

# UMBC Pre-Dental Requirements

## The PreMedical and PreDental Advising Office

PreMedical ♦ PreDental ♦ PreOptometry ♦ PrePodiatry ♦ PreVeterinary

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Common Dental School Requirements	UMBC Course Recommendations to Fulfill Dental School Requirements	UMBC Course Title	Number of Credits at UMBC
Two semesters of Biology with labs	BIOL 302	Molecular & General Genetics	4.0 credits
	BIOL 303	Cell Biology	4.0 credits
	<p><b>Choose <u>two</u> labs from the list below:</b>            BIOL 300 Lab</p> <p><b>and either:</b>            BIOL 302 Lab</p> <p><b>or</b>            BIOL 303 Lab</p>	<p>Experimental Biology Lab (BIOL 300 Lab is a prerequisite for BIOL 302 and 303 Lab)</p> <p>Genetics Lab</p> <p><b>or</b>            Cell Biology Lab</p>	<p>2.0 lab credits</p> <p>2.0 lab credits</p> <p>2.0 lab credits</p>
Two semesters of Inorganic/General Chemistry with labs	CHEM 101	Principles of Chemistry I	4.0 credits
	CHEM 102 CHEM 102 Lab	Principles of Chemistry II Introductory Chemistry Lab	4.0 credits 2.0 lab credits
Two semesters of Organic Chemistry with labs	CHEM 351 CHEM 351 Lab	Organic Chemistry I Organic Chemistry Laboratory I	3.0 credits 2.0 lab credits
	CHEM 352 CHEM 352 Lab	Organic Chemistry II (Spring/Summer only) Organic Chemistry Laboratory II (Spring/Summer only)	3.0 credits 2.0 lab credits

One semester of Biochemistry (no lab)	BIOL 430 <b>or</b> CHEM 437	Biological Chemistry <b>or</b> Comprehensive Biochemistry I (Fall only)	4.0 credits 4.0 credits
Two semesters of Physics with labs	<b><u>Option 1 (preferred)</u></b>  PHYS 111 PHYS 112  <b>or</b>  <b><u>Option 2</u></b>  PHYS121 PHYS122 + [PHYS 111 or PHYS 122Lab]	<b>Selection depends on a student's declared major, although the 111/112 sequence is preferred.</b> <b><u>Option 1</u></b> (Combines the lecture and lab credit required by professional schools.)  Basic Physics I Basic Physics II (may conflict with CHEM 352L)  <b>or</b>  <b><u>Option 2</u></b> (Lab credit is earned either via PHYS 111 or PHYS 122Lab)  Introductory Physics I Introductory Physics II + [Basic Physics I (combined lecture+lab) or Introductory Physics Laboratory]	4.0 credits 4.0 credits  4.0 credits 4.0 credits + [4.0 credits or 3.0 credits]
Two semesters of English	ENGL 100 <b>and</b> A second ENGL-prefix course.	Composition <b>and</b> A second ENGL-prefix course All courses must have the ENGL-prefix Examples: ENGL 206, 210, 226, 231, 232, 233, 241, 243,250, 260, 261, 271, 273, 281, 291, 301, 315, 380, 382, 383, 391, 393  This list is not exhaustive. Please see the UMBC course catalog for the entire list of ENGL-prefix courses	3.0 credits  3.0 credits

1-2 semesters of Math/Calculus	<b>Choose <u>one</u> course from the list below:</b>  MATH 155* <b>or</b> MATH 151*	<b>Math selections depend on math placement exam results and a student's declared major.</b>  Applied Calculus I* <b>or</b> Calculus & Analytic Geometry I*	4.0 credits  4.0 credits
One semester of Statistics	<b>Choose <u>one</u> course from the list below:</b>  STAT 121 <b>or</b> STAT 350	<b>Selection depends on a student's declared major.</b>  Intro to Statistics for the Social Sciences <b>or</b> Statistics with Applications in the Biological Sciences	4.0 credits  4.0 credits
0-1 semester of Microbiology with lab	BIOL 375# + BIOL 273Lab#	General Microbiology# + Microbiology Lab#	3.0 credits  2.0 credits
0-2 semesters of Anatomy and Physiology	BIOL 251# + BIOL 252#	Human Anatomy & Physiology I# + Human Anatomy & Physiology II#	3.0 credits  3.0 credits

Required courses may have prerequisites. Carefully review prerequisites for courses in the course descriptions found in the UMBC [catalog](#).

\* According to the ADEA AADSAS Participating Dental Schools Required and Recommended Courses (current as of June 2020), only 8 of the 70 participating dental schools require at least one or two semesters of some type of collegiate math course (college math or calculus). At UMBC, students need to complete MATH 150, MATH 155 **or** MATH 151 before registering for BIOL 141 and BIOL 142 (or have a MATH test placement into MATH 151).

# According to the ADEA AADSAS Participating Dental Schools Required and Recommended Courses, 17 out of the 70 participating dental schools require Anatomy and 13 require Physiology. Not required by the University of Maryland School of Dentistry, but 6.0 credits of Human Anatomy is required by Howard University College of Dentistry. UMBC's BIOL 307 course is only 3.0 credits of Human Physiology, and does not fulfill Howard University's requirement for 6.0 credits of Human Anatomy.

Transfer students may already have completed pre-dental courses at other institutions and therefore can use those previous courses toward fulfilling the minimum requirements of dental

schools. Dental schools evaluate transcripts of all colleges attended and will look at the original course when determining if a student fulfills the minimum requirements. Admission requirements vary among dental schools and therefore, it is a student's responsibility to research the admissions criteria of the dental schools to which they will be applying. The American Dental Education Association (ADEA, [www.adea.org](http://www.adea.org)) provides information on dental school requirements and career information. ADEA annually publishes the Official Guide to Dental Schools, a comprehensive source for dental school admissions information. Students may purchase their own copy of the Guide from ADEA or log onto each individual dental school's website for detailed information about each school's admission requirements.

NOTE: The biology, inorganic/general chemistry, and organic chemistry science prerequisite courses must be completed before a student takes the Dental Admission Test (DAT). Most UMBC pre-dental students take the DAT during the late spring or summer, a year in advance of their expected matriculation into dental school. For example, if a student expects to enter dental school in the Fall of 2024, then they would most likely take the DAT in the late Spring or Summer of 2023, having finished the necessary science courses for the DAT by the end of the Spring of 2023 at the latest. Please see the office website for recommended DAT study and completion timelines. Health Professions Evaluation Committee (HPEC) cohort members must take the DAT by July 31<sup>st</sup> in order to remain eligible for the program. Details about eligibility requirements may be found [here](#).

Current UMBC students are encouraged to join the Pre-Dental Society. Please check out the [myUMBC group](#) for more information.

### **The DAT Study Phase**

**Approximately 3-6 months before test date; preparation time varies among individuals**

Although DAT study technically begins with the first science prerequisite course as students master prerequisite course content, the DAT Study Phase begins as students are taking the final prerequisite courses. It continues through the completion of the prerequisite courses that cover material tested on the DAT, until the student determines that they are sufficiently prepared for the exam.

UMBC students who posted competitive DAT scores reported that they studied 8–10 hours per week for a minimum of 15 weeks (the equivalent of one semester) prior to taking the DAT. Individual pathways and study times vary per student. Some students preferred 30 weeks of study time, especially if they had a history of difficulty with standardized tests. Each student should approach DAT study with an individualized strategy based on their academic record, mastery of the tested content, and overall test confidence. “Trialing” the DAT is never recommended, leads to poor scores, and makes it very difficult for an applicant to gain admission. Additional information about the DAT may be found on the ADEA website [here](#).