Premedical Professions Preparation

Premedical Professions Advising

Predentistry, premedicine, preoptometry, and preveterinary medicine are career interests, usually developed together with completing a bachelor's degree and major. Students prepare by taking courses to meet dental school entry requirements, studying to learn concepts and perform well academically, shadowing or working in dental practices, and volunteering to serve people in need. They take the Dental Admission Test (http://www.ada.org/dat.aspx) (DAT) and apply for admission to dental schools, usually in the summer between the junior and senior year.

Dental schooling is 4 years of graduate-level, professional education and training. There is no dental school in Kansas, however, there is an agreement for some seats for Kansas residents at the University of Missouri—Kansas City (UMKC) School of Dentistry.

Most dental schools require:

English Composition I. Satisfied by:
- ENGL 101 Composition
- or ENGL 101!Freshman Honors English

English Composition II. Satisfied by:
- ENGL 102 Critical Reading and Writing
- or ENGL 20!Freshman-Sophomore Honors Proseminar: _____

Biology I with Lab. Satisfied by:
- BIOL 150 Principles of Molecular and Cellular Biology
- or BIOL 151 Principles of Molecular and Cellular Biology, Honors

Biology II with Lab. Satisfied by one of the following:
- BIOL 152 Principles of Organismal Biology
- or BIOL 153 Principles of Organismal Biology, Honors

General Chemistry I with Lab. Satisfied by one of the following:
- CHEM 130 General Chemistry I
- CHEM 170 Chemistry for the Chemical Sciences I
- CHEM 190 Foundations of Chemistry I, Honors

General Chemistry II with Lab. Satisfied by one of the following:
- CHEM 135 General Chemistry II
- CHEM 175 Chemistry for the Chemical Sciences II
- CHEM 195 Foundations of Chemistry II, Honors

Organic Chemistry I with Lab. Satisfied by one of the following:
- CHEM 330 Organic Chemistry I
- & CHEM 331 and Organic Chemistry I Laboratory
- CHEM 380 Organic Chemistry I, Honors
- & CHEM 331 and Organic Chemistry I Laboratory

Organic Chemistry II with Lab. Satisfied by one of the following:
- CHEM 335 Organic Chemistry II
- & CHEM 336 and Organic Chemistry II Laboratory
- CHEM 385 Organic Chemistry II, Honors
- & CHEM 336 and Organic Chemistry II Laboratory

Physics I with Lab. Satisfied by one of the following:
- PHSX 114 College Physics I
- PHSX 211 General Physics I
- & PHSX 216 and General Physics I Laboratory
- PHSX 213 General Physics I Honors

Physics II with Lab. Satisfied by one of the following:
- PHSX 115 College Physics II
- PHSX 212 General Physics II
- & PHSX 236 and General Physics II Laboratory
- PHSX 214 General Physics II Honors

The UMKC School of Dentistry also requires:

Anatomy with lab. Satisfied by:
- BIOL 240 Fundamentals of Human Anatomy
- & BIOL 241 and Human Anatomy Observation Laboratory

Physiology with lab. Satisfied by one of the following:
- BIOL 246 Principles of Human Physiology
- & BIOL 247 and Principles of Human Physiology Laboratory
- BIOL 546 Mammalian Physiology
- & BIOL 647 and Mammalian Physiology Laboratory

Cell biology. Satisfied by:
- BIOL 416 Cell Structure and Function

Biochemistry. Satisfied by one of the following:
- BIOL 600 Introductory Biochemistry, Lectures
- or BIOL 636 Biochemistry I

Some dental schools require additional mathematics, psychology, and/or biology courses.

For more information, visit the website (https://medadvising.ku.edu).

Premedicine

Premedicine is a career interest, usually developed together with completing a bachelor's degree and major. Students prepare by taking courses to meet medical school entry requirements, studying to learn concepts and perform well academically, shadowing or working in health care settings, and serving people in need. They take the Medical College Admission Test (https://www.aamc.org/students/applying/mcat) (MCAT) and apply for admission to medical schools, usually in the summer between the junior and senior year.

Medical schooling is four years of graduate-level, professional education and training, followed by a three- to six-year residency program. The only medical school in Kansas is the KU School of Medicine.

