WELCOME to the College of Science at UNT! We are thrilled you have chosen UNT to pursue your undergraduate education in the sciences. The College of Science (COS) is committed to providing a supportive, inclusive and collaborative learning environment to all of our students. With over 3,000 undergraduates, our college offers a variety of academic programs within the disciplines of Biological Science, Chemistry, Mathematics and Physics. Upon graduation, our students pursue careers in health professions, secondary teaching, continue their education with graduate research and so much more. We understand the transition to a four-year institution can be challenging and we are here to assist you through every step of your academic tenure. The College of Science offers a wide range of support services, including both faculty and staff advising, career services and a robust advising website to help guide you through the planning and registration process.

We look forward to partnering with you as you begin your academic journey with us and hope to meet you in the near future!

COS Academic Advising Team

Table of Contents

STUDENT RESOURCES

CAMPUS RESOURCES

Financial Aid and Scholarships	Financialaid.unt.edu
Dean of Students	deanofstudents@unt.edu
Student Accounting	sfs.unt.edu
Office of Disability Access	studentaffairs.unt.edu/office-disability-access
TSI Advising	vpaa.unt.edu/aservices/tsi
Learning Center	learningcenter.unt.edu
Math Lab	learningcenter.unt.edu/math-lab
Writing Center	writingcenter.unt.edu
Counseling and Testing Center	studentaffairs.unt.edu/counseling-and-testing-services
Career Center	careercenter.unt.edu/
Study Abroad	studyabroad.unt.edu
Exploring Majors	vpaa.unt.edu/aservices/exploring-majors
UNT Course Catalog	catalog.unt.edu
Navigate	navigate.unt.edu/access
Online Degree Audit	mydegreeaudit.unt.edu
Math Placement	math.unt.edu/academics/mathematics-placement
Foreign Language Testing	worldlanguages.unt.edu/resources/testing

QR Code for Advising Services
Campus Resources

COLLEGE OF SCIENCE RESOURCES

College of Science Advising Center	cos.unt.edu/advising
Health Professions Advising	healthcareers.unt.edu
Biological Science Faculty Advisors	biology@unt.edu
Chemistry Faculty Advisors	chem-advising@unt.edu
Math Faculty Advisors	mathadvising@unt.edu
Physics Faculty Advisors	rebekah.purvis@unt.edu
Forensic Science Advising	forensic@unt.edu
Teach North Texas Advising	tnt.unt.edu
Chemistry Resource Center	chemistry.unt.edu/undergraduate-program/instructional-resources
Physics Instructional Center	physics.unt.edu/pic
Data Analytics Certification Advisor	jessica.temple@unt.edu
Actuarial Science Certification Advisor	huguette.tran@unt.edu
Career Coach	susan.bradley@unt.edu

QR Code for
COS Resources

College of Science Undergraduate Degrees and Programs

Degrees:

- Bachelor of Arts (BA)
- Bachelor of Science (BS)

A BA degree is great for students who want to go into a particular industry--like health professions or business or that want to teach at the middle or high school level.

A BS degree is great for students who may want to continue their studies into graduate school, go into academia, or do research professionally.

If you're not sure which degree program is right for you, our advisors are happy to guide you to the choice that's right for you and your goals.

Majors:

- Biochemistry (BA, BS)
- Biochemistry with a Concentration in Forensic Science (BS)
- Biochemistry with Secondary Teaching Certification (BA, BS)
- Biology (BA, BS)
- Biology with a Concentration in Forensic Science (BS)
- Biology with Secondary Teaching Certification (BA, BS)
- Chemistry (BA, BS)
- Chemistry with a Concentration in Forensic Science (BS)
- Chemistry with Secondary Teaching Certification (BA, BS)
- Ecology for Environmental Science (BS)
- Mathematics (BA, BS)
- Mathematics with Secondary Teaching Certification (BA, BS)
- Medical Laboratory Science (BS)
- Physics (BA, BS)
- Physics with a concentration in Engineering Physics (BS)
- Physics with a concentration in Astrophysics (BS)
- Physics with a concentration in Computation (BS)
- Physics with Secondary Teaching Certification (BA, BS)

College of Science Undergraduate Degrees and Programs

Minors:

- Biology
- Chemistry
- Mathematics
- Physics
- Statistics

Several of our majors have built-in required minors. For more information on whether your major requires a minor, see your major checklist on pages 12-41.

Undergraduate Certificates:

- Actuarial Science
- Computational Science
- Data Analytics
- Health Professions Student Development
- Secondary Teaching
- Statistics

See page 11 of the university guidebook for more information on the benefits of an undergraduate certificate.

QR Code for UNT Catalog

**You can view the full list of majors, minors, and certificates and their requirements in the online UNT catalog – catalog.unt.edu*

UNT College of Science Career Coaching Services and Information

With a science degree from UNT, there are lots of exciting and varied career options available to you. To help you pursue the best path for you, UNT provides comprehensive career coaching services throughout your time at the university and even after you graduate, all free of charge. This includes one-on-one career coaching on topics such as resume reviews, cover letters, graduate and professional school statements of intent, practice interviews, job search strategies, and more. Book an appointment with your career coach using Navigate. Multiple career fairs and career-related workshops and webinars are held each semester. Review and register at www.unt.joinhandshake.com/login, as well as use the platform to search for on campus jobs, internships, part-time and full-time employment opportunities.

See below for common career paths chosen by UNT science. Begin working with your career coach starting early in your time at UNT to assess, plan and prepare for a great future!

Biology, Chemistry & Biochemistry

- Biostatistician
- Botanist
- Clinical Research Coordinator
- Food Safety Specialist
- Food Scientist
- Forensic Biologist
- Geneticist
- Immunologist
- Laboratory Technician
- Microbiologist
- Molecular Biologist
- Neuroscientist
- Quality Control Analyst
- Analytical Chemist
- Biotechnician
- Chemical Technician
- Food Chemist
- Forensic Scientist
- Inorganic Chemist
- Material Scientist
- Process Chemist
- Research Associate
- University Professor
- Public School Science Teacher

Environmental & Earth Sciences

- Atmospheric Scientist
- Meteorologist
- Oceanographer
- Range Manager
- Soil Scientist
- Sustainability Consultant
- Water Conservationist
- Watershed Manager
- Wildlife Biologist
- GIS Analyst
- University Professor
- Marine Biologist
- Conservation Scientist
- Environmental Remediation Scientist
- Environmental Restoration Specialist
- Environmental Scientist
- Forestry Technician
- Geographer
- Hydrologist
- Zoologist
- Public School Science Teacher

Mathematics

Actuary
Computational Scientist
Cost Estimator
Cryptographer
Data Analyst
Economic Forecast Analyst
Public School Science Teacher
Economist
Financial Analyst
Information Scientist
Research Mathematician
Research Scientist
Statistician
University Professor

Physics

Astronomer
Atomic Physicist
Biophysicist
Condensed Matter Physicist
Crystallographer
Geophysicist
Mathematical Physicist
University Professor
Medical Physicist
Molecular Physicist
Nuclear Physicist
Optical Physicist
Particle Physicist
Research Technician
Public School Science Teacher

Health Careers

Allergist
Anesthesiologist
Audiologist
Cardiologist
Community Health Worker
Dentist
Epidemiologist
Family Medicine Physician
Genetic Counselor
Health Educator
Medical Laboratory Scientist
Neurologist
Nurse Practitioner
OB/GYN
Occupational Health & Safety Specialist
Occupational Therapist
Oncologist
Ophthalmologist
Orthodontist
Osteopathic Physician
Pathologist
Pharmacist
Physical Therapist
Physician Assistant
Radiologist
Registered Nurse
Surgeon
Veterinarian

For more information on any of these careers, click on the hyperlink (online version) or enter the job title into the keyword search function of: https://www.onetonline.org/.

QR Code of Career Services

Office of Health Professions

UNT's Office of Health Professions helps students navigate their path to health professional schools (i.e. medical, dental, physician assistant, etc.). Our services include personalized advising, mentorship, professional school application guidance, creation of academic maps, and student professional development. Within the College of Science, students have access to staff advisors who review degree and graduation requirements, but our office specifically advises students on how to become competitive applicants for professional schools.

Characteristics of a Competitive Application to Professional Schools
Admission to professional schools is very competitive, and therefore, students must gain a diverse set of experiences throughout their undergraduate years. Here are some characteristics of a competitive application to [medical, dental, PA, PT, optometry, etc.] school:

- **GPA** – Grades are very important, and most professional schools are looking for GPAs that are above a 3.7 out of a 4.0 scale. GPA competitiveness differs based on health profession and a student's individual situation, so be sure to meet with your advisor to review your academic record.

- **Entrance Exam** – Most professional schools require an entrance exam in order to apply to their programs. The various health-related entrance exams include: MCAT, DAT, GRE, OAT, PCAT, and PA-CAT.

- **Clinical Experience** – Shadowing professionals in your chosen field and working/volunteering in healthcare is important for your professional development, as well as obtaining knowledge of the healthcare system.

- **Community Service** – Students must demonstrate a passion for serving others through their involvement in volunteer and community service opportunities. Showing a consistency in and commitment to service, especially in an area about which you are passionate, produces personal and professional growth that will prepare you for a life-long career in healthcare.

- Other characteristics and qualities of a strong application include:
    - Involvement in Extracurricular Activities
    - Leadership Roles
    - Hobbies and Leisure Activities
    - Research
    - Strong Letters of Recommendation from Academic and Clinical References
    - Strong Essays

Health Professions Programs and Opportunities at UNT

Joint Admission Medical Program (JAMP) –
The Joint Admission Medical Program (JAMP) is a program designed by the Texas state legislature to support socio-economically disadvantaged students who wish to become physicians. Students who are selected for JAMP, and maintain all eligibility requirements, are guaranteed admission to a Texas medical school. Other benefits include semester scholarships, summer internships at Texas medical schools, stipends, a free MCAT preparation course, and more. For more information, please visit: https://www.texasjamp.org/

3+4 Pathway Program –
The University of North Texas has partnered with the UNT Health Sciences Center Texas College of Osteopathic Medicine (UNTHSC TCOM) to offer an accelerated program where students can complete both their Bachelor's degree and Doctor of Osteopathic, D.O., medical degree in 7 years. Some benefits include early admission to medical school, not having to take the MCAT, and using first year medical school curriculum to complete certain requirements in the bachelor's degree at UNT. For more information, please visit: https://healthcareers.unt.edu/accelerated-programs

UNTHSC Pharmacy Reverse Articulation Agreement –
The University of North Texas has partnered with the University of North Texas Health Sciences Center College of Pharmacy to award students a Bachelor of Arts in Biology using coursework successfully completed in the first year of pharmacy college. Some of the benefits include reduced costs associated with completion of an undergraduate degree, better preparation for a rigorous pharmacy curriculum compared to only taking pharmacy prerequisites, and eligibility for dual degree programs offered at the UNTHSC College of Pharmacy. For more information, please visit: https://healthcareers.unt.edu/accelerated-programs

Health Professions Student Development Undergraduate Certificate –
The Health Professions Student Development certificate was designed to support pre-health students at UNT who are preparing for admission to health professional schools in the future. In completing this undergraduate certificate, not only students strengthen the basic sections of a professional school application, but will also be challenged to think critically about their future role in healthcare. For more information on the requirements to complete the HPSD certificate, please visit: https://healthcareers.unt.edu/program/hp-student-dev-undergrad-cert

Health Professions Advisory Committee (HPAC) –
The Health Professions Advisory Committee (HPAC) is available to pre-medical, pre-dental, pre-optometry, and pre-podiatry students who need a committee letter of recommendation for their professional school application. In addition to receiving a committee letter of recommendation, the Office of Health Professions will collect all other letters of recommendation for students (from professors, clinical references, etc.), and then upload the packet of letters to each student's [medical, dental, optometry, podiatry] school application. For more information on eligibility requirements, please visit: https://cos.unt.edu/advising/health-professions/health-professions-advisory-committee

Office of Health Professions
College of Science
Hickory Hall, Rm. 256
HealthCareers@unt.edu
940-369-7500
Website: https://cos.unt.edu/advising/health-professions

QR Code for Health Professions

JOIN TEACH NORTH TEXAS

Secondary certification program for math, science, and computer science teachers

What We Offer

- Hands-on experience
- Scholarships
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Teach North Texas

Visit us: teachnorthtexas.unt.edu
Contact us: TNTadvisor@unt.edu

Texas Success Initiative (TSI)

The Texas Success Initiative is a state law that requires students attending a public college or university in Texas to demonstrate their readiness for college-level courses in reading, writing, and math. Students can show readiness by providing exemptions, by earning qualifying scores on the TSI Assessment, or by completing developmental instruction/coursework.

Students are evaluated for TSI completion by the University of North Texas Advising Services when they register for Orientation. Students who are TSI incomplete in Math will be placed into a TSI Math course based on their performance in the TSI Assessment. Please see the charts below for further information.

