

WCSU Pre-Health Programs

Pre-Dental Pathway



Background on dental school

There are 76 schools and colleges in the United States that offer degrees in dentistry and 10 in Canada (a list of schools is included at: <https://www.adea.org/for-members/ADEA-Members/dental-institutions> with further information about schools found at: <https://www.ada.org/en/resources/research/health-policy-institute/dental-education>). The dental schools located in the United States are accredited by the Commission on Dental Accreditation (CODA) while those in Canada are accredited by the Commission on Dental Accreditation of Canada (CDAC).

Dentistry programs take four-years to complete and award a Doctor of Dental Surgery (DDS) or Doctor of Medicine in Dentistry (DMD) degrees. These doctoral-level programs prepare students to be a general dentist that has acquired oral diagnostic, predictive, surgical, and rehabilitative skills. With this skill set, dentists can restore any damaged or missing structures and treat disorders of the bone or soft tissue in the mouth. After graduation, you can explore one of the nine dental specialties. The American Dental Education Association (ADEA) provides information about how to fund your education including grant, scholarships, and loans (see: <https://www.adea.org/godental/Apply/financing-dental-education/money-matters>).

Pre-Requisite Coursework

Each dental school has their own pre-requisite course requirements, so make sure that you consult each school's website in advance so that you can organize your coursework as appropriate. The table below provides a summary of required courses that you can use as a general framework.

Courses	Dental School Pre-requisites
MAT 181 (Calculus I)	Some dental schools
MAT 115/120 (Statistics)	Some dental schools
CHE 110/111 (General Chemistry I and II)	Virtually all dental schools
CHE 210/211 (Organic Chemistry I and II)	Virtually all dental schools
CHE 421 (Biochemistry)	Most dental schools
PHY 120/121 (General Physics I and II – non-calculus based) or PHY 110/111 (General Physics I and II – calculus-based)	Most dental schools
BIO 103/104 (General Biology I and II)	All dental schools
Science Electives (e.g., Microbiology and Anatomy and Physiology, and Cell Biology)	Depends on the dental school – check with individual institutions
Humanities/Social Sciences Electives (e.g., Psychology and Sociology)	Depends on the dental school – check with individual institutions
English (1 year of college English or equivalent writing intensive courses)	Most dental schools

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Note: If a student has AP credits or has taken online coursework, they should consult with the individual institution to determine if such credits will be accepted.

Entrance Exams

Most dental schools require the Dental Admission Test (DAT), but not all do. If you wish to apply to a Canadian school, then you must take the Canadian DAT that is given through the Canadian Dental Association. Most Canadian schools require the Canadian DAT, and some accept the United States DAT. If you wish to apply to a Canadian school, then you should consult the Canadian Dental Association for more information: <https://www.cda-adc.ca/en/index.asp>. Most United States dental schools accept the Canadian DAT.

You can submit your dental school application without having taken the DAT, but most dental schools will not consider your application complete until you have taken the DAT. The ADEA Official Guide to Dental Schools is available for purchase and provides information about individual school's requirements about the DAT (<https://www.adea.org/home/publications/Books-and-Guides/officialguide>).

Topics on the DAT include a survey of natural sciences (biology, general chemistry, and organic chemistry), perceptual ability (two- and three-dimensional problem solving), reading comprehension (dental and basic sciences), and quantitative reasoning (including algebra, numerical calculations, and conversions). This test is conducted in English and in terms of format it is multiple choice. The test is taken on the computer and is offered year-round, and the administration time is five hours and 15 minutes. The DAT is offered at Prometric testing centers in the United States and territories including Guam, Puerto Rico, and the Virgin Islands, and Canada. For students in the United States, the cost of the test was \$540 in 2024.

The DAT has a strict retesting policy in which candidates must wait 60 days between attempts with a maximum of 4 testing attempts within a 12-month period. If you have three or more attempts on the DAT, you must apply to take the test again with each attempt and supply proof of a recent application to dental school. After the fifth attempt at the DAT, you can only take the test once in a 12-month period.

It is recommended that you take the test after you have completed all your pre-requisite coursework and at least one year before you want to go to dental school. To take the test, you must apply to which there is a non-refundable fee. As part of this, you will create a DENTPIN, which is a Dental Personal Identifier Number that is used throughout the application process. Next, you will receive an eligibility letter from the American Dental Association, after which you can schedule an appointment through Prometric testing.