Most medical schools require:

English Composition I. Satisfied by:
- ENGL 101 Composition
- or ENGL 101!Freshman Honors English

English Composition II. Satisfied by:
- ENGL 102 Critical Reading and Writing
- or ENGL 20!Freshman-Sophomore Honors Proseminar: _____

For more information, visit the website (https://medadvising.ku.edu).
**Premedical Professions Preparation**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 150</td>
<td>Principles of Molecular and Cellular Biology</td>
</tr>
<tr>
<td>or BIOL 151</td>
<td>Principles of Molecular and Cellular Biology, Honors</td>
</tr>
<tr>
<td>BIOL 152</td>
<td>Principles of Organismal Biology</td>
</tr>
<tr>
<td>or BIOL 153</td>
<td>Principles of Organismal Biology, Honors</td>
</tr>
<tr>
<td>CHEM 130</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>CHEM 170</td>
<td>Chemistry for the Chemical Sciences I</td>
</tr>
<tr>
<td>CHEM 190</td>
<td>Foundations of Chemistry I, Honors</td>
</tr>
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<td>BIOL 152</td>
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<td>or BIOL 153</td>
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</tr>
<tr>
<td>CHEM 190</td>
<td>Foundations of Chemistry I, Honors</td>
</tr>
</tbody>
</table>

**Biology I with Lab. Satisfied by:**

- BIOL 150: Principles of Molecular and Cellular Biology or BIOL 151: Principles of Molecular and Cellular Biology, Honors

**Biology II with Lab. Satisfied by:**

- BIOL 152: Principles of Organismal Biology or BIOL 153: Principles of Organismal Biology, Honors

**Statistics. Satisfied by one of the following:**

- PSYC 210: Statistics in Psychological Research
- PSYC 211: Statistics in Psychological Research, Honors

**Calculus. Satisfied by:**

- MATH 115: Calculus I
- MATH 125: Calculus I
- MATH 141: Calculus I: Honors

**General Chemistry I with Lab. Satisfied by one of the following:**

- CHEM 130: General Chemistry I
- CHEM 170: Chemistry for the Chemical Sciences I
- CHEM 190: Foundations of Chemistry I, Honors

**Organic Chemistry I with Lab. Satisfied by:**

- CHEM 330: Organic Chemistry I
- CHEM 331: Organic Chemistry I Laboratory
- CHEM 380: Organic Chemistry I, Honors
- CHEM 381: Organic Chemistry I Laboratory

**Physics I with Lab. Satisfied by one of the following:**

- PHSX 114: College Physics I
- PHSX 211: General Physics I
- PHSX 216: General Physics I Laboratory
- PHSX 213: General Physics I Honors

**Physics II with Lab. Satisfied by one of the following:**

- PHSX 115: College Physics II
- PHSX 212: General Physics II
- PHSX 236: General Physics II Laboratory
- PHSX 214: General Physics II Honors

**English Composition I. Satisfied by:**

- ENGL 101: Composition
- or ENGL 102: Composition, Honors

**English Composition II. Satisfied by:**

- ENGL 101: Composition
- or ENGL 102: Composition, Honors

**Critical Reading and Writing**

- ENGL 102: Critical Reading and Writing
- or ENGL 102: Critical Reading and Writing, Honors

**Biology I with Lab. Satisfied by:**

- BIOL 150: Principles of Molecular and Cellular Biology or BIOL 151: Principles of Molecular and Cellular Biology, Honors

**Biology II with Lab. Satisfied by:**

- BIOL 152: Principles of Organismal Biology or BIOL 153: Principles of Organismal Biology, Honors

**General Chemistry I with Lab. Satisfied by one of the following:**

- CHEM 130: General Chemistry I
- CHEM 170: Chemistry for the Chemical Sciences I
- CHEM 190: Foundations of Chemistry I, Honors

**General Chemistry II with Lab. Satisfied by one of the following:**

- CHEM 135: Foundations of Chemistry II, Honors
- CHEM 137: Foundations of Chemistry II, Honors
- CHEM 335: Foundations of Chemistry II, Honors