TSI Levels			
Level 1-3	Level 4	Level 5	Level 6
MATH 340	MATH 350	MATH 1100 + UGMT 1300 OR MATH 1180 + UGMT 1300	College Level Math See Algebra Proficiency and Math Placement on page 10

TSI Course Descriptions	
MATH 340 Pre & Beginning Algebra	• 4-Credit hours (does not fulfill degree requirements) • Does not impact GPA • Does go towards full-time status • Must pass with a C or higher
MATH 350 Beginning Algebra	• 3-Credit hours (does not fulfill degree requirements) • Does not impact GPA • Does go towards full-time status • Must pass with a C or higher
MATH 1100 + UGMT 1300 College Algebra with Tutorial course	• 3-Credit hour course, 2-Credit hour tutorial • Fulfills college requirement • C or higher required for Major
MATH 1180 + UGMT 1300 College Math for Business, Economics, and Related Fields with Tutorial course	• 3-Credit hour course, 1-Credit hour tutorial • Fulfills college requirement • C or higher required for Major

TSI and College of Science:

- Students who are TSI incomplete must meet with a TSI advisor during Orientation
- Depending on their initial TSI scores, student's will only take two TSI Math courses
- Being TSI incomplete will prolong entry into Chemistry, Physics, and some Math courses
- The TSI exam is NOT the Canvas Math Placement – You must be TSI complete to take the Canvas Math Placement

Algebra Proficiency and Math Placement

To be declared as a College of Science major, students must meet the Pre-College of Science Algebra Proficiency (PCOS) requirement. Enrollment in certain Chemistry, Math, and Physics courses is contingent on completion of the PCOS requirement. In order to meet this requirement, students must meet one of the following criteria:

- Have earned a C or higher in MATH 1100 or MATH 1180
- Have a Math Placement level 2 or higher (MTH2 etc.)
- Have successfully passed 2 Physical Sciences (Chemistry or Physics)

If you are TSI incomplete in math, you will have additional MATH courses to take and **will not** be able to take the Canvas Math Placement. Please refer to the TSI page for further information.

Mathematics Pre-Placement:

Initial Math Placement Groups (MTH1 or MTH2) are based on a combination of your high school class rank and SAT or ACT math scores. If you are TSI complete you can enroll in math courses based on your Math Group Level assigned by the Math Department.

- Math Level 1 or No Math Level: MATH 1100 – College Algebra
- Math Level 2: MATH 1650 - Precalculus
- Math Level 3: MATH 1710 – Calculus 1

*Please note, required Math courses vary by College of Science major. See Math Placement Chart on following page for further information.

MATH 1680, Elementary Probability and Statistics, can be taken with any Math Level Group dependent on degree plan. See Math Placement chart on next page to see required Math courses for each degree plan.

If you have earned credit for math via AP, IB, CLEP, Dual Credit, and/or transfer, please refer to your UNT Orientation guidebook for confirmation of UNT equivalent course(s).

Placement Testing:

If you do not have an initial Math Group Level or you feel that you are capable of beginning your math course at a higher level than your Math Group Level or earned math credit, you can seek approval via the Canvas Math Placement. This is placement test is offered for free and online. Students must download a web browser called Respondus Lockdown Browser and have access to a webcam to take the test. If the test option is not posted in your Canvas account, e-mail Rita.Sears@unt.edu for access.

Please note, your initial Math Group Level and your Canvas Math Placement score **EXPIRES after 365 days. **You can only take the Canvas Math Placement once**.*

QR Code for Math Placement

Math Course Flow by Major

Required Math courses differ based on major. See the four-year plan for your major, four-year plans start on page 12. Students interested in pursuing a Health Professions career should also note the required pre-requisite Math courses for the career field and School(s) they wish to pursue.

Chart reads Left to Right - Not all courses will be required based on TSI completion and Math Group Level.

Major	TSI MATH *	MTH1	MTH2	MTH3
BA Biology	TSI MATH (if applicable)	MATH 1180 OR MATH 1100	MATH 1680 OR MATH 1650	MATH 1710
BS Biology	TSI MATH (if applicable)	MATH 1100	MATH 1650	MATH 1710
BA Biochemistry	TSI MATH (if applicable)	MATH 1100	MATH 1650	MATH 1710
BS Biochemistry	TSI MATH (if applicable)	MATH 1100	MATH 1650	MATH 1710+ More
BS Medical Laboratory Science	TSI MATH (if applicable)	MATH 1180	MATH 1680	N/A
BS Ecology for Environmental Science	TSI MATH (if applicable)	MATH 1180 OR MATH 1100	MATH 1680 OR MATH 1650	MATH 1710
BA Chemistry	TSI MATH (if applicable)	MATH 1100	MATH 1650	MATH 1710+ More
BS Chemistry	TSI MATH (if applicable)	MATH 1100	MATH 1650	MATH 1710+ More
BA Math	TSI MATH (if applicable)	MATH 1100	MATH 1650	MATH 1710+ More
BS Math	TSI MATH (if applicable)	MATH 1100	MATH 1650	MATH 1710+ More
BA Physics	TSI MATH (if applicable)	MATH 1100	MATH 1650	MATH 1710+ More
BS Physics	TSI MATH (if applicable)	MATH 1100	MATH 1650	MATH 1710+ More

*For more information on TSI Math requirements, please see page 9. If you pass a College Level TSI Math Course with a C or higher, you will meet your PCOS requirement, and can take the MTH2 level Math course for your major.

Bachelor of Arts with a major in Biochemistry
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Foundation Course Requirements

Students must complete the following courses with a C or higher and at least a 2.5 overall GPA in these courses to take advanced coursework for the degree.

- **BIOL 1710:** Biology for Science Majors I (3hrs)
- **BIOL 1760:** Biology for Science Majors Lab (2hrs)
- One of the following:
  - **BIOL 2041 & 2042:** Microbiology & Lab (4hrs)
  - **BIOL 1720:** Biology for Science Majors II (3hrs)
- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs)
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)
- **CHEM 2370 & 3210:** Organic Chemistry I & Lab (4hrs)
- **MATH 1650:** Pre-Calculus (5hrs)

Major Requirements

Students must complete the following courses with a C or higher and at least a 2.0 overall GPA in these courses to graduate with the degree.

- **CHEM 2380 & 3220:** Organic Chemistry II & Lab (4hrs)
- **CHEM 3451 & 3452:** Quantitative Analysis & Lab (4hrs)
- **CHEM 3530:** Physical Chemistry for Life Science (4hrs)
- One of the following:
  - **BIOC 3621 & 3622:** Principles of Biochemistry & Lab (4hrs)
  - **BIOC 4540 and BIOC 4550:** Biochemistry I & II (6hrs)
- **BIOC 4570 & 4580:** Biochem & Molecular Bio of the Gene & Lab (5hrs)
- **BIOL 3510 & 3520:** Cell Biology & Lab (4hrs)
- **Eight** hours of advanced biology courses with associated labs

Other Required Courses for Degree

- **MATH 1710:** Calculus I (4hrs)
- **PHYS 1510 & 1530:** General Physics I with Calculus & Lab (4hrs)
- **PHYS 1520 & 1540:** General Physics II with Calculus & Lab (4hrs)
- **TECM 2700:** Technical Writing (3hrs) *(double-dips with core)*

Minor Requirements

All Biochemistry majors are awarded a Biology minor after completing their required biology courses within their degree requirements. Students can choose to add additional minors.

College Requirements

- One of the following:
  - **COS Breadth** – Students can complete 12 hours from any subject outside of the College of Science. (*May not also apply to University Core)*
  - **Foreign Language** – Students must demonstrate proficiency through the 2050 level in one language: Arabic, Chinese, French, German, Italian, Japanese, Latin, Russian, Spanish, or American Sign Language

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **TECM 2700**: Technical Writing (3hrs) *(double-dips with major)*

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
  - A minimum of 5 hours of advanced electives are needed to meet university requirement
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

Bachelor of Arts Biochemistry, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman

Fall Semester - 14 hours		
Course	Title	Hours
BIOL 1710*	Biology 1	3
BIOL 1760*	Biology Lab	2
CHEM 1410 & 1430*	General Chemistry 1 & Lab	4
MATH 1650*	Pre Calculus	5

Spring Semester - 14 or 15 hours		
Course	Title	Hours
BIOL 1720 or 2041 & 2042*	Biology 2 or Microbiology & Lab	3 or 4
CHEM 1420 & 1440*	General Chemistry 2 & Lab	4
MATH 1710	Calculus 1	4
ENGL 1310*	First-Year Writing 1	3

Sophomore

Fall Semester - 17 hours		
Course	Title	Hours
CHEM 2370 & 3210*	Organic Chemistry 1 & Lab	4
PHYS 1510 & 1530	General Physics 1 with Calculus & Lab	4
TECM 2700*	Technical Writing	3
PSCI 2305	US Government	3
Social & Behv Sci Core	See Guidebook for Options	3

Spring Semester - 15 hours		
Course	Title	Hours
BIOL 3510 & 3520*	Cell Biology & Lab	4
CHEM 2380 & 3220*	Organic Chemistry 2 & Lab	4
PHYS 1520 & 1540	General Physics 2 with Calculus & Lab	4
PSCI 2306	Texas Government	3

Junior

Fall Semester - 14 or 15 hours		
Course	Title	Hours
BIOC Course Option & Lab*	See Biology Advisor for options	4 or 5
CHEM 3451 & 3452*	Quantitative Analysis & Lab	4
COS Breadth or LANG	See COS Advisor for options	3
HIST 2610	US History up to 1865	3

Spring Semester - 17 hours		
Course	Title	Hours
BIOC Course* or Elective (Adv)	See Biology Advisor for options	3
BIOC 4570 & 4580*	Biochem and Molecular Biology of the Gene & Lab	5
COS Breadth or LANG	See COS Advisor for options	3
HIST 2620	US History from 1865 to now	3
Elective (Adv)	Must be numbered 3000 or higher	3

Senior

Fall Semester - 16 hours		
Course	Title	Hours
Adv BIOL Elective & Lab*	See Biology Advisor for options	4
COS Breadth or LANG	See COS Advisor for options	3
Creative Arts Core	See Guidebook for Options	3
Lang, Phil, Culture Core	See Guidebook for Options	3
Elective (Adv)	Must be numbered 3000 or higher	3

Spring Semester - 14 hours		
Course	Title	Hours
Adv BIOL Elective & Lab*	See Biology Advisor for options	4
CHEM 3530*	Physical Chemistry for Life Sciences	4
COS Breadth or LANG	See COS Advisor for options	3
Elective	Any course not in degree plan	3

1. The minor in Biology cannot be removed, but you may have more than one minor.

*Must earn a C or better

Bachelor of Science in Biochemistry
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Foundation Course Requirements

Students must complete the following courses with a C or higher and at least a 2.5 overall GPA in these courses to take advanced coursework for the degree.

- **BIOL 1710:** Biology for Science Majors I (3hrs)
- **BIOL 1760:** Biology for Science Majors Lab (2hrs)
- One of the following:
  - **BIOL 2041 & 2042:** Microbiology & Lab (4hrs)
  - **BIOL 1720:** Biology for Science Majors II (3hrs)
- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs)
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)
- **CHEM 2370 & 3210:** Organic Chemistry I & Lab (4hrs)
- **MATH 1650:** Pre-Calculus (5hrs)

Major Requirements

Students must complete the following courses with a C or higher and at least a 2.0 overall GPA in these courses to graduate with the degree.

- **CHEM 2380 & 3220:** Organic Chemistry II & Lab (4hrs)
- **CHEM 3451 & 3452:** Quantitative Analysis & Lab (4hrs)
- **CHEM 3510:** Physical Chemistry I (3hrs)
- **CHEM 3520:** Physical Chemistry II (3hrs)
- **BIOC 4540:** Biochemistry I (3hrs)
- **BIOC 4550:** Biochemistry II (3hrs)
- **BIOC 4560:** Biochemistry Lab (2hrs)
- **BIOC 4570 & 4580:** Biochem & Molecular Bio of the Gene & Lab (5hrs)
- **BIOL 3510 & 3520:** Cell Biology & Lab (4hrs)
- **BIOL 3451 & 3452:** Genetics & Lab (4hrs)
- **Four** hours of advanced biology course with associated lab

Other Required Courses for Degree

- **MATH 1710:** Calculus I (4hrs) *(C or higher)*
- **MATH 1720:** Calculus II (3hrs)
- One of the following:
  - **PHYS 1510 & 1530 and 1520 & 1540:** General Physics I and II with Calculus & Labs (8hrs)
    - *(C or higher in PHYS 1510)*
  - **PHYS 1710 & 1730 and 2220 & 2240:** Mechanics and Electricity & Magnetism & Labs (8hrs)
    - *(C or higher in PHYS 1710)*
- **TECM 2700:** Technical Writing (3hrs) *(double-dips with core)*

Minor Requirements

All Biochemistry majors are awarded a Biology minor after completing their required biology courses within their degree requirements. Students can choose to add additional minors.

