



## March 2022

### 13<sup>th</sup> — SAT

9th, 10th and 11th grade students - Make plans for a productive summer. Investigate summer programs, jobs, internships

Juniors – Create an initial list of colleges

## April 2022

### 2<sup>nd</sup> — ACT

Juniors—Visit colleges virtually  
Prepare for AP Exams

Seniors - Final letters of acceptance should arrive by the beginning of April

Compare offers of admission; re-visit top choices using virtual options and social media

Evaluate financial aid packages and consider college funding options

Notify the colleges that you will not attend and take some time to thank those who wrote your letters of recommendation

## The New SAT—Shorter and Online

As has been widely publicized of late, the College Board has announced some exciting updates to their standardized tests. The key parts of these changes include:

- Testing will be completed online
- Tests will last 2 hours, not 3
- Calculator allowed on all math questions

Factors to remain the same:

- A proctored setting is required
- Multiple choice questions remain in place
- Scoring is on a 1600 scale
- The removal of the Subject Tests and optional essay will remain in effect

Domestic sites will be seeing these significant changes in 2024, and international testing sites in 2023. This means that today's 8<sup>th</sup> and 9<sup>th</sup> grade students in the USA will be the first ones to take the new testing format.

The changes likely occurred because of College Board concerns about the future marketability of their test, the SAT. Over 1800 colleges no longer require standardized testing for admission, about 80%, with some states now mandating that all public colleges remove the requirement. After 700,000 fewer students took the SAT in 2021, numbers have risen this year, but that huge drop, coupled with the increase in the number of schools removing the requirement, has caused ripples of concern within the College Board.

The test remains controversial with opponents highlighting the greater ease for wealthy students to prepare and perform well, while those from more disadvantaged schools and backgrounds face several barriers to success. The College Board has reacted to this with 'adaptive testing'. Each section will be prefaced by a set of questions designed to assess performance and hence, adjust the rigor of the subsequent questions. The new test will

have two sections – one on mathematics and one on reading and writing, each counting for 800 points. Students will be permitted to use a calculator throughout the math section. The reading section will have shorter sections with texts covering a wider range of topics.

Students tried out the new test in November 2021 and overwhelmingly indicated a preference for the online format, indicating that they were less stressed and found it easier to complete. Test takers enjoyed being able to bring and use their own laptops; loaners, when needed, were available onsite. There was also praise for the simple login, and visible countdown clock and digital calculator. Results from this new test will be delivered electronically in days, not weeks. Testers will not be penalized for the loss of either power or connectivity and work already completed and time already used will be saved. Schools enjoyed the removal of the shipping and receiving requirements, and there was praise for the new option to offer more flexible testing dates, times and locations, most importantly during the school day with most students present.

This new system will also provide the security lacking in the current paper and pencil format, because each test will be unique - thus, no answer sharing will be possible. Historically, several international testing centers had to close because of widespread cheating and many unscrupulous individuals thrived over the years by selling test papers.

Over 80% of high school students want to submit test scores along with their applications. Students, parents and high school counselors know that strong test scores can open doors to scholarships and additional financial aid, a critical factor for many families, and this new format will allow students to quickly access their scores and decide whether to submit them. With so many public and private institutions now either eliminating testing permanently (the University of California system), or even temporarily (Harvard and Stanford), the College Board is hoping that bringing their test into the 21<sup>st</sup> century will secure its future viability.

### Career Paths for Molecular Biology Majors

- Molecular Biologist
- Microbiologist
- Geneticist
- Environmental Technician/  
Consultant
- Biomedical Researcher
- Research Scientist
- Professor/Teacher
- Toxicologist
- Pharmaceutical Sales  
Representative
- Scientific Editor
- Technical Writer
- Laboratory Technician
- Product Safety Manager
- Patent Lawyer
- Bioinformatics Technician
- Nutrition Educator
- Clinical Diagnostics Specialist
- Crop Improvement Consultant
- Business Manager
- Scientific Supply  
Representative

### Focus on Majors: Molecular Biology

Molecular biology is the study of biology at the molecular level. It focuses on the structure and function of the molecules that form the basis of life. Molecular biologists explore cells, their characteristics and parts, chemical processes, and how molecules control cellular activity and growth. They frequently focus on certain types of molecules or work to define the biological processes that cause genetic defects.