DAT results are reported as scale scores which are not simply the number of correct answers nor percentiles. Before March 1, 2025, the DAT will be graded on a 2-digit score and after this time, the DAT scores will range from 200 to 600 in increments of 10. This change to the scoring system will use the three-parameter logistic (3PL). This change is believed to allow for increased precision and accuracy in terms of estimating an applicant's skills, but there is no change to the content of the exam. The DAT academic average score is the rounded average of your scale scores in Biology, General Chemistry, Quantitative Reasoning, and Reading Comprehension. Then, the DAT Total Science score is based on your performance in the Survey of Natural Sciences section.

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There are resources available to help you interpret your DAT score (see: <https://www.ada.org/en/education/testing/exams/dental-admission-test-dat/dat-scores>).

The DAT also assesses manual dexterity. Please note that this assessment was suspended due to COVID-19 for a period, so be sure to check the current DAT manual when preparing for the exam.

Some schools require Computer-Based Assessment for Sampling Personal Characteristics (CASPer) testing (see below), so make sure that you consult with each school that you are interested in applying to.

Experiential Preparation

The experience portion of your application encompasses several aspects: leadership/extracurricular activities, community service/volunteering, employment, academic enrichment, research, dental experience, and shadowing. Leadership can be demonstrated in several ways and could include participation in a club or organization in which you organize a community service day or fundraiser, or more formally serving an official role in that club or organization. Similarly, there are many opportunities for you to get involved in community service, including Habitat for Humanity, working at community centers, soup kitchens, and homeless shelters. Many dental schools provide service to underserved and marginalized populations through clinic work, so volunteer work as part of your application will emphasize your commitment to serving your community.

Employment entails work that you performed outside of the dental field that you were paid for. Academic enrichment refers to participation in programs that are sponsored by colleges and universities through which one can explore interests in dentistry and other pre-health disciplines (e.g., Summer Health Professions Education Program (<https://www.shpep.org/>)). Research experience refers to work executed on a research project, which involves work outside of the classroom setting, examples of which could include research technician positions or summer research opportunities. Dental experience encompasses paid or unpaid work where you observed or participated in patient care, interacted with practitioners, or were directly responsible for patient care. Make sure to consult the individual schools to which you are applying to determine the number of clinical hours they require. Lastly, in dental shadowing you will officially follow and observe a dental practitioner in a clinic or practice. The number of shadowing hours that is required depends on the specific school in question, with some requiring a minimum of 50 hours and others requiring at least 200 hours.

One important aspect of your application entails manual dexterity, which refers to how you use your hands in a coordinated and orchestrated manner to hold and manipulate objects while also exhibiting the ability to make fine, precise movements. This is a critically important skill that is needed to ensure the safety of dental patients. During your interview, it is highly possible that the admissions committee will ask you about how you have honed your manual dexterity skills. The ADEA recommends engaging in the following activities to refine these skills: drawing, painting, woodcarving, constructing 3-D artwork, soap carving, sewing, needlepoint, cross-stitching, crocheting, knitting, tying fishing knots, or learning a musical instrument like piano or violin.

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Letters of Recommendation

Letters of recommendation are required in the ADEA Associated American Dental Schools Application Service (AADSAS) application, and you can submit up to four letters of recommendation. Some dental schools may require additional letters of recommendation, so you must check with each specific institution. All letters are submitted by the individual writing the letter of recommendation through the Liaison Letters, which is the letter of recommendation portal.

There are two types of letters that can be submitted: individual and committee letters. For individual letters, individual professors, advisors, and dentists submit letters through ADEA AADSAS. Committee letters are not a requirement for all schools (but some may require a committee letter), but if a student does submit a committee letter, then it only counts as one letter. Students are advised to check with each school to determine if committee letters can be submitted. The Pre-Health Committee is currently comprised of Dr. Kristin Giamanco (Biology), Dr. Helena Prieto (Chemistry), Dr. Russ Selzer (Chemistry), Dr. Joshua Cordeira (Biology), and Dr. Emily Stevens (Health Promotion and Exercise). A committee letter holistically considers an applicant's portfolio including the individual letters of recommendation. Please note that there is a committee letter request form that you must complete in addition to have those writing you letters of recommendation fill out a pre-health evaluation form. Your pre-health professions advisor can provide you with more detailed information and the specific deadlines for those forms to be submitted. If you choose to have a committee letter prepared as part of your application, you can request that three additional individual letters be submitted.

As mentioned above a committee letter considers the applicant's entire portfolio and is written collaboratively by the pre-health committee. A composite letter can also be prepared in which the letters of recommendation are collected and submitted on behalf of the institution or office.