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **TECM 2700**: Technical Writing (3hrs) *(double-dips with major)*

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

Bachelor of Science Biochemistry, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman

Fall Semester - 14 hours		
Course	Title	Hours
BIOL 1710*	Biology 1	3
BIOL 1760*	Biology Lab	2
CHEM 1410 & 1430*	General Chemistry 1 & Lab	4
MATH 1650*	Pre Calculus	5

Spring Semester - 14 or 15 hours		
Course	Title	Hours
BIOL 1720 or 2041 & 2042*	Biology 2 or Microbiology & Lab	3 or 4
CHEM 1420 & 1440*	General Chemistry 2 & Lab	4
MATH 1710*	Calculus 1	4
ENGL 1310*	First-Year Writing 1	3

Sophomore

Fall Semester - 14 hours		
Course	Title	Hours
CHEM 2370 & 3210*	Organic Chemistry 1 & Lab	4
PHYS Option 1	Physics & Lab - See checklist for options	4
MATH 1720	Calculus 2	3
TECM 2700*	Technical Writing	3

Spring Semester - 17 hours		
Course	Title	Hours
CHEM 2380 & 3220*	Organic Chemistry 2 & Lab	4
PHYS Option 2	Physics & Lab - See checklist for options	4
Creative Arts Core	See Guidebook for Options	3
Social & Behv Sci Core	See Guidebook for Options	3
Elective	Any course not in degree plan	3

Junior

Fall Semester - 15 hours		
Course	Title	Hours
BIOC 4540 & 4560*	Biochemistry 1 & Lab	5
BIOL 3451 & 3452*	Genetics & Lab	4
HIST 2610	US History up to 1865	3
Elective	Any course not in degree plan	3

Spring Semester - 17 hours		
Course	Title	Hours
BIOC 4550*	Biochemistry 2	3
CHEM 3451 & 3452*	Quantitative Analysis & Lab	4
Adv BIOL Elective & Lab*	See Biology Advisor for options	4
HIST 2620	US History from 1865 to now	3
Elective	Any course not in degree plan	3

Senior

Fall Semester - 16 hours		
Course	Title	Hours
CHEM 3510*	Physical Chemistry 1	3
BIOL 3510 & 3520*	Cell Biology & Lab	4
PSCI 2305	US Government	3
Lang, Phil, Culture Core	See Guidebook for Options	3
Elective	Any course not in degree plan	3

Spring Semester - 14 hours		
Course	Title	Hours
CHEM 3520*	Physical Chemistry 2	3
BIOC 4570 & 4580*	Biochem and Molecular Biology of the Gene & Lab	5
PSCI 2306	Texas Government	3
Elective	Any course not in degree plan	3

1. The minor in Biology cannot be removed, but you may have more than one minor.

*Must earn a C or better

Bachelor of Science in Biochemistry with a Concentration in Forensic Science
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Foundation Course Requirements

Students must complete the following courses with a C or higher and at least a 2.5 overall GPA in these courses to take advanced coursework for the degree.

- **BIOL 1710:** Biology for Science Majors I (3hrs)
- **BIOL 1760:** Biology for Science Majors Lab (2hrs)
- **BIOL 2041 & 2042:** Microbiology & Lab (4hrs)
- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs)
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)
- **CHEM 2370 & 3210:** Organic Chemistry I & Lab (4hrs)
- One of the following:
  - **MATH 1680:** Elem. Probability & Statistics (3hrs)
  - **MATH 1780:** Probability Models (3hrs)

Major Requirements

Students must complete the following courses with a C or higher.

- **CHEM 2380 & 3220:** Organic Chemistry II & Lab (4hrs)
- **CHEM 3451 & 3452:** Quantitative Analysis & Lab (4hrs)
- **BIOC 4540:** Biochemistry I (3hrs)
- **BIOC 4550:** Biochemistry II (3hrs)
- **BIOC 4560:** Biochemistry Lab (2hrs)
- **BIOC 4570:** Biochem & Molecular Bio of the Gene (3hrs)
- **CHEM 3510:** Physical Chemistry I (3hrs)
- **CHEM 3520:** Physical Chemistry II (3hrs)
- **BIOL 3510 & 3520:** Cell Biology & Lab (4hrs)
- **BIOL 3451 & 3452:** Genetics & Lab (4hrs)

Forensic Science Concentration Requirements

Students must complete the following courses with a C or higher.

- **BIOL 3331:** Biomedical Criminalistics (3hrs)
- **BIOL 4240:** Forensic Microscopy (3hrs)
- **BIOL 4590:** Forensic Molecular Biology Lab (3hrs)
- **CHEM 3330:** Forensic Science Analysis (4hrs)
- **CHEM 4351:** Forensic Chemistry (3hrs)
- **CHEM 4360:** Principles of Forensic Science (3hrs)
- **CHEM 4631 & 4632:** Instrumental Analysis & Lab (4hrs)
- **BIOL 4900:** Forensic Science Internship (3hrs)
  - *Must be approved by Forensic Science Program Director*

Other Required Courses for Degree

- **MATH 1710:** Calculus I (4hrs) *(C or higher)*
- **MATH 1720:** Calculus II (3hrs) *(C or higher)*
- One of the following:
  - **PHYS 1510 & 1530 and 1520 & 1540:** General Physics I and II with Calculus & Labs (8hrs)
    - *(C or higher in PHYS 1510)*
  - **PHYS 1710 & 1730 and 2220 & 2240:** Mechanics and Electricity & Magnetism & Labs (8hrs)
    - *(C or higher in PHYS 1710)*
- **TECM 2700:** Technical Writing (3hrs) *(double-dips with core)*

Minor Requirements

All Biochemistry majors are awarded a Biology minor after completing their required biology courses within their degree requirements. Students can choose to add additional minors.

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **TECM 2700**: Technical Writing (3hrs) *(double-dips with major)*

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
- Minimum 2.75 GPA in all math and science courses
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

College of Science Advising Center
Hickory Hall 283; (940) 369-8606; COSAdvising@unt.edu

Bachelor of Science in Biochemistry with a Concentration in Forensic Science, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman

Fall Semester - 14 hours		
Course	Title	Hours
BIOL 1710*	Biology 1	3
BIOL 1760*	Biology Lab	2
CHEM 1410 & 1430*	General Chemistry 1 & Lab	4
MATH 1650*	Pre Calculus	5

Spring Semester - 15 hours		
Course	Title	Hours
BIOL 2041 & 2042*	Microbiology & Lab	4
CHEM 1420 & 1440*	General Chemistry 2 & Lab	4
MATH 1710*	Calculus 1	4
ENGL 1310*	First Year Writing 1	3

Sophomore

Fall Semester - 18 hours		
Course	Title	Hours
CHEM 2370 & 3210*	Organic Chemistry 1 & Lab	4
CHEM 3330*	Forensic Science Analysis	4
MATH 1720*	Calculus 2	3
PHYS Option 1*	Physics & Lab - See checklist for options	4
TECM 2700*	Technical Writing	3

Spring Semester - 18 hours		
Course	Title	Hours
CHEM 2380 & 3220*	Organic Chemistry 2 & Lab	4
CHEM 4360*	Principles of Forensic Science	3
BIOL 3451 & 3452*	Genetics & Lab	4
PHYS Option 2	Physics & Lab - See checklist for options	4
Lang, Phil, Culture Core	See Guidebook for Options	3

Junior

Fall Semester - 19 hours		
Course	Title	Hours
BIOL 3510 & 3520*	Cell Biology & Lab	4
CHEM 3451 & 3452*	Quantitative Analysis & Lab	4
BIOC 4540 & 4560*	Biochemistry 1 & Lab	5
CHEM 3510*	Physical Chemistry 1	3
Social & Behv Sci Core	See Guidebook for Options	3

Spring Semester - 15 hours		
Course	Title	Hours
BIOC 4570*	Biochem and Molecular Biology or the Gene	3
CHEM 3520*	Physical Chemistry 2	3
BIOC 4550*	Biochemistry 2	3
BIOL 3331*	Biomedical Criminalistics	3
MATH 1680 or 1780*	Elem. Probability & Stats or Probability Models	3

Senior

Fall Semester - 15 hours		
Course	Title	Hours
BIOL 4240*	Forensic Microscopy	3
BIOL 4590*	Forensic Molecular Biology Lab	3
PSCI 2305	US Government	3
HIST 2610	US History up to 1865	3
BIOL 4900*	Forensic Science Internship	3

Spring Semester - 16 hours		
Course	Title	Hours
CHEM 4631 & 4632*	Instrumental Analysis & Lab	4
CHEM 4351*	Forensic Chemistry	3
PSCI 2306	State Government	3
HIST 2620	US History from 1865 to now	3
Creative Arts Core	See Guidebook for Options	3

1. The minor in Biology cannot be removed, but you may have more than one minor.
2. Minimum 2.75 GPA in all math and science courses

*Must earn a C or better

Bachelor of Arts with a major in Biology
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Foundation Course Requirements

Students must complete the following courses with a C or higher and at least a 2.5 overall GPA in these courses to take advanced coursework for the degree.

- **BIOL 1710:** Biology for Science Majors I (3hrs)
- **BIOL 1720:** Biology for Science Majors II (3hrs)
- **BIOL 1760:** Biology for Science Majors Lab (2hrs)
- One of the following (*students must complete two of these courses for degree, but only one for the foundation):*
  - **BIOL 2041 & 2042:** Microbiology & Lab (4hrs)
  - **BIOL 2140:** Principles of Ecology (3hrs)
  - **BIOL 2241:** Biology of Higher Plants (3hrs)
  - **BIOL 2251:** Biodiversity and Conservation of Animals (3hrs)
  - **BIOL 2301 & 2311 and 2302 & 2312:** Human Anatomy & Physiology I and II with Labs (8hrs)
- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs)
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)
- **CHEM 2370 & 3210:** Organic Chemistry I & Lab (4hrs)
- One of the following:
  - **MATH 1680:** Elem. Probability & Statistics (3hrs)
  - **MATH 1650:** Pre-Calculus (5hrs)

Major Requirements

Students must complete the following courses with a C or higher and at least a 2.0 overall GPA in these courses to graduate with the degree.

- One of the following which was not used already for the foundation:
  - **BIOL 2041 & 2042:** Microbiology & Lab (4hrs)
  - **BIOL 2140:** Principles of Ecology (3hrs)
  - **BIOL 2241:** Biology of Higher Plants (3hrs)
  - **BIOL 2251:** Biodiversity and Conservation of Animals (3hrs)
  - **BIOL 2301 & 2311 and 2302 & 2312:** Human Anatomy & Physiology I and II with Labs (8hrs)
- **BIOL 3451 & 3452:** Genetics & Lab (4hrs)
- **BIOL 3510 & 3520:** Cell Biology & Lab (4hrs)
- One of the following:
  - **BIOL 3800 & 4510:** Animal Physiology & Lab (4hrs)
  - **BIOL 4501 & 4502:** Bacterial Diversity & Physiology & Lab (4hrs)
  - **BIOL 4503 & 4504:** Plant Physiology & Lab (4hrs)
  - **BIOL 4505 & 4510:** Comparative Animal Physiology & Lab (4hrs)
- **Seven** hours of advanced biology courses. The seven hours must be either 1 lecture with lab and another lecture, or three lectures.
- **CHEM 2380 & 3220:** Organic Chemistry II & Lab (4hrs)
- One of the following:
  - **CHEM 3451 & 3452:** Quantitative Analysis & Lab (4hrs)
  - **CHEM 3530:** Physical Chemistry for Life Science (4hrs)
  - **BIOC 3621 & 3622:** Principles of Biochemistry & Lab (4hrs)
  - **BIOC 4540 and BIOC 4550:** Biochemistry I & II (6hrs)

Other Required Courses for Degree

- **PHYS 1410 & 1430:** General Physics I & Lab (4hrs)
- **PHYS 1420 & 1440:** General Physics II & Lab (4hrs)
- **TECM 2700:** Technical Writing (3hrs) *(double-dips with core)*
- One of the following:
  - **MATH 1680:** Elem. Probability & Statistics (3hrs) *(double-dips with foundation)*
  - **MATH 1710:** Calculus I (4hrs)

Minor Requirements

All Biology majors are awarded a Chemistry minor after completing their required chemistry courses within their degree requirements. Students can choose to add additional minors.

College Requirements

- One of the following:
  - **COS Breadth** – Students can complete 12 hours from any subject outside of the College of Science. (*May not also apply to University Core)*
  - **Foreign Language** – Students must demonstrate proficiency through the 2050 level in one language: Arabic, Chinese, French, German, Italian, Japanese, Latin, Russian, Spanish, or American Sign Language

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **TECM 2700**: Technical Writing (3hrs) *(double-dips with major)*

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
  - A minimum of 11 hours of advanced electives are needed to meet university requirement
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

Bachelor of Arts Biology, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman

Fall Semester - 15 hours		
Course	Title	Hours
BIOL 1710*	Biology 1	3
BIOL 1760*	Biology Lab	2
CHEM 1410 & 1430*	General Chemistry 1 & Lab	4
ENGL 1310*	First Year Writing 1	3
PSCI 2305	US Government	3

Spring Semester - 16 or 18 hours		
Course	Title	Hours
BIOL 1720*	Biology 2	3
CHEM 1420 & 1440*	General Chemistry 2 & Lab	4
MATH 1680 or 1650*	Elementary Probability and Statistics, or Pre Calculus	3 or 5
TECM 2700*	Technical Writing	3
PSCI 2306	State Government	3

Sophomore

Fall Semester - 13 to 15 hours		
Course	Title	Hours
BIOL 2XXX*	Sophomore Level Biology Option 1, see checklist for options	3 or 4
CHEM 2370 & 3210*	Organic Chemistry 1 & Lab	4
MATH 1710 or Elective	Calculus 1 (if took MATH 1650), or any non-degree course	4 or 3
COS Breadth or LANG	See COS Advisor for options	3

Spring Semester - 14 or 15 hours		
Course	Title	Hours
BIOL 2XXX*	Sophomore Level Biology Option 2, see checklist for options	3 or 4
CHEM 2380 & 3220*	Organic Chemistry 2 & Lab	4
BIOL 3451 & 3452*	Genetics & Lab	4
COS Breadth or LANG	See COS Advisor for options	3

Junior

Fall Semester - 14 hours		
Course	Title	Hours
BIOL 3510 & 3520*	Cell Biology & Lab	4
PHYS 1410 & 1430	General Physics 1 & Lab	4
COS Breadth or LANG	See COS Advisor for options	3
Lang, Phil, Culture Core	See Guidebook for Options	3

Spring Semester - 16 hours		
Course	Title	Hours
Adv BIOL Elective*	See Biology Advisor for options	3
PHYS 1420 & 1440	General Physics 2 & Lab	4
COS Breadth or LANG	See COS Advisor for options	3
Social & Behv Sci Core	See Guidebook for Options	3
Elective (Adv)	Must be numbered 3000 or higher	3

Senior

Fall Semester - 16 or 17 hours		
Course	Title	Hours
Adv BIOL Elective & Lab*	See Biology Advisor for options	4
Adv CHEM or BIOC Elective*	See Biology Advisor for options	3 or 4
Creative Arts Core	See Guidebook for Options	3
HIST 2610	US History up to 1865	3
Elective (Adv)	Must be numbered 3000 or higher	3

Spring Semester - 16 hours		
Course	Title	Hours
Adv Physiology Elective & Lab*	See Biology Advisor for options	4
Adv BIOC* or Elective	See Biology Advisor for options	3
HIST 2620	US History from 1865 to now	3
Elective (Adv)	Must be numbered 3000 or higher	3
Elective (Adv)	Must be numbered 3000 or higher	3

1. The minor in Chemistry cannot be removed, but you may have more than one minor.

*Must earn a C or better

Bachelor of Science in Biology
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Foundation Course Requirements

Students must complete the following courses with a C or higher and at least a 2.5 overall GPA in these courses to take advanced coursework for the degree.

