Microbiology and Molecular Genetics | Bachelor's Degree



	FIRST YEAR	MIDDLE YEARS	LAST YEARS
ADVANCE your academic journey	Meet with a <u>First Year Advisor</u> to develop your academic planning.	Schedule appointments with the COSE <u>Advising Center</u> and follow registration instructions for course guidance.	Check your Degree Audit & meet with your academic advisor.
	Take advantage of COSE <u>Virtual Express</u> advising.	Consult the <u>Pre-Health Advising website</u> for information on applying to nursing school or health profession programs.	Explore next steps including potential graduate programs.
	Participate in the <u>Experiential Education Certificate</u> Program	Check out the <u>Collaborative Learning Center (CLC)</u> for learning assistance.	Complement your degree with a <u>micro credential</u> .
	Adopt your <u>University Seminar US1100</u> learning as key for first year success.	Explore external scholarship opportunities such as the <u>Fulbright</u> Scholarship to take your expertise to unique locations abroad.	Meet with a faculty mentor or peer advisor.
			Complete a capstone project related to major.
EXPAND your personal and social development	Review your degree plan for courses that include the Service-Learning Excellence program	Consult your academic advisor and learn about <u>biology scholarship opportunities</u> .	Participate in <u>department of biology events</u> .
	Begin expanding your student experience by joining a student organization through the <u>Bobcat Organization</u>	Meet with an advisor in <u>Education Abroad</u> or <u>Study in America</u> to explore financial aid options toward learning in an international or national setting.	Seek out a leadership role with the <u>Leadership &</u> <u>Service</u> .
	HUB. Find <u>biology-related groups</u> to connect with others	Discover <u>Global Online Learning Experiences</u> for courses with culturally dynamic perspectives	Attend a <u>Student Government</u> Senate meeting to contribute to the TXST community.
	Join <u>science and engineering student organizations or</u> <u>clubs</u> to connect with others majoring within the	Participate in <u>Women in STEM initiatives</u> and the <u>Houston-Louis Stokes STEM</u> Pathways and Research Alliance (H-LSAMP).	Attend <u>financial literacy workshops</u> (e.g., budgeting, student loans, taxes).
	college.	Participate in <u>The Big Event</u> to give back to the regional community.	
ENRICH your practical competence	Explore the <u>TXST One Stop</u> for more information about the scholarships provided to new and continuing students.	Explore <u>research experience</u> opportunities to learn alongside faculty members or graduate students.	Explore <u>Undergraduate Research Opportunities</u> to gain hands-on experience and build research skills alongside faculty mentors.
	Attend an <u>IDEA Center</u> workshop to learn more about undergraduate research.	Learn about <u>Global Career Accelerator</u> options that give you experience with global companies and in-demand tech skills.	Join a professional organization in your major or passion.
	Consider the <u>STEM Communities Learning Assistance</u> program.	Get internship guidance and report your internship offers to <u>Career Services</u> . Check out the <u>National Science Foundation (NSF) Research Experiences for</u> Undergraduates (REU) Summer Program.	Attend a conference related to your major (get recommendations from a faculty) or your student organization.
			Deliver a presentation in a student conference, workshop, seminar or community organization.
ELEVATE your career and professional life	Complete your <u>Career Assessments</u> , such as Focus2.	Build <u>Career & Graduate School Fairs</u> into your schedule to ensure your connection maximum opportunities.	Attend <u>employer info sessions</u> at Career Services.
	Create your <u>Handshake</u> profile.	Join Employer Information Sessions at Career Services or your department.	Develop a full-time employment or graduate school plan with <u>Career Services</u> .
	Create your <u>LinkedIn</u> profile and connect with colleagues and leaders.	Prepare to <u>ace your job interviews</u> with Career Services or your academic department.	Complete your <u>First Destination Survey</u> to share your post-graduation plans.
	Develop and review your <u>resume</u> with Career Services.		Identify faculty and professional references.
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EXPERIENTIAL MAJOR MAP Microbiology and Molecular Genetics | Bachelor's Degree



OUTCOMES

Marketable Skills

Think critically

Analyze and solve problems

Communicate clearly and effectively, both orally and through scientific and technical writing

Demonstrate competence in laboratory skills related to microbiology and molecular genetics

Demonstrate understanding of experimental design and the collection, analysis, and interpretation of data

Career Opportunities

Medical laboratory scientist Bacteriologist Forensics scientist Geneticist Biomedical researcher Biotechnician Public health Environmental scientist Food scientist

Experiences in Microbiology and Molecular Genetics

The bachelor of science degree with major in microbiology and molecular genetics focuses on the study of microorganisms, including bacteria, viruses, fungi, and parasites, as well as the genetic and molecular mechanisms that underlie their behavior, interactions, and effects on other living organisms such as plants and animals. Students in this program gain a strong foundation in biological sciences, chemistry, and physics, specializing in microbial/cellular physiology, immunology, molecular biology and genetic engineering. The curriculum typically includes both theoretical coursework and hands-on laboratory experience, allowing students to develop skills in techniques such as gene cloning, microscopy, genomics and bioinformatics. Students may participate in a variety of transforming experiences including internships for professional development, Education Abroad or Study in America for global and cultural enrichment, and membership in numerous student organizations for developing peer networks.