**Chemistry for the Chemical Sciences I**

- CHEM 135: Foundations of Chemistry II, Honors
- CHEM 137: Foundations of Chemistry II, Honors
- CHEM 335: Foundations of Chemistry II, Honors

**General Chemistry II**

- CHEM 135: Foundations of Chemistry II, Honors
- CHEM 137: Foundations of Chemistry II, Honors
- CHEM 335: Foundations of Chemistry II, Honors

**Foundations of Chemistry I, Honors**

- CHEM 135: Foundations of Chemistry II, Honors
- CHEM 137: Foundations of Chemistry II, Honors
- CHEM 335: Foundations of Chemistry II, Honors

**Principles of Organismal Biology, Honors**

- BIOL 152: Principles of Organismal Biology
- BIOL 153: Principles of Organismal Biology, Honors

**Principles of Molecular and Cellular Biology, Honors**

- BIOL 150: Principles of Molecular and Cellular Biology
- BIOL 151: Principles of Molecular and Cellular Biology, Honors

**College Physics II**

- BIOL 150: Principles of Molecular and Cellular Biology
- BIOL 151: Principles of Molecular and Cellular Biology, Honors

**Introduction to Biostatistics**

- MATH 365: Elementary Statistics
- BIOL 570: Introduction to Biostatistics

**The MCAT also requires knowledge from:**

**Biochemistry. Satisfied by one of the following:**

- BIOL 600: Introductory Biochemistry, Lectures
- BIOL 636: Biochemistry I & BIOL 638: Biochemistry II

**Psychology. Satisfied by one of the following:**

- PSYC 104: General Psychology
- or PSYC 105: General Psychology, Honors

**Sociology. Satisfied by one of the following:**

- SOC 104: Elements of Sociology
- SOC 105: Elements of Sociology, Honors
- SOC 160: Social Problems and American Values
- SOC 161: Social Problems and American Values, Honors

For more information, visit the website [https://medadvising.ku.edu](https://medadvising.ku.edu).

**Preoptometry**

Preoptometry is a career interest, usually developed together with completing a bachelor’s degree and major. Students prepare by taking courses to meet optometry school admission requirements, studying to learn concepts and perform well academically, shadowing or working in optometry practices, and volunteering to serve people in need. They take the Optometry Admission Test (http://www.ada.org/en/oat) (OAT) and apply for admission to optometry schools, usually in the summer between the junior and senior year.

Optometry schooling is four years of graduate-level, professional education and training. There is no optometry school in Kansas, however, there are agreements for some seats for Kansas residents at the University of Missouri - St. Louis School of Optometry, Northeastern State University of Oklahoma College of Optometry, and the Southern College of Optometry in Tennessee.

Most optometry schools require:

- English Composition I. Satisfied by:
  - ENGL 101: Composition
  - or ENGL 102: Composition, Honors

- Critical Reading and Writing
  - ENGL 102: Critical Reading and Writing
  - or ENGL 202: Critical Reading and Writing, Honors

- Biology I with Lab. Satisfied by:
  - BIOL 150: Principles of Molecular and Cellular Biology
  - or BIOL 151: Principles of Molecular and Cellular Biology, Honors

- Biology II with Lab. Satisfied by:
  - BIOL 152: Principles of Organismal Biology
  - or BIOL 153: Principles of Organismal Biology, Honors

- General Chemistry I with Lab. Satisfied by one of the following:
  - CHEM 130: General Chemistry I
  - CHEM 170: Chemistry for the Chemical Sciences I
  - CHEM 190: Foundations of Chemistry I, Honors

- General Chemistry II with Lab. Satisfied by one of the following:
  - CHEM 135: Foundations of Chemistry II, Honors
  - CHEM 137: Foundations of Chemistry II, Honors
  - CHEM 335: Foundations of Chemistry II, Honors

- Principles of Organismal Biology
  - BIOL 152: Principles of Organismal Biology
  - BIOL 153: Principles of Organismal Biology, Honors

- Principles of Molecular and Cellular Biology, Honors
  - BIOL 150: Principles of Molecular and Cellular Biology
  - BIOL 151: Principles of Molecular and Cellular Biology, Honors