- **BIOL 1710:** Biology for Science Majors I (3hrs)
- **BIOL 1720:** Biology for Science Majors II (3hrs)
- **BIOL 1760:** Biology for Science Majors Lab (2hrs)
- One of the following (*students must complete two of these courses for degree, but only one for the foundation):*
  - **BIOL 2041 & 2042:** Microbiology & Lab (4hrs)
  - **BIOL 2140:** Principles of Ecology (3hrs)
  - **BIOL 2241:** Biology of Higher Plants (3hrs)
  - **BIOL 2251:** Biodiversity and Conservation of Animals (3hrs)
- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs)
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)
- **CHEM 2370 & 3210:** Organic Chemistry I & Lab (4hrs)
- **MATH 1650:** Pre-Calculus (5hrs)

Major Requirements

Students must complete the following courses with a C or higher and at least a 2.0 overall GPA in these courses to graduate with the degree.

- One of the following which was not used already for the foundation:
  - **BIOL 2041 & 2042:** Microbiology & Lab (4hrs)
  - **BIOL 2140:** Principles of Ecology (3hrs)
  - **BIOL 2241:** Biology of Higher Plants (3hrs)
  - **BIOL 2251:** Biodiversity and Conservation of Animals (3hrs)
- **BIOL 3451 & 3452:** Genetics & Lab (4hrs)
- **BIOL 3510 & 3520:** Cell Biology & Lab (4hrs)
- One of the following:
  - **BIOL 3800 & 4510:** Animal Physiology & Lab (4hrs)
  - **BIOL 4501 & 4502:** Bacterial Diversity & Physiology & Lab (4hrs)
  - **BIOL 4503 & 4504:** Plant Physiology & Lab (4hrs)
  - **BIOL 4505 & 4510:** Comparative Animal Physiology & Lab (4hrs)
- **Sixteen** hours of advanced biology courses. The sixteen hours must include at least 2 lectures with associated labs.
- **CHEM 2380 & 3220:** Organic Chemistry II & Lab (4hrs)
- One of the following:
  - **CHEM 3451 & 3452:** Quantitative Analysis & Lab (4hrs)
  - **CHEM 3530:** Physical Chemistry for Life Science (4hrs)
  - **BIOC 3621 & 3622:** Principles of Biochemistry & Lab (4hrs)
  - **BIOC 4540 and BIOC 4550:** Biochemistry I & II (6hrs)

Other Required Courses for Degree

- **PHYS 1410 & 1430:** General Physics I & Lab (4hrs)
- **PHYS 1420 & 1440:** General Physics II & Lab (4hrs)
- **TECM 2700:** Technical Writing (3hrs) *(double-dips with core)*
- **MATH 1710:** Calculus I (4hrs)

Minor Requirements

All Biology majors are awarded a Chemistry minor after completing their required chemistry courses within their degree requirements. Students can choose to add additional minors.

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **TECM 2700**: Technical Writing (3hrs) *(double-dips with major)*

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
  - A minimum of 2 hours of advanced electives are needed to meet university requirement
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

College of Science Advising Center
Hickory Hall 283; (940) 369-8606; COSAdvising@unt.edu

Bachelor of Science Biology, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman

Fall Semester - 15 hours		
Course	Title	Hours
BIOL 1710*	Biology 1	3
CHEM 1410 & 1430*	General Chemistry 1 & Lab	4
MATH 1650*	Pre Calculus	5
ENGL 1310*	First Year Writing 1	3

Spring Semester - 16 hours		
Course	Title	Hours
BIOL 1720*	Biology 2	3
BIOL 1760*	Biology Lab	2
CHEM 1420 & 1440*	General Chemistry 2 & Lab	4
MATH 1710	Calculus 1	4
TECM 2700*	Technical Writing	3

Sophomore

Fall Semester - 16 or 17 hours		
Course	Title	Hours
BIOL 2XXX*	Sophomore Level Biology Option 1, see checklist for options	3 or 4
CHEM 2370 & 3210*	Organic Chemistry 1 & Lab	4
Lang, Phil, Culture Core	See Guidebook for Options	3
PSCI 2305	US Government	3
Elective	Any course not in degree plan	3

Spring Semester - 14 or 15 hours		
Course	Title	Hours
BIOL 2XXX*	Sophomore Level Biology Option 2, see checklist for options	3 or 4
CHEM 2380 & 3220*	Organic Chemistry 2 & Lab	4
BIOL 3451 & 3452*	Genetics & Lab	4
PSCI 2306	State Government	3

Junior

Fall Semester - 14 or 15 hours		
Course	Title	Hours
BIOL 3510 & 3520*	Cell Biology & Lab	4
Adv CHEM or BIOC Elective*	See Biology Advisor for options	3 or 4
PHYS 1410 & 1430	General Physics 1 & Lab	4
Social & Behv Sci Core	See Guidebook for Options	3

Spring Semester - 15 hours		
Course	Title	Hours
Adv BIOL Elective & Lab*	See Biology Advisor for options	4
Adv Physiology Elective & Lab*	See Biology Advisor for options	4
PHYS 1420 & 1440	General Physics 2 & Lab	4
Adv BIOC* or Elective	See Biology Advisor for options	3

Senior

Fall Semester - 16 hours		
Course	Title	Hours
Adv BIOL Elective & Lab*	See Biology Advisor for options	4
Adv BIOL Elective*	See Biology Advisor for options	3
Creative Arts Core	See Guidebook for Options	3
HIST 2610	US History up to 1865	3
Elective (Adv)	Must be numbered 3000 or higher	3

Spring Semester - 15 hours		
Course	Title	Hours
Adv BIOL Elective*	See Biology Advisor for options	3
Adv BIOL Elective*	See Biology Advisor for options	3
HIST 2620	US History from 1865 to now	3
Elective	Any course not in degree plan	3
Elective	Any course not in degree plan	3

1. The minor in Chemistry cannot be removed, but you may have more than one minor.

*Must earn a C or better

Bachelor of Science in Biology with a Concentration in Forensic Science
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Foundation Course Requirements

Students must complete the following courses with a C or higher and at least a 2.5 overall GPA in these courses to take advanced coursework for the degree.

- **BIOL 1710:** Biology for Science Majors I (3hrs)
- **BIOL 1720:** Biology for Science Majors II (3hrs)
- **BIOL 1760:** Biology for Science Majors Lab (2hrs)
- **BIOL 2041 & 2042:** Microbiology & Lab (4hrs)
- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs)
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)
- **CHEM 2370 & 3210:** Organic Chemistry I & Lab (4hrs)
- One of the following:
  - **MATH 1680:** Elem. Probability & Statistics (3hrs)
  - **MATH 1780:** Probability Models (3hrs)

Major Requirements

Students must complete the following courses with a C or higher.

- **BIOL 3451 & 3452:** Genetics & Lab (4hrs)
- **BIOL 3510 & 3520:** Cell Biology & Lab (4hrs)
- **BIOL 3800 & 4510:** Animal Physiology & Lab (4hrs)
- **BIOL 4570:** Biochem & Molecular Bio of the Gene (3hrs)
- **BIOC 3621 & 3622:** Principles of Biochemistry & Lab (4hrs)
- **CHEM 2380 & 3220:** Organic Chemistry II & Lab (4hrs)
- **CHEM 3451 & 3452:** Quantitative Analysis & Lab (4hrs)

Forensic Science Concentration Requirements

Students must complete the following courses with a C or higher.

- **BIOL 3331:** Biomedical Criminalistics (3hrs)
- **BIOL 4240:** Forensic Microscopy (3hrs)
- **BIOL 4590:** Forensic Molecular Biology Lab (3hrs)
- **CHEM 3330:** Forensic Science Analysis (4hrs)
- **CHEM 4351:** Forensic Chemistry (3hrs)
- **CHEM 4360:** Principles of Forensic Science (3hrs)
- **CHEM 4631 & 4632:** Instrumental Analysis & Lab (4hrs)
- **BIOL 4900:** Forensic Science Internship (3hrs)
  - *Must be approved by Forensic Science Program Director*

Other Required Courses for Degree

- **MATH 1710:** Calculus I (4hrs)
- One of the following:
  - **PHYS 1410 & 1430 and 1420 & 1440:** General Physics I and II & Labs (8hrs)
  - **PHYS 1510 & 1530 and 1520 & 1540:** General Physics I and II with Calculus & Labs (8hrs)
- **TECM 2700:** Technical Writing (3hrs) *(double-dips with core)*

Minor Requirements

All Biology majors are awarded a Chemistry minor after completing their required chemistry courses within their degree requirements. Students can choose to add additional minors.

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **TECM 2700**: Technical Writing (3hrs) *(double-dips with major)*

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
- Minimum 2.75 GPA in all math and science courses
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

Bachelor of Science in Biology with a Concentration in Forensic Science, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman	Fall Semester - 15 hours			Spring Semester - 16 hours		
	Course	Title	Hours	Course	Title	Hours
	BIOL 1710*	Biology 1	3	**BIOL 1720***	Biology 2	3
	CHEM 1410 & 1430*	General Chemistry 1 & Lab	4	**BIOL 1760***	Biology Lab	2
	MATH 1650*	Pre Calculus	5	**CHEM 1420 & 1440***	General Chemistry 2 & Lab	4
	ENGL 1310*	First Year Writing 1	3	**MATH 1710**	Calculus 1	4
				TECM 2700*	Technical Writing	3

Sophomore	Fall Semester - 16 hours			Spring Semester - 17 hours		
	Course	Title	Hours	Course	Title	Hours
	BIOL 2041 & 2042*	Microbiology & Lab	4	**BIOL 3331***	Biomedical Criminalistics	3
	CHEM 2370 & 3210*	Organic Chemistry 1 & Lab	4	**BIOL 3451 & 3452***	Genetics & Lab	4
	CHEM 3330*	Forensic Science Analysis	4	**CHEM 2380 & 3220***	Organic Chemistry 2 & Lab	4
	PHYS Option 1	Physics & Lab - See checklist for options	4	**CHEM 4360***	Principles of Forensic Science	3
				Lang, Phil, Culture Core	See Guidebook for Options	3

Junior	Fall Semester - 15 hours			Spring Semester - 17 hours		
	Course	Title	Hours	Course	Title	Hours
	BIOL 3510 & 3520*	Cell Biology & Lab	4	**BIOL 3800 & 4510***	Animal Physiology & Lab	4
	CHEM 3451 & 3452*	Quantitative Analysis & Lab	4	**BIOC 3621 & 3622***	Principles of Biochemistry & Lab	4
	PHYS Option 2	Physics & Lab - See checklist for options	4	**CHEM 4351***	Forensic Chemistry	3
	MATH 1680 or 1780*	Elem. Probability & Stats or Probability Models	3	**Social & Behv Sci Core**	See Guidebook for Options	3
				Creative Arts Core	See Guidebook for Options	3

Senior	Fall Semester - 15 hours			Spring Semester - 13 hours		
	Course	Title	Hours	Course	Title	Hours
	BIOL 4240*	Forensic Microscopy	3	**CHEM 4631 & 4632***	Instrumental Analysis & Lab	4
	BIOL 4570*	Biochem & Molecular Bio of the Gene	3	**BIOL 4590***	Forensic Molecular Biology Lab	3
	PSCI 2305	US Government	3	**PSCI 2306**	State Government	3
	HIST 2610	US History up to 1865	3	**HIST 2620**	US History from 1865 to now	3
	BIOL 4900*	Forensic Science Internship	3			

1. The minor in Chemistry cannot be removed, but you may have more than one minor.
2. Minimum 2.75 GPA in all math and science courses

*Must earn a C or better

Bachelor of Arts with a major in Chemistry
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Chemistry Foundation Requirements