Application Process

The centralized application service is called ADEA AADSAS and each year the application opens in May and the first day that you can submit your application is in early June (make sure that you check the specific date for the year in question). The application cycle ends in February of the following year. Most schools in the United States require the ADEA AADSAS as the primary application, but some do not participate, so make sure that you check with each specific institution you are interested in applying to. Texas residents that are applying to in-state schools must use the Texas Medical and Dental Schools Application Service (TMDSAS). For the 2024–2025 cycle, the application fee was \$264 for a single institution and \$115 for each additional institution. Some institutions/programs may have additional supplemental fees. If you are applying to an ADEA-AADSAS-participating Canadian dental school, you can receive a 25% discount on each Canadian dental school application to take into account the exchange rate difference. You first must pay the full application fee upfront after which the discount will be processed.

There is an ADEA-AADSAS fee assistance program (FAP) that you can apply for on a first-come, first-serve basis. There is a limited number of waivers available (see: https://help.liaisonedu.com/ADEA_AADSAS_Applicant_Help_Center) for more information

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about this opportunity. In addition, some programs offer coupons that you can use to defray the application fees.

The primary application has four main sections: personal information, academic history, supporting information, and program materials. In the first section, you will provide contact, biographic, and citizenship information. In addition, you will have the opportunity to explain how any social, economic, or educational factors have shaped your application portfolio. In the next portion of the application, you will input details about the colleges you attended, standardized testing, and enter your transcripts. Requests for letters of recommendation are designated through the ADEA AADSAS application platform and official DAT scores will be available to all schools that the applicant inputs. Transcripts must be sent directly to ADEA AADSAS. If you enter any coursework, it must appear exactly as it does on your official transcript. In the supporting information section, your letters of recommendation will be linked to your application, and you will outline your achievements and experiences. There is no limit to the number of experiences/achievements that you can enter in this section. You can also highlight which of your experiences were the most important. In the supporting information section, you can also enter any licenses that you hold. Your personal statement should also be entered in the supporting information section in which you explain why you want to pursue a dental career. Make sure that you follow any specific directions about the personal statement, e.g., word limits. Lastly, the program materials section encompasses any additional application requirements by the specific institutions you are applying to. Within the ADEA AADSAS system, there is an instruction manual and frequently asked questions page to help in the application process.

Some schools might require a secondary application which could entail the inputting of additional information, inclusion of an additional essay/statement, or CASPer testing. This examination is administered online, and it is an open response situational judgement test. This test assesses what you would do in difficult situations and why you would act in a particular way. Acuity Insights, the company that owns CASPer, also offers additional modules that could be required by specific programs. When preparing your application materials, make sure that you check if the schools that you are applying to require a secondary application.

Application Timeline

Below is a timeline so that you can plan accordingly. This example timeline is for a student that would start dental school in Fall 2025.

December 2023

- Familiarize yourself with the application process by examining the resources on the AADSAS site (if applicable, consult the TMDSAS site)
- Collect information about dental schools that you are interested in and plan to purchase the ADEA Dental School Explorer, which is available in the spring
- Pay close attention to the ADEA AADSAS school-specific deadlines
- Make sure that you are on track for completing the necessary pre-requisite classes for dental school
- Determine if you need a committee letter for your application and ensure that you

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understand the process for obtaining the letter

- Continue to gain experience (dental, research, and/or community service)

January – March 2024

- Request letters of recommendation or obtain a committee letter. While the letters cannot be uploaded until May, it is important to give those that are writing your letters plenty of time to craft a supportive recommendation
- Register and study for the DAT. You should register 60 to 90 days prior to the test date

April – May 2024

- Take the DAT. It is advised to take the exam in the late spring or early summer
- The AADSAS application opens in May, but the application cannot be submitted until June while the TMDSAS cycle opens in May
- Submit transcripts through the application platform
- Some schools have secondary applications within the AADSAS applications and those must be completed with the primary application
- If the schools that you are applying to require the CASPer test, apply for this examination
- Take the CASPer test in May, if possible

June 2024

- Take the DAT, if you have not already taken it
- Take the CASPer test, if required
- If any of the schools that you are applying to have secondary applications that were not included within the AADSAS application, those schools will start to send you the secondary applications
- Prepare for interviews

July – August 2024

- Take or retake the DAT, if needed
- Take the CASPer test, if required
- Continue to complete secondary applications, if applicable
- Some dental schools will start inviting applicants for interviews

September – December 2024

- Continue to interview at schools
- Dental schools may notify you of acceptance starting on December 15th

January – April 2025

- Continue to interview (some schools continue to offer interviews into the spring)
- If you are waitlisted at any schools, update them with any new achievements that you

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may have made since you submitted the initial application

May – July 2025

- If you are waitlisted at any schools, update them with any new achievements that you may have made since you submitted the initial application

Admissions Process

Your application is holistically examined and considers your academic performance, letters of recommendation, experiential preparation, essays, testing, and interviews. Strong candidates do not only have a strong academic record, but they also have demonstrated that they are compassionate, caring, and ethical providers. Factors that are evaluated include experiences, attributes, and metrics. In terms of experiences, the admissions committee considers one's educational background, employment history, research experience, and dental experiences. Next, for attributes, one's skills and abilities, personal and professional characteristics, and demographics are reviewed. Lastly, in terms of metrics, grades and DAT scores are assessed.