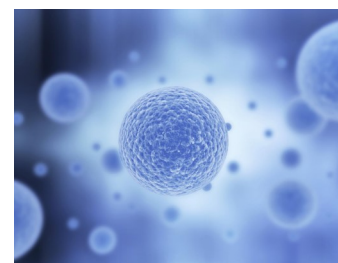
Majoring in this field prepares students for a wide range of careers in scientific research, medicine, bioengineering, and biotechnology. It is important to note that there will be a high demand for science and engineering jobs in the future. Government agencies such as the EPA, the NIH, and the U.S. Food and Drug Administration, hire graduates to work in research, analyze samples of food, air, water, and drugs, and head programs that review the safety of new medical devices, foods, and drugs. In the field of biotechnology, molecular biologists work to improve therapies, vaccines, drugs, and medical diagnostic testing. They assist in the design of environmental biotechnological products, which are used to clean up hazardous waste. They also work in quality control, manufacturing, production, and information systems.

Jobs are also available in education. Chemistry and biology teachers are currently in demand at both the junior high and high school levels. With a doctoral degree, students can become university professors. Professors perform research in laboratories and write up the results of their research findings. They also spend time writing grant proposals to support their research and teaching efforts. In the field of agriculture, molecular biology graduates work to create more disease resistant genetically-engineered crops. In the pharmaceutical industry, jobs are available in the design and manufacturing

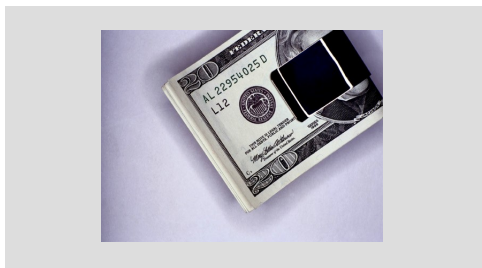
of drugs and vaccines. Other employment options include writing and reporting on scientific policy, biological and medical illustration, and forensic science.

While specific coursework varies among colleges, students planning on majoring in molecular biology can expect to take classes in chemistry, biochemistry, genetics, molecular biology, cell biology, biostatistics, physics, and mathematics. It is important to note that some college programs focus on preparing students for medical school while others prepare students for careers in the biotechnology industry. Decide which path you prefer and pick a college that is consistent with your career plans. Students should be ready to record and analyze data using computers, perform research and laboratory work, attend lectures, and work cooperatively with other students. To enhance job prospects, it is recommended that students spend an additional year at a college that offers training programs for specialized lab techniques, such as cell culture and DNA sequencing and synthesis. This is often known as a "certificate program", and can give students the added research experience that is crucial to finding jobs in their field.

For more information, go to [www.asbmb.org](http://www.asbmb.org), the website of the American Society for Biochemistry and Molecular Biology. This organization publishes scientific journals and supports research funding and education. To see job listings and read about current events, another helpful website is [www.cellbio.com](http://www.cellbio.com), the Cell and Molecular Biology Online informational resource.



### Financial Matters: College Majors with the Best ROI



Today, students and parents alike are far more thoughtful about both if and where they continue into higher education after graduating from high school. That 'where' is always accompanied by 'what should I study'. It has been shown that college graduates on average earn 80% more than those with just a high school diploma. Approximately 65% of graduates from a bachelor's degree program typically recoup the cost of that diploma within 10 years. In an interesting report by Michael Itzkowitz, senior fellow for Third Way, it was determined that for some, it may even be possible to recoup those college expenses within 5 years, assuming that the undergraduate degree program was completed in 4 years.

When analysing bachelor's degree programs with a view to both future employability and median income, there is a correlation between a high salary upon graduation and low unemployment levels. For example, a typical graduate with a degree in Architectural Engineering earns on average \$83,000 per year. It can be as low as \$59,000 for an entry level position. Even with the Covid-19 pandemic decimating so many jobs in 2019 and 2020, the unemployment rate for these highly trained professionals is only approximately 2%. High income potential and low unemployment are the factors to consider when choosing a college major with a strong return on investment.