- College Physics II
  - BIOL 150: Principles of Molecular and Cellular Biology
  - BIOL 151: Principles of Molecular and Cellular Biology, Honors

- Introduction to Biostatistics
  - MATH 365: Elementary Statistics
  - BIOL 570: Introduction to Biostatistics

- The MCAT also requires knowledge from:
  - Biochemistry. Satisfied by one of the following:
    - BIOL 600: Introductory Biochemistry, Lectures
    - BIOL 636: Biochemistry I & BIOL 638: Biochemistry II
  - Psychology. Satisfied by one of the following:
    - PSYC 104: General Psychology
    - or PSYC 105: General Psychology, Honors
  - Sociology. Satisfied by one of the following:
    - SOC 104: Elements of Sociology
    - SOC 105: Elements of Sociology, Honors
    - SOC 160: Social Problems and American Values
    - SOC 161: Social Problems and American Values, Honors

For more information, visit the website [https://medadvising.ku.edu](https://medadvising.ku.edu).
CHEM 175  Chemistry for the Chemical Sciences II
CHEM 195  Foundations of Chemistry II, Honors

Physics I with Lab. Satisfied by one of the following:  4-5
PHSX 114  College Physics I
PHSX 211  General Physics I
& PHSX 216  and General Physics I Laboratory
PHSX 213  General Physics I Honors

Physics II with Lab. Satisfied by one of the following:  4
PHSX 115  College Physics II
PHSX 212  General Physics II
& PHSX 236  and General Physics II Laboratory
PHSX 214  General Physics II Honors

Calculus I: Satisfied by one of the following:  3-5
MATH 115  Calculus I
MATH 125  Calculus I
MATH 141  Calculus I: Honors

Microbiology with Lab. Satisfied by one of the following:  5
BIOL 400  Fundamentals of Microbiology
& BIOL 402  and Fundamentals of Microbiology Laboratory

BIOL 401  Fundamentals of Microbiology, Honors
& BIOL 402  and Fundamentals of Microbiology Laboratory

Organic Chemistry with Lab. Satisfied by one of the following:  5
CHEM 330  Organic Chemistry I
& CHEM 331  and Organic Chemistry I Laboratory
or CHEM 380  Organic Chemistry I, Honors

Psychology. Satisfied by:  3
PSYC 104  General Psychology
or PSYC 105  General Psychology, Honors

Statistics. Satisfied by:  3
PSYC 210  Statistics in Psychological Research
PSYC 211  Statistics in Psychological Research, Honors
MATH 365  Elementary Statistics
BIOL 570  Introduction to Biostatistics

Most also require or recommend:

Anatomy with lab. Satisfied by one of the following:  5
BIOL 240  Fundamentals of Human Anatomy
& BIOL 241  and Human Anatomy Observation Laboratory

Biochemistry. Satisfied by:  3-4
BIOL 600  Introductory Biochemistry, Lectures
or BIOL 636  Biochemistry I

Physiology with lab: Satisfied by one of the following:  5
BIOL 246  Principles of Human Physiology
& BIOL 247  and Principles of Human Physiology Laboratory
BIOL 546  Mammalian Physiology
& BIOL 647  and Mammalian Physiology Laboratory

Some require additional mathematics, psychology, and/or other courses.

For more information, visit the website [https://medadvising.ku.edu](https://medadvising.ku.edu).

**Preveterinary Medicine**

Preveterinary medicine is a career interest, usually developed together with completing a bachelor's degree and major. Students prepare by taking courses to meet veterinary school admission requirements, studying to learn concepts and perform well academically, shadowing or working in veterinary practices, and volunteering to help people and other animals in need. They take the Graduate Record Examination ([http://www.ets.org/gre](http://www.ets.org/gre)) and apply for admission to veterinary schools, usually in the summer between the junior and senior year.

Veterinary schooling is four years of graduate-level, professional education and training. The only veterinary school in Kansas is the Kansas State College of Veterinary Medicine.