Interviews can be conducted in-person or virtually (this is subject to change), so it best to be prepared for either structure. The ADEA has prepared some helpful tips on what to do before, during, and after an interview which can be applied to both virtual and in-person platforms.

What to do before an interview

- Be prompt
- Familiarize yourself with the school's mission and do research on the institution
- If the interview is conducted virtually, find a quiet spot to engage in conversation with proper lighting and ensure that your video works
- Understand the type of interview (group, one-one, or multiple mini-interviews)

What to do during an interview

- Turn off your cell phone
- Dress professionally
- Be genuine as opposed to saying what you think the committee wants to hear
- Listen carefully before answering any questions
- Create a list of questions
- Take notes on paper in lieu of using a device
- If you are interviewing virtually, treat the interview as if it were in-person and make ample eye contact with the camera

What to do after an interview

- Send a well-crafted thank you email
- If you were asked to provide any additional or follow-up information, make sure that you do so in a timely and appropriate manner
- Do not contact members of the admissions committee or the dental school too frequently

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- Do not post anything disparaging about the dental school on social media or discuss anything negative about specific schools on interviews

Admissions Statistics

The mean GPA of accepted students has steadily risen between 2000 and 2023 (2000: 3.35, 2010: 3.53, 2020: 3.58, and 3.65 in 2023). Furthermore, the mean science GPA of accepted students increased in that same timeframe (2000: 3.25, 2010: 3.47, 2020: 3.49, and 2023: 3.57).

The mean DAT scores for first-year enrollees at United States dental schools overall has risen between 2000 and 2023, with the scores being broken down by DAT academic average (2000: 17.7, 2010: 19.3, 2020: 20.8, and 2023: 20.8), DAT perceptual ability (2000: 17.7, 2010: 19.6, 2020: 20.5, and 2023: 20.2), and DAT total science (2000: 18.3, 2010: 19.5, 2020: 20.4, and 2023: 20.4). The ADEA has compiled data on applicants and accepted students over the past 23 years, which can serve as a helpful resource (see: <https://www.adea.org/data/students/Applicants-2023-Entering-Class/>).

Dental Career Paths

Practicing dentists assess the overall health of the patients and educate patients on oral health and how to prevent diseases. They perform standard examinations, fillings, crowns, implants, extractions, and correctives surgeries. According to the Bureau of Labor Statistics employment of dentists is projected to grow 4% between 2022 and 2032. Dentists can practice in general dentistry, or they can practice within a specialty. The specialties listed below are recognized by National Commission on Recognition of Dental Specialties and Certifying Boards:

- Dental anesthesiology
- Dental public health
- Endodontics
- Oral and maxillofacial pathology
- Oral and maxillofacial surgery
- Oral and maxillofacial radiology
- Oral medicine
- Orofacial pain
- Orthodontics and dentofacial orthopedics
- Periodontics
- Pediatric dentistry
- Prosthodontics

The list below outlines options for dentists in terms of how you can practice:

- Academic dentistry and dental education
- Dental research
- International healthcare
- Private practice (as a salaried employee or associate)

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- Public health care policy
- Self-employment in private practice
- Service in the federal government

Helpful websites

<https://aadsas.liaisoncas.com/applicant-ux/#/login> – To complete an application you must register with the ADEA AADAS

https://help.liaisonedu.com/ADEA_AADSAS_Applicant_Help_Center – Applicants can consult the help center to learn more about the structure of the application which includes a frequently asked question page

<https://www.ada.org/en/education/testing/exams/dental-admission-test-dat> – The American Dental Education Association provides an overview of the DAT

https://www.adea.org/GoDental/Career_Options/Advanced_Dental_Education_Programs.aspx – The American Dental Education Association details dental specialties that one can enter

<https://www.adea.org/data/students/Applicants-2023-Entering-Class/> – The American Dental Education Association organizes data on dental school applicants and accepted students over a period of 23 years

<https://acuityinsights.app/> – Acuity Insights details what the CASPer test is and there is information on how to register for that testing option