- **CHEM 1400:** First Year Seminar in Chemistry (1hr)
- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs)
  - *(C or higher)*
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)
  - *(C or higher)*
- **CHEM 2370 & 3210:** Organic Chemistry I & Lab (4hrs)
  - *(C or higher)*
- **CHEM 2380 & 3220:** Organic Chemistry II & Lab (4hrs)
  - *(C or higher)*
- **CHEM 3451 & 3452:** Quantitative Analysis & Lab (4hrs)

Major Requirements

One of the following options:

- Option 1: *(recommended for advanced studies in chemistry)*
  - **CHEM 3510 & 3230** Physical Chemistry I & Lab (4hrs)
    - *(C or higher)*
  - **CHEM 3520 & 3240** Physical Chemistry II & Lab (4hrs)
  - 3 additional hours of 4000 level chemistry OR
    - **BIOC 3621 & 3622:** Principles of Biochemistry & Lab (4hrs)
- Option 2: *(recommended for a career in chemistry industry)*
  - **CHEM 3510 & 3230** Physical Chemistry I & Lab (4hrs)
  - 7 additional hours of 4000 level chemistry
    - may include **BIOC 3621 & 3622:** Principles of Biochemistry & Lab (4hrs)
- Option 3: *(recommended for health professions)*
  - **CHEM 3530** Physical Chemistry for Life Science (4hrs)
  - 7 additional hours of 4000 level chemistry
    - may include **BIOC 3621 & 3622**: Principles of Biochemistry & Lab (4hrs)

Other Required Courses for Degree

- **MATH 1710:** Calculus I (4hrs)
  - *(C or higher)*
- **MATH 1720:** Calculus II (3hrs)
  - *(C or higher if taking PHYS 2220 or CHEM 3510)*
- One of the following:
  - **PHYS 1410 & 1430 and 1420 & 1440:** General Physics I and II & Labs (8hrs)
  - **PHYS 1510 & 1530 and 1520 & 1540:** General Physics I and II with Calculus & Labs (8hrs)
    - *(C or higher for PHYS 1510)*
  - **PHYS 1710 & 1730 and 2220 & 2240:** Mechanics and Electricity & Magnetism & Labs (8hrs)
    - *(C or higher for PHYS 1710)*

College Requirements

- One of the following:
  - **COS Breadth** – Students can complete 12 hours from any subject outside of the College of Science. (*May not also apply to University Core)*
  - **Foreign Language** – Students must demonstrate proficiency through the 2050 level in one language: Arabic, Chinese, French, German, Italian, Japanese, Latin, Russian, Spanish, or American Sign Language

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **ENGL 1320:** First-Year Writing II (3hrs) or **TECM 2700**: Technical Writing (3hrs)

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
  - A minimum of 19 hours of advanced electives are needed to meet university requirement
- Minimum 2.5 GPA on all advanced science, math, and engineering courses
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

Bachelor of Arts Chemistry, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman

Fall Semester - 16 hours		
Course	Title	Hours
CHEM 1410 & 1430*	General Chemistry 1 & Lab	4
CHEM 1400	Chemistry First-Year Seminar	1
MATH 1650*	Pre Calculus	5
ENGL 1310*	First-Year Writing 1	3
HIST 2610	US History up to 1865	3

Spring Semester - 14 hours		
Course	Title	Hours
CHEM 1420 & 1440*	General Chemistry 2 & Lab	4
MATH 1710*	Calculus 1	4
ENGL 1320 or TECM 2700*	First-Year Writing 2 or Technical Writing	3
HIST 2610	US History from 1865 to now	3

Sophomore

Fall Semester - 14 hours		
Course	Title	Hours
CHEM 2370 & 3210*	Organic Chemistry 1 & Lab	4
PHYS Option 1	Physics & Lab - See checklist for options	4
MATH 1720*	Calculus 2	3
PSCI 2305	US Government	3

Spring Semester - 17 hours		
Course	Title	Hours
CHEM 2380 & 3220*	Organic Chemistry 2 & Lab	4
PHYS Option 2	Physics & Lab - See checklist for options	4
Lang, Phil, Culture Core	See Guidebook for Options	3
PSCI 2306	State Government	3
Elective	Any course not in degree plan	3

Junior

Fall Semester - 14 hours		
Course	Title	Hours
CHEM 3451 & 3452	Quantitative Analysis & Lab	4
Adv. CHEM or BIOC Options	See Chemistry advisor for options	4
COS Breadth or LANG	See COS Advisor for options	3
Elective (Adv)	Must be numbered 3000 or higher	3

Spring Semester - 15 or 16 hours		
Course	Title	Hours
Adv. CHEM or BIOC Options	See Chemistry advisor for options	3 or 4
Creative Arts Core	See Guidebook for Options	3
COS Breadth or LANG	See COS Advisor for options	3
Elective	Any course not in degree plan	3
Elective (Adv)	Must be numbered 3000 or higher	3

Senior

Fall Semester - 15 or 16 hours		
Course	Title	Hours
Adv. CHEM or BIOC Options	See Chemistry advisor for options	3 or 4
COS Breadth or LANG	See COS Advisor for options	3
Elective (Adv)	Must be numbered 3000 or higher	3
Elective (Adv)	Must be numbered 3000 or higher	3
Elective (Adv)	Must be numbered 3000 or higher	3

Spring Semester - 15 hours		
Course	Title	Hours
COS Breadth or LANG	See COS Advisor for options	3
Social & Behv Sci Core	See Guidebook for Options	3
Elective	Any course not in degree plan	3
Elective (Adv)	Must be numbered 3000 or higher	3
Elective (Adv)	Must be numbered 3000 or higher	3

1. A minor is optional.
2. Must earn a 2.5 average across all advanced Science, Math, and Engineering courses.

*Must earn a C or better

Bachelor of Science in Chemistry
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Chemistry Foundation Requirements

- **CHEM 1400:** First Year Seminar in Chemistry (1hr)
- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs)
  - *(C or higher)*
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)
  - *(C or higher)*
- **CHEM 2370 & 3210:** Organic Chemistry I & Lab (4hrs)
  - *(C or higher)*
- **CHEM 2380 & 3220:** Organic Chemistry II & Lab (4hrs)
  - *(C or higher)*
- **CHEM 3451 & 3452:** Quantitative Analysis & Lab (4hrs)
  - *(C or higher)*

Major Requirements

- **CHEM 3510 & 3230** Physical Chemistry I & Lab (4hrs) *(C or higher)*
- **CHEM 3520 & 3240** Physical Chemistry II & Lab (4hrs) *(C or higher)*
- **CHEM 4610:** Advanced Inorganic Chemistry Lecture (3hrs)
- **CHEM 4620:** Advanced Inorganic Chemistry Lab (1hr)
- **CHEM 4631 & 4632:** Instrumental Analysis & Lab (4hrs)
- **Six** additional hours at the 4000 level
  - ***BIOC 4540:*** *Biochemistry I (3hrs) required to satisfy ACS certification*

Other Required Courses for Degree

- **MATH 1710:** Calculus I (4hrs) *(C or higher)*
- **MATH 1720:** Calculus II (3hrs) *(C or higher)*
- **MATH 2700:** Linear Algebra and Vector Geometry (3hrs)
- **MATH 2730:** Multivariable Calculus (3hrs)
- One of the following:
  - **PHYS 1510 & 1530 and 1520 & 1540:** General Physics I and II with Calculus & Labs (8hrs) *(C or higher in both)*
  - **PHYS 1710 & 1730 and 2220 & 2240:** Mechanics and Electricity & Magnetism & Labs (8hrs) *(C or higher in both)*

Minor Requirements

A minor of at least 18 hours in Mathematics, Computer Science, Physics, Biology, Geology (if taken as a laboratory science), or Materials Science, of which 6 hours must be advanced.

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **ENGL 1320:** First-Year Writing II (3hrs) or **TECM 2700**: Technical Writing (3hrs)

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
  - A minimum of 2 hours of advanced electives are needed to meet university requirement
- Minimum 2.5 GPA on all advanced science, math, and engineering courses
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

Bachelor of Science Chemistry, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman

Fall Semester - 16 hours		
Course	Title	Hours
CHEM 1410 & 1430*	General Chemistry 1 & Lab	4
CHEM 1400	Chemistry First-Year Seminar	1
MATH 1650*	Pre Calculus	5
ENGL 1310*	First-Year Writing 1	3
HIST 2610	US History up to 1865	3

Spring Semester - 14 hours		
Course	Title	Hours
CHEM 1420 & 1440*	General Chemistry 2 & Lab	4
MATH 1710*	Calculus 1	4
ENGL 1320 or TECM 2700*	First-Year Writing 2 or Technical Writing	3
HIST 2620	US History from 1865 to now	3

Sophomore

Fall Semester - 17 hours		
Course	Title	Hours
CHEM 2370 & 3210*	Organic Chemistry 1 & Lab	4
PHYS Option 1*	Physics & Lab - See checklist for options	4
MATH 1720*	Calculus 2	3
Minor	See Catalog for Options	3
Elective	Any course not in degree plan	3

Spring Semester - 14 hours		
Course	Title	Hours
CHEM 2380 & 3220*	Organic Chemistry 2 & Lab	4
PHYS Option 2*	Physics & Lab - See checklist for options	4
MATH 2730	Multivariable Calculus	3
Minor	See Catalog for Options	3

Junior

Fall Semester - 14 hours		
Course	Title	Hours
CHEM 3510 & 3230*	Physical Chemistry 1 & Lab	4
CHEM 3451 & 3452*	Quantitative Analysis & Lab	4
MATH 2700	Linear Algebra and Vector Geometry	3
Minor	See Catalog for Options	3

Spring Semester - 17 hours		
Course	Title	Hours
CHEM 3520 & 3240*	Physical Chemistry 2 & Lab	4
CHEM 4631 & 4632	Instrumental Analysis & Lab	4
Minor	See Catalog for Options	3
Creative Arts Core	See Guidebook for Options	3
Social & Behv Sci Core	See Guidebook for Options	3

Senior

Fall Semester - 15 hours		
Course	Title	Hours
CHEM 4610	Advanced Inorganic Chemistry	3
CHEM 4XXX or BIOC 4540	See Chemistry advisor for options	3
Minor (Adv)	Must be numbered 3000 or higher	3
Lang, Phil, Culture Core	See Guidebook for Options	3
PSCI 2305	US Government	3

Spring Semester - 13 hours		
Course	Title	Hours
CHEM 4620	Advanced Inorganic Chemistry Lab	1
CHEM 4XXX	See Chemistry advisor for options	3
Minor (Adv)	Must be numbered 3000 or higher	3
PSCI 2306	State Government	3
Elective (Adv)	Must be numbered 3000 or higher	3

1. A minor in Math, Physics, Biology, Computer Science, Materials Science, or Geology (lab science) is required.
2. Must earn a 2.5 average across all advanced Science, Math, and Engineering courses.

*Must earn a C or better

Bachelor of Science in Chemistry with a Concentration in Forensic Science
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Chemistry Foundation Requirements

Students must complete the following courses with a C or higher.

- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs)
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)
- **CHEM 2370 & 3210:** Organic Chemistry I & Lab (4hrs)
- **CHEM 2380 & 3220:** Organic Chemistry II & Lab (4hrs)
- **CHEM 3451 & 3452:** Quantitative Analysis & Lab (4hrs)

Major Requirements

Students must complete the following courses with a C or higher.

- **CHEM 3510 & 3230** Physical Chemistry I & Lab (4hrs)
- **CHEM 3520 & 3240** Physical Chemistry II & Lab (4hrs)
- **CHEM 4610:** Advanced Inorganic Chemistry Lecture (3hrs)
- **CHEM 4620:** Advanced Inorganic Chemistry Lab (1hr)
- **CHEM 4631 & 4632:** Instrumental Analysis & Lab (4hrs)
- **BIOC 4540:** Biochemistry I (3hrs)

Forensic Science Concentration Requirements

Students must complete the following courses with a C or higher.

- **BIOL 3331:** Biomedical Criminalistics (3hrs)
- **BIOL 4240:** Forensic Microscopy (3hrs)
- **BIOL 4590:** Forensic Molecular Biology Lab (3hrs)
- **CHEM 3330:** Forensic Science Analysis (4hrs)
- **CHEM 4351:** Forensic Chemistry (3hrs)
- **CHEM 4360:** Principles of Forensic Science (3hrs)
- One of the following:
  - **CHEM 4900:** Forensic Science Internship (3hrs)
    - *Must be approved by Forensic Science Program Director*
  - **CHEM 4912:** Undergraduate Research Experience

Biology Minor Requirements

Students must complete the following courses with a C or higher.