The Kansas State College of Veterinary Medicine requires:

<table>
<thead>
<tr>
<th>Course</th>
<th>Satisfactory by:</th>
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</thead>
<tbody>
<tr>
<td>English Composition I.</td>
<td>Satisfied by:</td>
</tr>
<tr>
<td>ENGL 101  Composition</td>
<td>or ENGL 100 Freshman Honors English</td>
</tr>
<tr>
<td>English Composition II.</td>
<td>Satisfied by:</td>
</tr>
<tr>
<td>ENGL 102  Critical Reading and Writing</td>
<td>or ENGL 200 Freshman-Sophomore Honors Proseminar: _____</td>
</tr>
<tr>
<td>Public Speaking.</td>
<td>Satisfied by:</td>
</tr>
<tr>
<td>COMS 130  Speaker-Audience Communication</td>
<td>or COMS 13 Speaker-Audience Communication, Honors</td>
</tr>
<tr>
<td>Chemistry I with Lab.</td>
<td>Satisfied by one of the following:</td>
</tr>
<tr>
<td>CHEM 130  General Chemistry I</td>
<td></td>
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<tr>
<td>CHEM 170  Chemistry for the Chemical Sciences I</td>
<td></td>
</tr>
<tr>
<td>CHEM 190  Foundations of Chemistry I</td>
<td>Honors</td>
</tr>
<tr>
<td>Chemistry II with Lab.</td>
<td>Satisfied by one of the following:</td>
</tr>
<tr>
<td>CHEM 135  General Chemistry II</td>
<td></td>
</tr>
<tr>
<td>CHEM 175  Chemistry for the Chemical Sciences II</td>
<td></td>
</tr>
<tr>
<td>CHEM 195  Foundations of Chemistry II</td>
<td>Honors</td>
</tr>
<tr>
<td>General Organic Chemistry with Lab.</td>
<td>Satisfied by one of the following:</td>
</tr>
<tr>
<td>CHEM 330  Organic Chemistry I</td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 331  and Organic Chemistry I</td>
<td>Laboratory</td>
</tr>
<tr>
<td>CHEM 380  Organic Chemistry I, Honors</td>
<td>&amp; CHEM 331  and Organic Chemistry I Laboratory</td>
</tr>
<tr>
<td>General Biochemistry.</td>
<td>Satisfied by one of the following:</td>
</tr>
<tr>
<td>BIOL 600  Introductory Biochemistry, Lectures</td>
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<tr>
<td>BIOL 636  Biochemistry I</td>
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</tr>
<tr>
<td>&amp; BIOL 638  and Biochemistry II</td>
<td></td>
</tr>
<tr>
<td>Physics I with Lab.</td>
<td>Satisfied by one of the following:</td>
</tr>
<tr>
<td>PHSX 114  College Physics I</td>
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<tr>
<td>PHSX 211  General Physics I</td>
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</tbody>
</table>
& PHSX 216  and General Physics I Laboratory |
| PHSX 213  General Physics I Honors  |                                                                                   |
| Physics II with Lab.              | Satisfied by one of the following:                                                  |
| PHSX 115  College Physics II       |                                                                                   |
| PHSX 212  General Physics II       |                                                                                   |
& PHSX 236  and General Physics II Laboratory |
| PHSX 214  General Physics II Honors |                                                                                   |
| Biology I with Lab.               | Satisfied by:                                                                       |
| BIOL 150  Principles of Molecular and Cellular Biology | or BIOL 151 Principles of Molecular and Cellular Biology, Honors                     |
| Microbiology with Lab.            | Satisfied by one of the following:                                                  |
| BIOL 400  Fundamentals of Microbiology |                                                                                   |
& BIOL 402  and Fundamentals of Microbiology Laboratory |
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 401</td>
<td>Fundamentals of Microbiology, Honors</td>
<td>4</td>
</tr>
<tr>
<td>&amp; BIOL 402</td>
<td>and Fundamentals of Microbiology Laboratory</td>
<td></td>
</tr>
<tr>
<td>BIOL 350</td>
<td>Principles of Genetics</td>
<td>4</td>
</tr>
<tr>
<td>or BIOL 360</td>
<td>Principles of Genetics, Honors</td>
<td></td>
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<tr>
<td>12 credit hours of social sciences and/or humanities</td>
<td>12</td>
<td></td>
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<tr>
<td>And, enough electives to reach a total of 64 credit hours</td>
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</tbody>
</table>

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