

Riley Baker Educational Consulting

www.rileybaker.com

139 Sunset Ridge Road

Northfield, IL 60093

847.441.8687

rileybaker@rileybaker.com

September 2013

10th and 11th grade students:
register & prepare for PSAT

Seniors – Finalize college list;
work on applications & essays;
review transcript for accuracy;
request recommendation
letters from teachers and
counselors; meet with visiting
college reps

**21st – ACT and ACT plus
Writing** – offered in selected
states only

October 2013

10th and 11th grade students:
Review test materials & take
PSAT either 10/16 or 10/19

**5th — SAT Reasoning
and Subject Tests**
(register by 9/6 — late
registration 9/20)

**26th — ACT and ACT plus
Writing** (register by 9/27 —
late registration 10/11)

Attend area college fairs and
meetings

Meet with college reps visiting
high school

Seniors - Continue work on
college applications; complete
Early Decision/Early Action
applications; complete CSS
Profile if required

Submit “rolling” admissions
applications ASAP

The Secret to a Happy High School Experience

I’m sure you’ve heard this many times from the adults in your life: “Enjoy high school—these are the best years of your life!” But many teenagers would not agree. What can you do to make sure that your high school years are truly special?

- Get involved. Join a club or activity that interests you and participate fully. It doesn’t much matter which one. Just follow your passions in finding a club that suits you or get together with a friend or two and start your own group. Extracurricular activities are what make high school fun and give you a place to belong.
 - Challenge yourself. It might be tempting to take the easier route with grade-level classes, but try that AP or honors class and move beyond your comfort zone. Don’t fear the teacher whom everyone says is really demanding—the best teachers are those who will encourage you to think outside the box and to stretch your mind.
 - Ask for help. There’s no glory in doing it all yourself; ask for help when you need it. Meet with your English teacher after school for help with an essay or ask your math teacher to explain a difficult concept. In this way you’ll establish relationships with your teachers outside of the classroom and perhaps find yourself with a true mentor. You may even really get to know the individual who will write your college recommendation.
 - Try not to focus on being with the “popular” kids. High school students tend to form cliques of like-minded individuals. Make your friends based on shared interests and values and welcome opportunities to get to know new friends throughout high school.
- Take care of yourself. That means eating well, getting an adequate amount of sleep and exercise, and finding ways of managing the stress that comes with being a high school student. Learn to manage your time well so you don’t get caught with last-minute assignments. Set aside time each day to work on each subject, even getting ahead in reading or other assignments when you can. Make sure you build in time for fun and relaxation. Go for a run, play with your dog, read a novel, chat with a friend—anything to break up long hours of study.
 - Do good—volunteer. Helping others will make you feel good about yourself. Look for volunteer activities that you generally care about, not just those you think will look good on your resume.
 - Don’t sweat the small stuff. You’ll encounter a lot of petty ideas and petty people during your high school years, but you don’t need to get caught up in focusing on things that really will not matter. Spend your time and effort on those things that are important to you.
 - Keep your grades in perspective. Of course you’ll want to do the best you can in each of your classes, but don’t let one or two B’s on your transcript convince you that you’ll never get into college. There are wonderful colleges out there for students who’ve shown a range of achievement; there’s a place for every student who truly wants an education.
 - Have fun!

Where are Applied Math Majors Employed?

- Government labs and research offices
- Federally funded contractors
- Engineering research organizations
- Computer information and software firms
- Energy systems firms
- Electronics and computer manufacturers
- Consulting firms
- Aerospace and transportation equipment manufacturers
- Financial service and investment management firms
- Transportation service providers
- Communications services providers
- Chemical or pharmaceutical manufacturers
- Medical device companies
- Producers of petroleum and petroleum products
- Academic institutions and research institutes
- Consumer products companies



Focus on Majors: Applied Math

In a survey by CareerCast.com of the best and worst occupations in the U.S., Mathematicians landed the top spot. With an average annual income of about \$95,000, enviable working conditions, and considerable autonomy, math majors not only took first place, but math-related careers occupied eight of the top twenty career positions. If math has been one of your favorite classes in high school and you love to solve problems, especially those with only one “right” answer, you might want to consider a major in math. Don’t see yourself as a mathematician? Look instead to a study of applied mathematics.

Applied mathematics is the study of the mathematical methods and modeling that are typically used in professions as varied as science, engineering, business, and industry. In this branch of mathematics, mathematicians work on practical problems rather than developing math theory. Although applied math majors spend much of their time studying pure math, they do so with an eye to using the skills they develop to prepare for a particular career or purpose. As an applied math major you’ll take courses such as calculus, differential equations, linear algebra and discrete mathematics, but you’ll combine these studies with your career interests. For example, you might apply mathematical principles to problems studied in physics, computer science, statistics, systems design, engineering, probability theory, or computer programming.

What kinds of career paths are open to students who major in applied mathematics? Although many professions use math in their daily work, there are a host of careers for which a strong background in mathematics is a necessary prerequisite for success. According to the Society For Industrial and Applied Mathematics (SIAM), mathematicians and computational scientists may work in a variety of

vastly different career areas. (See side bar.)

A bachelor’s degree in applied math will prepare you for jobs in statistics, actuarial sciences, mathematical modeling, cryptography, and math education. You’ll apply your knowledge of mathematical principles to solve real-world problems. For example, mathematical modeling is used to make predictions based on statistical evidence. This can be applied in physiology to determine what will occur as blood pressure increases, in medicine to track outbreaks of epidemics, or in engineering to determine how quickly heat can be dissipated. Financial institutions such as banks, investment companies and hedge funds use mathematical modeling to explain and predict the behavior of financial markets.