- **BIOL 1710:** Biology for Science Majors I (3hrs)
- **BIOL 1760:** Biology for Science Majors Lab (2hrs)
- **BIOL 2041 & 2042:** Microbiology & Lab (4hrs)
- **BIOL 3451 & 3452:** Genetics & Lab (4hrs)

Other Required Courses for Degree

- **MATH 1710:** Calculus I (4hrs) *(C or higher)*
- **MATH 1720:** Calculus II (3hrs) *(C or higher)*
- **MATH 1780:** Probability Models (3hrs)
- **MATH 2730:** Multivariable Calculus (3hrs)
- One of the following:
  - **PHYS 1510 & 1530 and 1520 & 1540:** General Physics I and II with Calculus & Labs (8hrs) *(C or higher in both)*
  - **PHYS 1710 & 1730 and 2220 & 2240:** Mechanics and Electricity & Magnetism & Labs (8hrs) *(C or higher in both)*

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **ENGL 1320:** First-Year Writing II (3hrs) or **TECM 2700**: Technical Writing (3hrs)

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
- Minimum 2.5 GPA on all advanced science, math, and engineering courses
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

Bachelor of Science in Chemistry with a Concentration in Forensic Science, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman

Fall Semester - 14 hours		
Course	Title	Hours
CHEM 1410 & 1430*	General Chemistry 1 & Lab	4
BIOL 1710*	Biology 1	3
BIOL 1760*	Biology Lab	2
MATH 1650*	Pre Calculus	5

Spring Semester - 15 hours		
Course	Title	Hours
CHEM 1420 & 1440*	General Chemistry 2 & Lab	4
BIOL 2041 & 2042*	Microbiology & Lab	4
MATH 1710*	Calculus 1	4
ENGL 1310*	First Year Writing 1	3

Sophomore

Fall Semester - 18 hours		
Course	Title	Hours
CHEM 2370 & 3210*	Organic Chemistry 1 & Lab	4
CHEM 3330*	Forensic Science Analysis	4
MATH 1720*	Calculus 2	3
PHYS Option 1*	Physics & Lab - See checklist for options	4
ENGL 1320 or TECM 2700*	First-Year Writing 2 or Technical Writing	3

Spring Semester - 18 hours		
Course	Title	Hours
CHEM 2380 & 3220*	Organic Chemistry 2 & Lab	4
CHEM 4360*	Principles of Forensic Science	3
MATH 2370	Multivariable Calculus	3
PHYS Option 2*	Physics & Lab - See checklist for options	4
BIOL 3451 & 3452*	Genetics & Lab	4

Junior

Fall Semester - 17 hours		
Course	Title	Hours
CHEM 3510 & 3230*	Physical Chemistry 1 & Lab	4
CHEM 3451 & 3452*	Quantitative Analysis & Lab	4
BIOC 4540*	Biochemistry 1	3
PSCI 2305	US Government	3
Social & Behv Sci Core	See Guidebook for Options	3

Spring Semester - 16 hours		
Course	Title	Hours
CHEM 3520 & 3240*	Physical Chemistry 2 & Lab	4
BIOL 3331*	Biomedical Criminalistics	3
MATH 1780*	Probability Models	3
PSCI 2306	State Government	3
Lang, Phil, Culture Core	See Guidebook for Options	3

Senior

Fall Semester - 15 hours		
Course	Title	Hours
CHEM 4610	Advanced Inorganic Chemistry	3
BIOL 4240*	Forensic Microscopy	3
BIOL 4590*	Forensic Molecular Biology Lab	3
CHEM 4900 or 4912*	Forensic Science Internship or Undergrad Research Experience	3
HIST 2610	US History up to 1865	3

Spring Semester - 14 hours		
Course	Title	Hours
CHEM 4620	Advanced Inorganic Chemistry Lab	1
CHEM 4351*	Forensic Chemistry	3
CHEM 4631 & 4632*	Instrumental Analysis & Lab	4
Creative Arts Core	See Guidebook for Options	3
HIST 2620	US History from 1865 to now	3

1. The minor in Biology cannot be removed, but you may have more than one minor.
2. Minimum 2.75 GPA in all math and science courses

*Must earn a C or better

Bachelor of Science with a major in Ecology for Environmental Science
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Foundation Course Requirements

Students must complete the following courses with a C or higher and at least a 2.5 overall GPA in these courses to take advanced coursework for the degree.

- **BIOL 1710:** Biology for Science Majors I (3hrs)
- **BIOL 1720:** Biology for Science Majors II (3hrs)
- **BIOL 1760:** Biology for Science Majors Lab (2hrs)
- One of the following (*students must complete both of these courses for degree, but only one for the foundation):*
  - **BIOL 2140:** Principles of Ecology & Lab (4hrs)
  - **BIOL 2251:** Biodiversity and Conservation of Animals (3hrs)
- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs)
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)
- **CHEM 2370 & 3210:** Organic Chemistry I & Lab (4hrs)
- One of the following:
  - **MATH 1680:** Elem. Probability & Statistics (3hrs)
  - **MATH 1650:** Pre-Calculus (5hrs)

Major Requirements

Students must complete the following courses with a C or higher and at least a 2.0 overall GPA in these courses to graduate with the degree.

- One of the following which was not used already for the foundation:
  - **BIOL 2140:** Principles of Ecology & Lab (4hrs)
  - **BIOL 2251:** Biodiversity and Conservation of Animals (3hrs)
- **BIOL 3451 & 3452:** Genetics & Lab (4hrs)
- **BIOL 4051 & 4052:** Community Ecology & Lab (4hrs)
- **BIOL 4260:** Principles of Evolution (3hrs)
- One of the following:
  - **BIOL 4503 & 4504:** Plant Physiology & Lab (4hrs)
  - **BIOL 4505 & 4510:** Comparative Animal Physiology & Lab (4hrs)
- **Twelve** hours of advanced ecology courses. The twelve hours must include at least 2 lectures with associated labs.

Other Required Courses for Degree

- One of the following:
  - **MATH 1680:** Elem. Probability & Statistics (3hrs) *(double-dips with Foundation math)*
  - **MATH 1710:** Calculus I (4hrs)
- **CHEM 2380 & 3220:** Organic Chemistry II & Lab (4hrs)
- **PHYS 1410 & 1430:** General Physics I & Lab (4hrs)
- **PHYS 1420 & 1440:** General Physics II & Lab (4hrs)
- **TECM 2700:** Technical Writing (3hrs) *(double-dips with core)*
- **GEOG 3500:** Intro. to Geographic Information Systems (3hrs)
- **ECON 4440:** Economics of Natural Resources and Environment (3hrs)
- **PHIL 2500:** Environment and Society (3hrs)

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **TECM 2700**: Technical Writing (3hrs) *(double-dips with major)*

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- **ECON 1100:** Principles of Microeconomics (3hrs) *(pre-req for ECON 4440)*

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
  - A minimum of 1 hour of advanced electives are needed to meet university requirement
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

College of Science Advising Center
Hickory Hall 283; (940) 369-8606; COSAdvising@unt.edu

Bachelor of Science in Ecology for Environmental Science, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman

Fall Semester - 16 hours		
Course	Title	Hours
BIOL 1710*	Biology 1	3
BIOL 1760*	Biology Lab	2
CHEM 1410 & 1430*	General Chemistry 1 & Lab	4
ENGL 1310*	First Year Writing 1	3
PSCI 2305	US Government	3

Spring Semester - 16 or 18 hours		
Course	Title	Hours
BIOL 1720*	Biology 2	3
CHEM 1420 & 1440*	General Chemistry 2 & Lab	4
MATH 1680 or 1650*	Elementary Probability and Statistics, or Pre Calculus	3 or 5
TECM 2700*	Technical Writing	3
PSCI 2306	Texas Government	3

Sophomore

Fall Semester - 13 to 15 hours		
Course	Title	Hours
BIOL 2251, or 2140 & 2141*	Biodiversity and Conservation, or Ecology & Lab	3 or 4
CHEM 2370 & 3210*	Organic Chemistry 1 & Lab	4
MATH 1710 or Elective	Calculus 1 (if took MATH 1650), or any non-degree course	4 or 3
Lang, Phil, Culture Core	See Guidebook for Options	3

Spring Semester - 14 or 15 hours		
Course	Title	Hours
BIOL 2251, or 2140 & 2141*	Biodiversity and Conservation, or Ecology & Lab	3 or 4
CHEM 2380 & 3220*	Organic Chemistry 2 & Lab	4
BIOL 3451 & 3452*	Genetics & Lab	4
Elective	Any course not in degree plan	3

Junior

Fall Semester - 14 or 15 hours		
Course	Title	Hours
BIOL 4051 & 4052*	Community Ecology & Lab	4
Adv BIOL Elective & Lab*	See Biology Advisor for options	3 or 4
PHYS 1410 & 1430	General Physics 1 & Lab	4
ECON 1100	Principles of Microeconomics	3

Spring Semester - 16 or 17 hours		
Course	Title	Hours
BIOL 4260*	Principles of Evolution	3
Adv BIOL Elective & Lab*	See Biology Advisor for options	3 or 4
PHYS 1420 & 1440	General Physics 2 & Lab	4
GEOG 3500	Introduction to Geographic Information Systems	3
Creative Arts Core	See Guidebook for Options	3

Senior

Fall Semester - 15 hours		
Course	Title	Hours
Adv BIOL Elective*	See Biology Advisor for options	3
PHIL 2500	Environment & Society	3
HIST 2610	US History up to 1865	3
ECON 4440	Economics of Natural Resources and Environment	3
Elective	Any course not in degree plan	3

Spring Semester - 16 hours		
Course	Title	Hours
Adv Physiology Elective & Lab*	See Biology Advisor for options	4
Adv BIOL Elective*	See Biology Advisor for options	3
HIST 2620	US History from 1865 to now	3
Elective (Adv)	Must be numbered 3000 or higher	3
Elective	Any course not in degree plan	3

1. Adding a minor is optional.

*Must earn a C or better

Bachelor of Arts with a major in Mathematics
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Math Foundation Requirements

- **MATH 1710:** Calculus I (4hrs) *(C or higher)*
- **MATH 1720:** Calculus I (3hrs) *(C or higher)*
- **MATH 2000:** Discrete Math (3hrs) *(C or higher)*
- **MATH 2700:** Linear Algebra and Vector Geometry
- **MATH 2730:** Multivariable Calculus (3hrs)
- **MATH 3000:** Real Analysis I (3hrs)
- **MATH 3510:** Intro. to Abstract Algebra I (3hrs) or **MATH 3610:** Real Analysis II (3hrs) *(can double-dip with depth or breadth course)*

Major Depth Requirements

Students must complete two courses from one of the following areas

- Analysis area
  - **MATH 3350:** Intro. to Numerical Analysis (3hrs)
  - **MATH 3410:** Differential Equations I (3hrs)
  - **MATH 3420**: Differential Equations II (3hrs)
  - **MATH 3610:** Real Analysis II (3hrs)
  - **MATH 3740:** Vector Calculus (3hrs)
  - **MATH 4080:** Differential Geometry (3hrs)
  - **MATH 4100:** Fourier Analysis (3hrs)
  - **MATH 4200:** Dynamical Systems (3hrs)
  - **MATH 4520:** Intro. to Functions of a Complex Variable (3hrs)
- Algebra area
  - **MATH 3400:** Number Theory (3hrs)
  - **MATH 3510:** Intro. to Abstract Algebra I (3hrs)
  - **MATH 4010:** Intro. to Metamathematics (3hrs)
  - **MATH 4430:** Intro. to Graph Theory (3hrs)
  - **MATH 4450:** Intro. to the Theory of Matrices (3hrs)
  - **MATH 4510:** Abstract Algebra II (3hrs)
- Probability & Statistics area
  - **MATH 3680:** Applied Statistics (3hrs)
  - **MATH 4610:** Probability (3hrs)
  - **MATH 4650:** Statistics (3hrs)
- Geometry & Topology area
  - **MATH 3740:** Vector Calculus (3hrs)
  - **MATH 4060:** Foundations of Geometry (3hrs)
  - **MATH 4080:** Differential Geometry (3hrs)
  - **MATH 4500:** Intro. to Topology (3hrs)

Major Breadth Requirements

Students must complete one course in each of the three areas above not used to satisfy the depth requirement. (9hrs)

Other Major Requirements

- **Three** hours of advanced math electives numbered 3350 or above
- Minimum of 2.0 GPA in math courses numbered 3350 or above

Other Required Courses for Degree

- **One** physical science course with lab intended for science majors (4hrs)
- **One** life or physical science course with lab intended for science majors (4-5hrs)
- **One** additional lab science course that meets the university core requirement (3-5hrs)
- **Six** hours of technical writing courses or **six** hours of a foreign language
- **CSCE 1010:** Discovering Computer Science (3hrs) or **CSCE 1030:** Computer Science I (4hrs)

Minor Requirements

- **One** of the following is required:
  - Minor of at least 18 hours; *cannot* minor in Statistics
  - Completion of a second major in addition to Mathematics
  - Completion of the Actuarial Science, Data Analytics, or Secondary Teaching certificate

College Requirements

- **One** of the following:
  - **COS Breadth** – Students can complete 12 hours from any subject outside of the College of Science. (*May not also apply to University Core)*
  - **Foreign Language** – Students must demonstrate proficiency through the 2050 level in one language: Arabic, Chinese, French, German, Italian, Japanese, Latin, Russian, Spanish, or American Sign Language

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **ENGL 1320:** First-Year Writing II (3hrs) or **TECM 2700**: Technical Writing (3hrs)

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
  - Elective requirements vary by path
- Minimum 2.000 UNT GPA and Overall GPA

Bachelor of Arts Mathematics, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman	Fall Semester - 14 hours			Spring Semester - 16 hours		
	Course	Title	Hours	Course	Title	Hours
	MATH 1650*	Pre Calculus	5	**MATH 1710***	Calculus 1	4
	ENGL 1310*	First-Year Writing 1	3	**MATH 2000***	Discrete Mathematics	3
	PSCI 2305	US Government	3	**ENGL 1320* or TECM 2700***	First-Year Writing 2 or Technical Writing	3
	Elective	Any course not in degree plan	3	**PSCI 2306**	Texas Government	3
				Creative Arts Core	See Guidebook for Options	3