Once a high school student has determined that an undergraduate degree is the path to take in order to achieve personal and professional success, the question of *what* a student should select for their degree program rises to the forefront. There are several bachelor's degree programs that are always at the top of the list of highest earning degrees, and for many years, they have been in an engineering discipline. With so many fields to explore, the most dominant today are:

Petroleum, Aerospace, Industrial, Software, Nuclear, Electrical, Mechanical and Civil, Biomedical, Chemical, Architectural, Computer, Materials/Materials Science.

Other STEM majors to consider are: Mathematics, Physics, Biology/Chemistry/ Nursing/Premedical/Pre dental, Biotechnology, Sustainability, Health Information Technology, Medical Technology, Construction Management, Quality Control/Safety technicians and Environmental Sciences.

For those with a focused interest in computers, some exciting majors with a great ROI include:

Cybersecurity, Artificial Intelligence, Information Technology, Health Informatics, Game Design, Computer Science, Data Science and Analytics, and Big Data.

For a wider range of some unexpected options, consider these:

Economics, Accounting, Finance, Human Resources, Marketing, Advertising and E-Commerce, Public/Business Administration, Management and Management Information Systems, Communications, and Health Care Administration.

Unfortunately, most liberal arts degree programs such as history, sociology, comparative literature, language studies, economics and psychology, don't

usually end up on the lists of majors with the best ROI, but that should never discourage a student from making such a choice. There are so many transferrable skills attained by completing such programs, and graduate degrees may then become the speciality for which they are well qualified. Many students have entered top professional schools – medical, dental, veterinary, and law schools – with a solid liberal arts degree, provided that all prerequisite coursework has been completed successfully.

Students should never select a major based solely upon likely salary outcomes but on a true passion that excites and intrigues them. Instead, focus on learning as much as possible during high school and college years, and performing as well as possible. By following your true interests in selecting a major, you assure yourself of a fulfilling career. That said, for many students, it is necessary to take out student loans to pay for a bachelor's degree; families should carefully examine earning potential and employment numbers when considering how much to borrow.

It is often a hard decision to compare an academic passion with practical and long-term outcomes, but it should be part of the decision. It is always safe to assume that whatever a student chooses to major in at college, a strong and rigorous program of study in high school will allow options and choices in higher education. Work hard in all of your classes, selecting four+ years of all core areas (math, science, foreign language, English and social studies), rounding out your curriculum with electives that fit your interests. Take the most advanced coursework available and do your very best to perform well. Choice is always a good thing.

## Waitlist Purgatory

Uh-oh. Your eagerly-awaited decision letter from Dream University finally arrives and you learn that you've been offered not the hoped-for place in the class, but a spot on their waitlist. What should you do now?

Your first step is to carefully consider the rest of your college acceptances and determine which of these provides the best fit for you. If necessary, revisit several of your top choices, spending as much time on campus as possible, sitting in on classes and talking to current students. Accept your favorite offer by returning your intent to enroll form along with any needed deposit before the May 1st reply date. Be sure to submit the form and deposit for housing as well. For many schools, the date your deposit is received determines your housing choice. You'll also want to send a nice note to each of the other colleges that offered you a place, thanking them for their interest and explaining that you've made other plans. Letting your other colleges know as soon as possible that you won't enroll allows them to offer your spot to another student.

Now for your waitlist offer. If you are still

truly interested in attending this college, respond promptly to their offer accepting a place on the waitlist. Follow this up with a personal call to your admission contact, expressing your disappointment as well as your hope of admittance. Ask if the waitlist is ranked in any way and how many students are on it. Inquire about the number of students they expect to take from the waitlist or have taken in prior years. Be sure to find out if there is a cut-off date for the waitlist. This is also a good time to update the admission officer about your new achievements, rising grades, honors or awards. Remind your admission officer of why the school is a good fit for you and of the many assets you'll bring to campus. You might even wish to send an additional letter of recommendation from one of your senior year teachers. If Waitlist U is your first choice and you will enroll if admitted, tell them so.

Nationally, only about 20% of waitlisted students are admitted each year. If you really want to be among those who are, you need to be proactive in contacting the admission office and letting them know of your continued interest in attending.

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