Actuarial science takes math and statistics and applies these subjects to the finance and insurance industries. Actuarial work ranks among the top few careers in the U.S. for both job satisfaction and salaries.

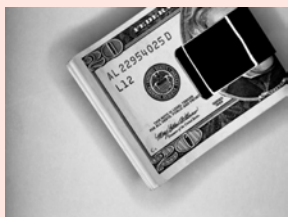
Cryptography deals with the practice of hiding information. Once used to aid spies during wartime, cryptographers might now focus on protecting the security of credit cards and ATM machines.

Computer animation and digital imaging combine such diverse fields of study as math, computer science, fine art, traditional animation, physics and biomechanics. Mathematical knowledge can be applied to a variety of areas such as medical diagnostics, entertainment, and fine art.

Climatology uses simulations to understand the forces that control our climate. These simulations utilize data from satellites, ocean buoys and other monitoring for predicting future events.

You’ll find more careers for applied math majors at SIAM’s website at www.siam.org.

Financial Matters: Are Private Colleges Worth Their Cost?



Families sometimes urge their children to consider only public colleges because they believe private education is beyond their means. According to the College Board, the average annual full-fare price at private colleges in 2012-2013 was \$43,289. This number included tuition, fees, room and board. The net cost, however, was considerably lower. After taking into account scholarships, grants and federal tax credits, the average net price paid by students was \$27,600. More than 80% of private college students received some form of financial assistance, with an average annual aid package of more than \$17,000. Obviously, most private college students do not pay the

full “sticker” price. For students who qualify for some need-based aid, the net cost of attending a \$45,000 per year private college may be nearly the same as the cost of attending a \$20,000 per year public university.

Assuming that the cost of education may still be higher at a private college, is the experience of going there worth the additional fee? Studies show that college graduates earn about a million dollars more over their working lifetime than those without a diploma. College graduates also report more satisfaction with their careers and lives. No studies, however, have reported differences in earning power for those attending private vs. public colleges. What is most important seems to be how students take advantage of the opportunities offered at whatever college they attend. So what does the additional cost of private education buy?

Private colleges can offer smaller classes and a higher faculty to student ratio. This translates to more opportu-

nities to engage in discussion and to establish relationships with professors. At private institutions, students are much more likely to be taught by professors rather than by graduate assistants. Although you may face competition for popular classes, you are still more likely to get the classes you need for your degree.

Public institutions are more subject to the whim of budget cuts. They often must cut sections of classes, leading to larger classes, and sometimes increasing the time needed to earn a bachelor's degree. Students at private institutions are much more likely to graduate in four years than those at even the most selective public colleges. Some private colleges are so sure that students can graduate in four years that they offer free tuition if a fifth year of study proves necessary. When considering total college cost, be sure to factor in the number of years you're likely to spend at that institution and the earnings you might lose if it takes you longer to complete your degree.

Show Them Some Love

“Demonstrated interest”, an indication that an applicant is truly interested in attending a particular college, has long played a small role in college admissions. Applicants traditionally showed interest by initiating contact with a university. Talking to an admissions representative at a college fair, visiting a campus, meeting with the college rep at your local school, or maintaining contact with an admissions officer through occasional e-mails are all examples of demonstrated interest. Taking advantage of the offer of an alumni interview or participating in an on-campus interview are other signs that a college ranks high on the applicant's list. Admissions officers know that the more interest a student shows in this way, the more likely he

is to attend. Therefore, most selective colleges now track the number of these contacts with students, and use this information in choosing between two applicants with similar profiles.

More recently, however, colleges have been employing enrollment management programs to make more refined predictions about the applicant's interest in that institution. These programs track all of the contacts described above, but also look to see if the applicant has been active on the college's Facebook page or is following their Twitter feeds. The more visits you make to their social media pages, the more interest the college believes you are showing.

You can also demonstrate your inter-

est in a school through the statements you make on your application. Research your college choices carefully; look for programs that particularly interest you and that are unique to that college. Be sure that your responses to application questions reflect your understanding of that college's special qualities, and why these are a good fit for you. If a college is your first choice, say so.

Through both your responses to application questions and your actions (numerous meaningful contacts with that college), you can influence your chances of acceptance at your top college choices.

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Tips for A Winning Essay

The new Common Application prompts give students lots of opportunity to let their distinctive voices be heard. By telling the story that only you can tell, one that is both personal and authentic, you allow the admissions committee to glimpse the person behind all the demographic data, grades, and test scores. Rather than dread the writing assignment, applicants should understand that the essay is truly their opportunity to be heard. But how do you write a compelling college essay? Here are some tips adapted from the Dickinson College website.

- Tell your story. It may sound trite, but tell the story that is unique to you. Essays about building a house in a poor country or one focusing on making (or missing) the winning touchdown are so common that they might be written by any number of people. Tell the story that only you can tell.
- Write with focus. Think about the main point you wish to make, the most important information you want your reader to know, and write with that theme in mind.
- Throw out your thesaurus. It may be tempting to use scholarly words but telling your story in a simple and concise fashion is most likely to hold your reader's interest. Don't let vocabulary that does not reflect you detract from your message.
- Read your essay aloud to someone. Hearing the essay contents spoken aloud will help you to assess how well the story flows, reveal grammatical errors, and ensure that your message is coming through. Resist the urge to have adult friends and relatives "tweak" your essay. It needs to sound like you.
- Enlist a proofreader. Ask someone you trust to look over your essay for grammatical and spelling errors. Don't trust your work to "spellcheck" alone.

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