Sophomore	Fall Semester - 16 or 17 hours			Spring Semester - 16 hours		
	Course	Title	Hours	Course	Title	Hours
	MATH 1720*	Calculus 2	3	**MATH 2700**	Linear Algebra & Vector Geo	3
	CSCE 1010, or 1030	Discovering Computer Science, or Comp Sci 1	3 or 4	**MATH 2730**	Multivariable Calculus	3
	Lab Science	See degree audit for options	4	**Lab Science**	See degree audit for options	4
	HIST 2610	US History up to 1865	3	**HIST 2620**	US History from 1865 to now	3
	Minor	See Catalog for Options	3	**Minor**	See Catalog for Options	3

Junior	Fall Semester - 15 hours			Spring Semester - 15 hours		
	Course	Title	Hours	Course	Title	Hours
	MATH 3000	Real Analysis 1	3	**MATH 3510 or 3610**	Abstract Algebra 1 or Real Analysis 2	3
	Lang, Phil, Culture Core	See Guidebook for Options	3	**MATH Breadth**	See Faculty Advisor	3
	Language Opt 1 or 2	Either a Foreign Language or Technical Writing	3	**Social & Behv Sci Core**	See Guidebook for Options	3
	Minor	See Catalog for Options	3	**Language Opt 1 or 2**	Either a Foreign Language or Technical Writing	3
	Elective (Adv)	Must be numbered 3000 or higher	3	**Minor**	See Catalog for Options	3

Senior	Fall Semester - 15 or 16 hours			Spring Semester - 12 hours		
	Course	Title	Hours	Course	Title	Hours
	MATH Depth	See Faculty Advisor	3	**MATH Breadth**	See Faculty Advisor	3
	MATH Elective 3350+	See Faculty Advisor	3	**MATH Depth/Breadth**	See Faculty Advisor	3
	Minor (Adv)	Must be numbered 3000 or higher	3	**Minor (Adv)**	Must be numbered 3000 or higher	3
	Elective (Adv)	Must be numbered 3000 or higher	3	**Elective (Adv)**	Must be numbered 3000 or higher	3
	Lab Science	See degree audit for options	3 or 4			

1. You cannot minor in Statistics.
2. Adding a Teaching, Actuarial, or Data Analytics Certification will fulfill your minor requirement. See an advisor for more information on these options.
3. Must earn a 2.0 average across all MATH courses numbered 3350 or higher.

*Must earn a C or better

Bachelor of Science in Mathematics
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Math Foundation Requirements

- **MATH 1710:** Calculus I (4hrs) *(C or higher)*
- **MATH 1720:** Calculus I (3hrs) *(C or higher)*
- **MATH 2000:** Discrete Math (3hrs) *(C or higher)*
- **MATH 2700:** Linear Algebra and Vector Geometry
- **MATH 2730:** Multivariable Calculus (3hrs)
- **MATH 3000:** Real Analysis I (3hrs)
- **MATH 3510:** Intro. to Abstract Algebra I (3hrs) or **MATH 3610:** Real Analysis II (3hrs) *(can double-dip with depth or breadth course)*

Major Depth Requirements

Students must complete three courses from one of the following areas

- Analysis area
  - **MATH 3350:** Intro. to Numerical Analysis (3hrs)
  - **MATH 3410:** Differential Equations I (3hrs)
  - **MATH 3420**: Differential Equations II (3hrs)
  - **MATH 3610:** Real Analysis II (3hrs) (*required if chosen for depth)*
  - **MATH 3740:** Vector Calculus (3hrs)
  - **MATH 4080:** Differential Geometry (3hrs)
  - **MATH 4100:** Fourier Analysis (3hrs)
  - **MATH 4200:** Dynamical Systems (3hrs)
  - **MATH 4520:** Intro. to Functions of a Complex Variable (3hrs)
- Algebra area
  - **MATH 3400:** Number Theory (3hrs)
  - **MATH 3510:** Intro. to Abstract Algebra I (3hrs) (*required if chosen for depth)*
  - **MATH 4010:** Intro. to Metamathematics (3hrs)
  - **MATH 4430:** Intro. to Graph Theory (3hrs)
  - **MATH 4450:** Intro. to the Theory of Matrices (3hrs)
  - **MATH 4510:** Abstract Algebra II (3hrs)
- Probability & Statistics area
  - **MATH 3680:** Applied Statistics (3hrs)
  - **MATH 4610:** Probability (3hrs)
  - **MATH 4650:** Statistics (3hrs)
- Geometry & Topology area
  - **MATH 3740:** Vector Calculus (3hrs)
  - **MATH 4060:** Foundations of Geometry (3hrs)
  - **MATH 4080:** Differential Geometry (3hrs)
  - **MATH 4500:** Intro. to Topology (3hrs)

Major Breadth Requirements

Students must complete one course in each of the three areas above not used to satisfy the depth requirement. (9hrs)

Other Major Requirements

- **Six** hours of advanced math electives numbered 3350 or above
- Minimum of 2.0 GPA in math courses numbered 3350 or above

Other Required Courses for Degree

- **Three** lab science courses intended for science majors in one of the following areas (12hrs)
  - Biology emphasis
  - Chemistry emphasis
  - Physics emphasis
- **Six** hours of technical writing courses or **six** hours of a foreign language
- **CSCE 1010:** Discovering Computer Science (3hrs) or **CSCE 1030:** Computer Science I (4hrs)

Minor Requirements

- **One** of the following is required:
  - Minor of at least 18 hours; *cannot* minor in Statistics
  - Completion of a second major in addition to Mathematics
  - Completion of the Actuarial Science, Data Analytics, or Secondary Teaching certificate

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **ENGL 1320:** First-Year Writing II (3hrs) or **TECM 2700**: Technical Writing (3hrs)

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
  - Elective requirements vary by path
- Minimum 2.000 UNT GPA and Overall GPA

College of Science Advising Center
Hickory Hall 283; (940) 369-8606; COSAdvising@unt.edu

Bachelor of Science Mathematics, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman

Fall Semester - 14 hours		
Course	Title	Hours
MATH 1650*	Pre Calculus	5
ENGL 1310*	First-Year Writing 1	3
PSCI 2305	US Government	3
Elective	Any course not in degree plan	3

Spring Semester - 16 hours		
Course	Title	Hours
MATH 1710*	Calculus	4
MATH 2000*	Discrete Mathematics	3
ENGL 1320* or TECM 2700*	First-Year Writing 2 or Technical Writing	3
PSCI 2306	Texas Government	3
Creative Arts Core	See Guidebook for Options	3

Sophomore

Fall Semester - 16 or 17 hours		
Course	Title	Hours
MATH 1720*	Calculus 2	3
CSCE 1010, or 1030	Discovering Computer Science, or Comp Sci 1	3 or 4
Lab Science	See degree audit for options	4
HIST 2610	US History up to 1865	3
Minor	See Catalog for Options	3

Spring Semester - 16 hours		
Course	Title	Hours
MATH 2700	Linear Algebra & Vector Geo	3
MATH 2730	Multivariable Calculus	3
Lab Science	See degree audit for options	4
HIST 2620	US History from 1865 to now	3
Minor	See Catalog for Options	3

Junior

Fall Semester - 15 hours		
Course	Title	Hours
MATH 3000	Real Analysis 1	3
Math Depth	See Faculty Advisor	3
Language Opt 1 or 2	Either a Foreign Language or Technical Writing	3
Lang, Phil, Culture Core	See Guidebook for Options	3
Minor	See Catalog for Options	3

Spring Semester - 15 hours		
Course	Title	Hours
MATH 3510 or 3610	Abstract Algebra 1 or Real Analysis 2	3
MATH Breadth	See Faculty Advisor	3
Language Opt 1 or 2	Either a Foreign Language or Technical Writing	3
Social & Behv Sci Core	See Guidebook for Options	3
Minor	See Catalog for Options	3

Senior

Fall Semester - 15 or 16 hours		
Course	Title	Hours
MATH Depth	See Faculty Advisor	3
MATH Elective 3350+	See Faculty Advisor	3
MATH Elective 3350+	See Faculty Advisor	3
Minor (Adv)	Must be numbered 3000 or higher	3
Lab Science	See degree audit for options	3 or 4

Spring Semester - 12 hours		
Course	Title	Hours
MATH Breadth	See Faculty Advisor	3
MATH Depth/Breadth	See Faculty Advisor	3
Minor (Adv)	Must be numbered 3000 or higher	3
Elective (Adv)	Must be numbered 3000 or higher	3

1. You cannot minor in Statistics.
2. Adding a Teaching, Actuarial, or Data Analytics Certification will fulfill your minor requirement. See an advisor for more information on these options.
3. Must earn a 2.0 average across all MATH courses numbered 3350 or higher

*Must earn a C or better

Bachelor of Science in Medical Laboratory Sciences
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Foundation Course Requirements

Students must complete the following courses with a C or higher and at least a 2.5 overall GPA in these courses to take advanced coursework for the degree.

- **BIOL 1710:** Biology for Science Majors I (3hrs)
- **BIOL 1760:** Biology for Science Majors Lab (2hrs)
- **BIOL 2041 & 2042:** Microbiology & Lab (4hrs)
- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs)
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)
- **CHEM 2370 & 3210:** Organic Chemistry I & Lab (4hrs)
- **MATH 1680:** Elem. Probability & Statistics (3hrs)

Major Requirements

Students must complete the following courses with a C or higher and at least a 2.0 overall GPA in these courses to graduate with the degree.

- **BIOL 3381 & 3382:** Medical Bacteriology & Lab (4hrs)
- **BIOL 3510 & 3520:** Cell Biology & Lab (4hrs)
- One of the following:
  - **BIOL 3800 & 4510:** Animal Physiology & Lab (4hrs)
  - **BIOL 2301 & 2311 and 2302 & 2312:** Human Anatomy & Physiology I and II with Labs (8hrs)
- **BIOL 4201 & 4202:** Immunology & Lab (4hrs)
- Two of the following:
  - **BIOL 3451 & 3452:** Genetics & Lab (4hrs)
  - **BIOL 3770:** Biotechnology (3hrs)
  - **BIOL 4091 & 4092:** Parasitology & Lab (4hrs)
  - **BIOL 4300:** Histology (4hrs)
  - **BIOL 4570:** Biochem and Molecular Bio of the Gene (3hrs)
- **BIOC 3621 & 3622:** Principles of Biochemistry & Lab (4hrs)

Other Required Courses for Degree

- **TECM 2700:** Technical Writing (3hrs) *(double-dips with core)*
- **BCIS 2610:** Intro. To Computers in Business (3hrs)
- One of the following:
  - **MGMT 3720:** Organizational Behavior (3hrs)
  - **MGMT 3721:** Essentials of Organizational Behavior for Non-Business Majors (3hrs)

Clinical Training

Must complete clinical training at an affiliated medical laboratory sciences clinical program.

- Baylor Scott and White, Temple, TX
- Comanche County Memorial Hospital, Lawton, OK
- Houston Methodist Hospital, Houston, TX
- Parkview School of Medical Laboratory Science, Pueblo, CO
- Tarleton State University, Fort Worth, TX
- United Regional Health Care, Wichita Falls, TX

Students must apply for acceptance into the affiliated clinical program(s) of their choice. Admission is competitive and completion of the required UNT coursework does not guarantee admission into a clinical program. For more information, contact MedLab@unt.edu.

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **TECM 2700**: Technical Writing (3hrs) *(double-dips with major)*

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- See catalog or online degree audit for acceptable options

Additional University Requirements

- Minimum of 120 total hours
  - A minimum of 88 hours will be completed at UNT; the remaining hours will be completed through clinical training to meet university requirement
- Minimum of 36 advanced hours
  - A minimum of 27 hours will be completed at UNT; the remaining hours will be completed through clinical training to meet university requirement
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

Bachelor of Science Medical Laboratory Sciences, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman

Fall Semester - 15 hours		
Course	Title	Hours
BIOL 1710*	Biology 1	3
BIOL 1760*	Biology Lab	2
CHEM 1410 & 1430*	General Chemistry 1 & Lab	4
ENGL 1310*	First Year Writing 1	3
Creative Arts Core	See Guidebook for Options	3

Spring Semester - 14 hours		
Course	Title	Hours
BIOL 2041 & 2042*	Microbiology & Lab	4
CHEM 1420 & 1440*	General Chemistry 2 & Lab	4
MATH 1680*	Elementary Probability and Statistics	3
TECM 2700*	Technical Writing	3

Sophomore

Fall Semester - 16 hours		
Course	Title	Hours
CHEM 2370 & 3210*	Organic Chemistry 1 & Lab	4
MGMT 3721	Essentials of Organizational Behavior	3
Lang, Phil, Culture Core	See Guidebook for Options	3
Social & Behv Sci Core	See Guidebook for Options	3
HIST 2610	US History up to 1865	3

Spring Semester - 14 hours		
Course	Title	Hours
BIOL 3381 & 3382*	Medical Bacteriology & Lab	4
BIOC 3621 & 3622*	Principles of Biochemistry & Lab	4
BCIS 2610	Intro to Computers in Business	3
HIST 2620	US History from 1865 to now	3

Junior

Fall Semester - 14 or 15 hours		
Course	Title	Hours
Adv BIOL Elective*	See Biology Advisor for options	3 or 4
Physiology Option	See Biology Advisor for options	4
BIOL 3510 & 3520*	Cell Biology & Lab	4
PSCI 2305	US Government	3

Spring Semester - 13 to 15 hours		
Course	Title	Hours
Adv BIOL Elective*	See Biology Advisor for options	3 or 4
Physiology Option or CAO	See Biology Advisor for options	3 or 4
BIOL 4201 & 4202*	Immunology & Lab	4
PSCI 2306	State Government	3

Senior

Clinical Training
12 to 16 months
Clinical Training program: **•Baylor Scott and White, Temple, TX** **•Comanche County Memorial Hospital, Lawton, OK** **•Houston Methodist Hospital, Houston, TX** **•Parkview School of Medical Laboratory Science, Pueblo, CO** **•Tarleton State University, Fort Worth, TX** **•United Regional Health Care, Wichita Falls, TX**

Clinical Training
12 to 16 months
Students must apply for acceptance into the affiliated clinical program(s) of their choice. Admission is competitive and completion of the required UNT coursework does not guarantee admission into a clinical program. For more information, contact MedLab@unt.edu.

