

What does a Dentist do? How's the job outlook?

Dentists diagnose and treat problems with patients' teeth, gums, and related parts of the mouth. They provide advice and instruction on taking care of the teeth and gums and on diet choices that affect oral health.

Overall employment of dentists is projected to grow 8 percent from 2020 to 2030. Much of the projected employment growth in this occupation is due to recovery from the COVID-19 recession that began in 2020. Demand for dentists is expected to increase as larger numbers of older people require dental services. Because each generation is more likely to keep their teeth than the previous generation, more dental care will be needed in the years to come. Dentists and dental specialists are among the highest paid professions; they're also among some of the more stable professions. The annual mean wage for dentists in the Denver Metro area is approximately \$206,340.*



*U.S. Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Dentists, General, on the Internet at <https://www.bls.gov/ooh/healthcare/dentists.htm>

How do I become a Dentist?

Most dental school applicants have a bachelor's degree; however, it is still possible to apply without one. It should also be noted that you don't need to be a Biology major in order to apply for dental school. If you have at least 90 credits and have completed the prerequisite courses for the specific program to which you are applying, you can pursue dental school. Applicants will also need to take the Dental Admission Test (DAT). An applicant's DAT score, GPA, dental shadowing hours, interviews and recommendations will all be considered when applying for dental school.

Dentists must also be licensed in the state in which they work. Licensure requirements vary by state, although candidates must have a Doctor of Dental Surgery (DDS) or Doctor of Medicine in Dentistry/Doctor of Dental Medicine (DMD) degree from an accredited dental program and pass written and clinical exams. Dentists who practice in a specialty area must complete postdoctoral training.

Course prerequisites required for those interested in pursuing dental school include:

General Chemistry with lab – CHE 1800/1801 and CHE 1810/1811; 2 semesters

Organic Chemistry with lab – CHE 3100/3120 and CHE 3110/3130; 2 semesters

Biochemistry I – CHE 4310, no lab required; 1 semester

General Biology with lab – BIO 1080/1090 and BIO 1081/1091; 2 semesters

General Microbiology – BIO 2400; 1 semester

College Physics with lab – PHY 2010/2030 and PHY 2020/2040; 2 semesters

Math – MTH 1110 and MTH 1120 (prerequisites for CHE & PHY); 2 semesters

English Composition – ENG 1010; 1 semester

Biology Faculty Advisor who can guide you on this path is:

Dr. Clare Hays - haysc@msudenver.edu

MSU Denver - Department of Biology

REQUIREMENTS FOR B.S. IN BIOLOGY

(2024-2025 or future catalogs ONLY)

Major Requirements:

- Total of 46 total credit hours approved by the Biology Faculty must be completed in the BIO prefix
- C- or better must be earned for any BIO course to apply to your major requirements.
- 27 upper division credit hours in BIO courses must be completed
- Non-biology courses in math, chemistry and other STEM disciplines are required

☐ **Start Smart!** Have you met with a Biology Academic Advisor at least once a semester to ensure timely progression toward your degree and to avoid taking unnecessary courses.

Required Introductory Courses:

- ☐ BIO 1080 & 1090: General Biology I w/ Lab
- ☐ BIO 1081 & 1091: General Biology II w/ Lab

Choose one of the following chemistry sequences:

- ☐ CHE 1800 & 1801: General Chemistry I w/ Lab
- ☐ CHE 1810 & 1811: General Chemistry II w/ Lab

*** **OR** ***

Two semesters of math:

- ☐ MTH 1109/ 1110: College Algebra, or higher
- ☐ Another semester of Math > MTH 1110
- ☐ CHE 1110 & 1150: Principles of Chemistry w/ Lab
- ☐ CHE 2100 & 2150: Into to Organic & Biol Chem w/ Lab

Pro Tip! Biology students do not need additional General Studies coursework for Natural & Physical Sciences or Quantitative Literacy. Your required Biology, Chemistry, and Math courses will fulfill these.

Additional Required Biology courses:

Choose one of the following:

- ☐ BIO 2100: General Botany (5cr.)
- ☐ BIO 2310: Human Anatomy & Physiology I (4cr.)
- ☐ BIO 2400: General Microbiology (5cr.)
- ☐ BIO 3200: Invertebrate Zoology (4cr.)
- ☐ BIO 3260: Vertebrate Zoology (4cr.)

Take General Ecology and a Genetics course:

- ☐ BIO 3520: General Ecology (3cr.)

Choose one of the following:

- ☐ BIO 3600: General Genetics (4cr.)
- ☐ BIO 3610: Genetics: Principles & Analysis (4cr.)

☐ **Professionalize!** Have you met with a Faculty Advisor to personalize your path and ensure you select courses and extracurricular experiences that will best serve you?

MSU Denver - Department of Biology

Biology Elective Course Requirement:

- At least 46 total credit hours must be completed in BIO courses.
- At least 27 total credit hours must be upper division BIO courses (3000/4000 level).
 - Includes any upper division Zoology, General Ecology, Genetics, and BIO Senior Experience

Lower Division BIO Courses (1000/2000 level)	Credit Hours	Upper Division BIO Courses (3000/4000 level)	Credit Hours
<input type="checkbox"/> BIO 1080/1090 – General Biology I w/Lab	4	<input type="checkbox"/> BIO 3520: General Ecology	3
<input type="checkbox"/> BIO 1081/1091 – General Biology II w/Lab	4	<input type="checkbox"/> BIO 36XX: Genetics	4
<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/>	
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<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/> BIO Senior Experience (recommended)	
Total lower division BIO credit hours:		Total upper division BIO credit hours: <i>AT LEAST 27 UPPER DIVISION BIO CREDIT HOURS REQUIRED</i>	
Total BIO prefix credit hours: <i>LOWER DIVISION + UPPER DIVISION (AT LEAST 46 TOTAL BIO CREDIT HOURS REQUIRED)</i>			

Required Non-Biology Science Electives:

- 9 credits total, at least 6 of which must be upper division (3000 /4000 level).
- Any Math course selected would be in addition to the two semesters required above.

Non-Biology Science Elective Courses	Credit Hours
<input type="checkbox"/>	
<input type="checkbox"/> (upper division)	
<input type="checkbox"/> (upper division)	
Total Non-Biology Science Elective credit hours: <i>At least 6 credit hours must be upper division (3000/4000 level)</i>	

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Senior Experience Requirement:

- A capstone course is required to graduate.
- A Biology Senior Experience is recommended.
- Courses outside Biology marked (SE) fulfill the Senior Experience requirement but would **not** count toward your BIO hours.

BIO 4050: Advanced Cell & Molecular Biology

BIO 4230: Issues in Conservation Biology

BIO 4271: Parasitology

BIO 4300: Neurobiology

BIO 4510: Microbial Ecology

BIO 4540: Animal Ecology

BIO 4820: Developmental Biology

BIO 4850: Evolution

Are you ready for graduation?

→ Please see your Degree Progress Report for General Studies and MSU Denver graduation requirements. ←

- ☐ Have you completed a total of 46 credit hours of BIO courses approved by the Biology Department?
- ☐ Have you completed at least 27 upper division BIO coursework (3000/ 4000 level)?
- ☐ Have you completed at least 39 total upper division credit hours?
- ☐ Have you completed a Senior Experience course?
- ☐ Have you had a final advising appointment?
- ☐ Have you submitted an application for graduation?