNDERGRADUATE RESEARCH PROGRAM

An intense research experience where students are paired with a faculty member and receive a stipend for 10 weeks of full-time participation during the summer. Previous research conducted by students in our department include:

Computational and Experimental Research
Fundamental Nuclear Physics Research with the Nab Experiment at Oak Ridge National Laboratory

CAREER POSSIBILITIES

Are you starting college with a specific career in mind? Physics graduates excel in these fields and more.

Visit University Career Services at utc.edu/career-student-employment for a detailed list of career possibilities.

Research and Testing

Acoustical Physicist
Astrophysicist
Biophysicist
Chemical Physicist
Geophysicist
Nuclear Physicist

Health

Medical/Health Physicist
Biophysicist

Industry

Acoustical Physicist
Astrophysicist
Biophysicist
Chemical Physicist
Geophysicist

Life

Biophysicist
Medical Physicist
Geophysicist

Materials

Materials Scientist
Hazardous Waste Manager

Sales and Business

Technical Sales Person
Research and Development
Management

Education

High School Teacher
College Professor
Science Writer

These options do not represent all of the occupations you might consider. Some of the options listed above might require additional training.

THE UNIVERSITY OF TENNESSEE CHATTANOOGA

SUCCESS TRACK: PHYSICS
DEGREE: BS IN PHYSICS

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	PROF. DEVELOP.
EXPLORATION	Meet with the Center for Advisement and a physics faculty member to brainstorm academic goals and pinpoint academic focus.	Start to narrow down your academic concentration to match your career goals. Develop a plan with your advisor that will lead you to your aspirations after graduation.	Begin searching for programs you will be applying to in the fourth year (graduate school). Continue meeting advisors and building relationships with faculty who will provide reference letters.	Launch your job or graduate program search and applications. Focus on your strengths and promoting your knowledge base. Work with University Career Services and your advisor during this process.	American Institute of Physics College Park, Md. aip.org
ACADEMIC MILESTONES	Complete CHEM 1110-1120 General Chemistry, required math course, and other General Education requirements where appropriate.	Complete PHYS 2300 and 2310 Lecture and Lab Course, continue math courses and other General Education requirements where appropriate.	Complete upper-division physics courses, choosing courses to enhance your analytical thinking skills.. Develop a professional relationship with your advisor.	Complete any remaining General Education requirements and advanced science courses in major. Apply for graduation. Complete your graduation requirements.	American Medical Association Chicago, Ill. ama-assn.org
CONNECTIONS	Join a student club in your major. Explore Student Development opportunities. Schedule an appointment with a faculty member to discuss your major and career goals.	Get involved with campus student organizations. Quality is always better than quantity. Volunteer with organizations in the Chattanooga area. Apply for a Research Award.	Submit abstracts/papers to research conferences and attend to meet others in your field of interest. Consider faculty-sponsored research or internships for experiential learning.	Join appropriate professional organizations (The American institute of Physics) reviewing conference proceedings, journals and academic research. Network with department and UTC alumni.	American Dental Association Chicago, Ill. ada.org
READINESS	Meet with University Career Services. Identify four skills employers want and begin cultivating them now. Attend a part-time job fair in fall or spring.	Write a professional résumé. Create a “Career Information” computer file for job search notes with websites, names and contact information of potential mentors or employers. Invest in an interview outfit.	Hone your professional demeanor with University Career Services’ MOC interview programs. Attend career fairs on campus. Develop communication skills.	Contact organizations and associations in your interest area for informational interviews, potential mentors and shadowing opportunities. Engage with University Career Services for career prep resources.	Graduate Programs gradschools.com
ACHIEVEMENT	Complete 30 credit hours. Meet with your advisor twice. Have your second year mapped out and a general plan for years three and four.	Complete 60 credit hours. Meet with your advisor at least three times. Have your third year mapped out and a general plan for year four.	Complete 90 credit hours and check-in with graduation goals. Begin preparing employment and graduate program admissions packets.	Complete the minimum credit hours to graduate. Attend Commencement. Join the Alumni Association.	

PHYSICS STEM EDUCATION
utc.edu/stem-education/

Participation in the STEM Education program gives students valuable hands-on teaching experience, a four-year degree in their respective field and completion of requirements necessary to earn a teaching license. Physics majors who choose the STEM Education concentration should successfully meet these milestones as they navigate the mathematics curriculum.

FIRST YEAR

STEM 1030 and STEM Checkpoint 1.
Meet with STEM advisor in addition to meeting with your academic advisor.

SECOND YEAR

STEM 2010, 2020 and STEM Checkpoint 2.
Meet with STEM advisor in addition to meeting with your academic advisor.

THIRD YEAR

STEM 3010, 3020 and STEM Checkpoint 3.
Apply for Apprentice Teaching.
Prepare to take the Praxis.
Meet with STEM advisor in addition to meeting with your academic advisor.

FOURTH YEAR

STEM 4010, 4020 (Apprentice Teaching) and STEM Checkpoint 4.
Meet with STEM advisor in addition to meeting with your academic advisor.