1. Clinical training completion is worth a minimum of 30 credit hours for your degree.
2. Minimum hours completed before Clinical Training will vary depending on chosen program.
3. Advanced Biology Elective options may include required labs. See checklist for details.

*Must earn a C or better

Bachelor of Arts with a major in Physics
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam **OR** completing College Algebra or higher with a grade of C or higher.

Major Requirements

- One of the following:
  - **PHYS 1710 & 1730:** Mechanics & Lab (4hrs) *(C or higher)*
  - **PHYS 1510 & 1530:** General Physics I with Calculus & Lab (4hrs) *(C or higher)*
  - **PHYS 1410 & 1430 and 1420 & 1440:** General Physics I and II & Labs (8hrs)
- One of the following:
  - **PHYS 2220 & 2240:** Electricity & Magnetism & Lab (4hrs)
  - **PHYS 1520 & 1540:** General Physics II with Calculus & Lab (4hrs)
- **PHYS 3010 & 3030:** Modern Physics & Lab (4hrs)
- **Fifteen** additional hours of advanced physics courses

Other Required Courses for Degree

- **MATH 1710:** Calculus I (4hrs) *(C or higher)*
- **MATH 1720:** Calculus II (3hrs) *(C or higher)*
- **MATH 2730:** Multivariable Calculus (3hrs)
- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs) *(C or higher)*
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)

College Requirements

- One of the following:
  - **COS Breadth** – Students can complete 12 hours from any subject outside of the College of Science. (*May not also apply to University Core)*
  - **Foreign Language** – Students must demonstrate proficiency through the 2050 level in one language: Arabic, Chinese, French, German, Italian, Japanese, Latin, Russian, Spanish, or American Sign Language

University Core Requirements

Communication – English Composition and Rhetoric (6hrs total)
C or higher required for English core

- **ENGL 1310**: First-Year Writing I (3hrs)
- **ENGL 1320:** First-Year Writing II (3hrs) or **TECM 2700**: Technical Writing (3hrs)

Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
  - A minimum of 17 hours of advanced electives are needed to meet university requirement
- Minimum 2.5 GPA on all advanced science, math, and enginerring courses
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

Bachelor of Arts Physics, 2022 - 2023

This plan is one example of how to complete the degree in 4 years. It assumes starting with Math Placement Level 2. It will work for some, not all. Remember to take this information, meet with advisors, plan around your circumstances, and make your path. Degree requirements and pre-requisites are subject to change, please consult advisors for updates. Online catalog - http://catalog.unt.edu/

Freshman

Fall Semester - 15 hours		
Course	Title	Hours
MATH 1650*	Pre Calculus	5
CHEM 1410 & 1430*	General Chemistry 1 & Lab	4
ENGL 1310*	First-Year Writing 1	3
HIST 2610	US History up to 1865	3

Spring Semester - 14 hours		
Course	Title	Hours
MATH 1710*	Calculus 1	4
CHEM 1420 & 1440	General Chemistry 2 & Lab	4
ENGL 1320 or TECM 2700*	First-Year Writing 2 or Technical Writing	3
HIST 2620	US History from 1865 to now	3

Sophomore

Fall Semester - 16 hours		
Course	Title	Hours
Physics 1 Option	See Advisor or Checklist for options	4
MATH 1720*	Calculus 2	3
Creative Arts Core	See Guidebook for Options	3
Social & Behv Sci Core	See Guidebook for Options	3
Elective (Adv)	Must be numbered 3000 or higher	3

Spring Semester - 16 hours		
Course	Title	Hours
Physics 2 Option	See Advisor or Checklist for options	4
MATH 2700	Linear Algebra and Vector Geometry	3
MATH 2730	Multivariable Calculus	3
Elective	Any course not in degree plan	3
Elective (Adv)	Must be numbered 3000 or higher	3

Junior

Fall Semester - 16 hours		
Course	Title	Hours
PHYS 3010 & 3030	Modern Physics & Lab	4
COS Breadth or LANG	See COS Advisor for options	3
PSCI 2305	US Government	3
Elective	Any course not in degree plan	3
Elective (Adv)	Must be numbered 3000 or higher	3

Spring Semester - 15 hours		
Course	Title	Hours
Adv PHYS Elective	See Physics Advisor for options	3
COS Breadth or LANG	See COS Advisor for options	3
PSCI 2306	State Government	3
Elective	Any course not in degree plan	3
Elective (Adv)	Must be numbered 3000 or higher	3

Senior

Fall Semester - 15 hours		
Course	Title	Hours
Adv PHYS Elective	See Physics Advisor for options	3
Adv PHYS Elective	See Physics Advisor for options	3
COS Breadth or LANG	See COS Advisor for options	3
Lang, Phil, Culture Core	See Guidebook for Options	3
Elective (Adv)	Must be numbered 3000 or higher	3

Spring Semester - 15 hours		
Course	Title	Hours
Adv PHYS Elective	See Physics Advisor for options	3
Adv PHYS Elective	See Physics Advisor for options	3
COS Breadth or LANG	See COS Advisor for options	3
Elective	Any course not in degree plan	3
Elective (Adv)	Must be numbered 3000 or higher	3

1. PHYS 1410 & 1430 and 1420 & 1440 can be taken in place of "Physics 1 Option," but requires an additional semester.
2. "Physics 1 Option" may be taken earlier depending on your chosen courses and Math level.
3. A minor is optional.

*Must earn a C or better

Bachelor of Science in Physics
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement

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  - **PHYS 1520 & 1540:** General Physics II with Calculus & Lab (4hrs)
- **PHYS 3010 & 3030:** Modern Physics & Lab (4hrs)
- **PHYS 3210:** Mechanics (3hrs)
- **PHYS 3310:** Mathematical Methods in the Physical Sciences (3hrs)
- **PHYS 3420:** Electronics (4hrs)
- **PHYS 3510:** Physics, Computation, and Software Applications (3hrs)
- **PHYS 4110:** Statistical and Thermal Physics (3hrs)
- **PHYS 4210:** Electricity and Magnetism (3hrs)
- **PHYS 4310:** Quantum Mechanics (3hrs)
- **PHYS 4950:** Physics Senior Thesis (3hrs)
- **PHYS 4955:** Physics Senior Thesis Capstone (3hrs)
- **Nine** additional hours of advanced physics courses

Concentrations available for BS Physics

See Physics Faculty Advisor for more information on concentrations

- Concentration in Engineering Physics
- Concentration in Astrophysics
- Concentration in Computation

Other Required Courses for Degree

- **MATH 1710:** Calculus I (4hrs) *(C or higher)*
- **MATH 1720:** Calculus II (3hrs) *(C or higher)*
- **MATH 2700:** Linear Algebra and Vector Geometry (3hrs)
- **MATH 2730:** Multivariable Calculus (3hrs)
- **MATH 3410:** Differential Equations I (3hrs)
- **CHEM 1410 & 1430:** General Chemistry I & Lab (4hrs) *(C or higher)*
- **CHEM 1420 & 1440:** General Chemistry II & Lab (4hrs)

University Core Requirements

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C or higher required for English core

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Mathematics (at least 3hrs total)

- Double-dips with major requirement

Laboratory Sciences (at least 6hrs total)

- Double-dips with major requirement

Creative Arts (3hrs total)

- See catalog or online degree audit for acceptable options

Language, Philosophy, & Culture (3hrs total)

- See catalog or online degree audit for acceptable options

American History (6hrs total)

- **HIST 2610:** US History to 1865 (3hrs)
- **HIST 2620:** US History since 1865 (3hrs)

Government/Political Science (6hrs total)

- **PSCI 2305:** (3hrs)
- **PSCI 2306:** (3hrs)

Social & Behavioral Sciences (3hrs total)

- See catalog or online degree audit for acceptable options

Component Area Option (6hrs total)

- Double-dips with major requirement

Additional University Requirements

- Minimum of 120 total hours
- Minimum of 36 advanced hours
- Minimum 2.5 GPA on all advanced science, math, and enginerring courses
- Minimum 2.000 UNT GPA
- Minimum 2.000 Overall GPA

Bachelor of Science Physics, 2022 - 2023

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ENGL 1310*	First-Year Writing 1	3
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Course	Title	Hours
MATH 1710*	Calculus 1	4
CHEM 1420 & 1440	General Chemistry 2 & Lab	4
ENGL 1320 or TECM 2700*	First-Year Writing 2 or Technical Writing	3
HIST 2620	US History from 1865 to now	3

Sophomore

Fall Semester - 16 hours		
Course	Title	Hours
Physics 1 Option	See Advisor or Checklist for options	4
MATH 1720*	Calculus 2	3
Creative Arts Core	See Guidebook for Options	3
Social & Behv Sci Core	See Guidebook for Options	3
PSCI 2305	US Government	3

Spring Semester - 16 hours		
Course	Title	Hours
Physics 2 Option	See Advisor or Checklist for options	4
MATH 2700	Linear Algebra and Vector Geometry	3
MATH 2730	Multivariable Calculus	3
Lang, Phil, Culture Core	See Guidebook for Options	3
PSCI 2306	State Government	3

Junior

Fall Semester - 16 hours		
Course	Title	Hours
PHYS 3010 & 3030	Modern Physics & Lab	4
PHYS 3210	Mechanics	3
PHYS 3310	Math Methods in Physical Sciences	3
MATH 3410	Differential Equations 1	3
Elective	Any course not in degree plan	3

Spring Semester - 15 hours		
Course	Title	Hours
PHYS 3420	Electronics	3
PHYS 3510	Physics, Computation and Software Applications	3
PHYS 4110	Statistical and Thermal Physics	3
Elective	Any course not in degree plan	3
Elective	Any course not in degree plan	3

Senior

Fall Semester - 15 hours		
Course	Title	Hours
PHYS 4210	Electricity & Magnetism	3
PHYS 4950	Physics Senior Thesis	3
Adv PHYS Elective	See Physics Advisor for options	3
Adv PHYS Elective	See Physics Advisor for options	3
Elective	Any course not in degree plan	3

Spring Semester - 15 hours		
Course	Title	Hours
PHYS 4310	Quantum Mechanics	3
PHYS 4951	Physics Senior Thesis Capstone	3
Adv PHYS Elective	See Physics Advisor for options	3
Elective	Any course not in degree plan	3
Elective	Any course not in degree plan	3

1. PHYS 1410 & 1430 and 1420 & 1440 can be taken in place of "Physics 1 Option," but requires an additional semester.
2. "Physics 1 Option" may be taken earlier depending on your chosen courses and Math level.
3. A minor is optional.

*Must earn a C or better

NOTES…

NOTES…

Are You Experiencing Registration Issues?

If your pre-requisite course…

- Has not yet been posted to UNT
- Is currently being taken
- Is from AP or IB credit
- Is from a private institution
- Is from an out-of-state institution

You will need to contact the department offering the course. Be sure to include your name, student ID number, desired section number for the course, and proof that you have met the pre-requisite(s) (unofficial transcript or screenshot of current registration).

BIOLOGY DEPARTMENT (BIOL or BIOC courses):

- Visit https://biology.unt.edu/
- Click the "Advising" Tab
- Scroll to the bottom of the page to download "Biology Advising Course Enrollment Request Form – Updated.pdf"
- Fill out the form and email it to biology@unt.edu

CHEMISTRY DEPARTMENT (CHEM courses):

- E-mail heather.vidaurri@unt.edu

MATH DEPARTMENT (MATH courses):

- E-mail mathadvising@unt.edu

PHYSICS DEPARTMENT (PHYS courses):

- Visit https://physics.unt.edu/
- Click the "Resources" Tab
- Click on "Physics Course Override Request"
- Complete the form and click on the "Submit" button at the bottom

*If you have issues that require an Academic Advisor, please email cosadvising@unt.edu.

To assist with your communication with the departments, here is a template you may use when constructing your email.

Greetings!
My name is (*Name*), (*Student ID*). I have received a notification while trying to enroll in (*Course Code/Section Number*) with (*Professor Name*) stating that I am not eligible to enroll/do not have the pre-requisites. I have previously taken (*List of Pre-Reqs completed*) with a 'C' or higher, I have attached proof below. Would I be eligible to be manually enrolled?

Best,
(*Name*) (*Student ID*)
(*Email*)