

## Career Preparation

The practice of dentistry is devoted to maintaining the health of the teeth, gums and other tissues of the oral cavity. Dentistry is a licensed health care profession usually requiring a total of eight to eleven years of formal undergraduate and professional training. During undergraduate education, a Pre-Dental student reinforces his or her commitment to becoming a dentist by learning about the various aspects of the profession and by preparing for admission to dental school. Admission to dental school remains highly competitive so that a student who may be denied admission should plan for alternate career options while an undergraduate student.

Upon graduation from dental school, dentists are licensed to practice general dentistry, or they may seek to enter residencies in one of the nine dental specialties requiring three to five additional years of training. Because of changes in the profession, it is expected that all dentists soon will be required to complete at least one year of residency training after graduating from dental school.

Men and women who are attracted to dentistry tend to be highly motivated individuals with scientific curiosity, intelligence, ambition and social consciousness. They enjoy the independence and flexibility that dentistry has to offer. They are willing to invest in a profession that repays with respect and monetary rewards. They enjoy the close interactions with patients and the satisfaction from their daily professional accomplishments of being able to improve their health, comfort and appearance.

## Academic Program

Although a student may choose to major in any area, most Pre-Dental students major in one of the sciences. There are a number of elective courses that help prepare the student for the profession regardless of the student's choice of a particular major. Students planning to apply to dental school need to work closely with a pre-dental advisor in addition to their academic major advisor. The roles

of the pre-dental advisor is to assist in recommending the sequence of coursework, in selecting appropriate electives, in suggesting pre-professional internships, in completing the dental school application process, in sponsoring and advising the Pre-Dental Club, in communicating professional information and recommendations and in serving as the primary professional and academic reference in a competitive dental school admission process.

The specific list of undergraduate course requirements recommended by most dental schools is minimal; however, students who are admitted usually have completed many of the suggested electives in addition to these minimal requirements. These electives not only serve to prepare applicants for the Dental Admissions Test (DAT), which is taken during the second semester of their junior year, but also help prepare students for the intense coursework taken during the first two years of dental school.

## Required Courses and Preparation

Many dental schools have similar course requirements that should be completed before the beginning of the senior year of college. Students should therefore check the specific course requirements for the dental schools to which they intend to apply. For example, the chemistry admissions criteria to the UMKC Doctor of Dental Surgery program include (<https://dentistry.umkc.edu/academics/doctor-of-dental-surgery/admissions-criteria/>): general chemistry I & II, organic chemistry I & II, physics I & II, and English composition I & II, and one semester of biochemistry. The other prerequisites include general biology, anatomy, physiology, and cell biology, and their recommended course include histology, immunology, genetics, ethics, statistics, public health, social sciences, psychology, nutrition, business, communications, art, ceramics, 3-D design, and Spanish. Other qualities of a good applicant that are non-course related are listed on their website as well.

## Recommended Elective Courses

See the current Missouri State Catalog for specific courses in the Department of Biology, Department of Biomedical Sciences, Department of Chemistry and Biochemistry or the College of Business Administration. Chemistry and Business majors are strongly recommended to have a minor in one of the biological science departments (BMS or BIO).

**General or human genetics\***  
**Human or comparative anatomy\***  
**Human or general physiology\***  
**Cell biology/molecular biology\***  
**Biochemistry**  
**Pharmacology**  
**Quantitative analysis**  
**Accounting**  
**Embryology**  
**Microbiology**  
**Histology**  
**Neurobiology**  
**General business\***  
**Metals, Sculpting, Jewelry\***

\* A required course for admission into some schools.



The following is a generic two-year Pre-Dental course schedule applicable to a student planning to major in the sciences. Pre-Dental students in non-science majors should begin their first semester with the schedule indicated below but should consult with the academic and Pre-Dental advisors for meeting major and core Pre-Dental requirements.

### Sample Schedule

#### Freshman Year 1st Semester

GEP 101  
BMS 110 or BIO 121  
CHM 160  
CHM 161  
PSY 121  
ENG 110

#### Freshman Year 2nd Semester

CHM 170  
CHM 171  
BIO 122 or BMS 230  
Humanities/Social Science Electives

#### Sophomore Year 1st Semester

MTH 135 or MTH 138  
CHM 342 Organic Chem I  
American Democracy & Citizenship  
BIO 380 or BMS 308 or BIO 235

#### Sophomore Year 2nd Semester

CHM 343 Organic Chem II  
BMS 321 or BIO 320  
General Ed., Pre-dental and Major Electives

Specific schedules for the remaining four semesters should be worked out in consultation with the student's major advisor and Pre-Dental advisor.



Pre-Dentistry Advisor Contact Information:  
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#### Other Helpful Links Include:

Pre-Dentistry:

<https://www.missouristate.edu/prehealth/Pre-Dentistry.htm>

Pre-Dental Society:

<https://missouristate.campuslabs.com/engage/organization/predentalsociety>

Department links:

[https://chemistry.missouristate.edu/assets/chemistry/Pre-Dentistry\\_Flyer\\_2016.pdf](https://chemistry.missouristate.edu/assets/chemistry/Pre-Dentistry_Flyer_2016.pdf)

Department advising:

<https://chemistry.missouristate.edu/Advisement.htm>

UMKC program:

<https://dentistry.umkc.edu/>

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and Biochemistry

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**Missouri State**  
UNIVERSITY



## Pre-Dentistry Fact Sheet

Department of Chemistry  
and Biochemistry

College of Natural and Applied Sciences

[www.chemistry.missouristate.edu](http://www.chemistry.missouristate.edu)

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