When asked, most high school students have never heard about actuarial science, let alone the educational pathways needed to enter the college major or progress into a career. In fact, many adults are not familiar with the actuarial field, which happens to be one of the more lucrative careers. What does an actuary do? Actuaries are math-proficient professionals who analyze data and statistics to make predictions and calculate risks for a variety of companies and industries. Insurance companies use actuaries to calculate premiums and pay out amounts for accidents. Pharmaceutical companies determine efficacy of new drugs based on actuarial calculations. Elections can be lost and won with the help of actuaries. Professional sports recruiters decide on which players will be best to bid for in a pro sports draft to maximize their chances in a future championship season. Actuaries work in many fields and diverse industries, and as data collection and analysis becomes more and more valuable, so are people with advanced math skills.

Back in 2018, the College Access office collaborated with professional actuarial organizations to show off this interesting and lucrative career to Chicago high school students. We held a series of career exploration events which illuminated the actuarial field and the academic pathways students need to pursue to become an actuary. We collaborated with DePaul’s actuarial science department to provide guidance and mentoring to Chicago’s math-proficient students interested in the field.
The events we organized benefitted both high school students, who learned about a new career option, and college majors, as well as the actuarial organizations who are working to recruit a diverse workforce for the future. College Access works with underrepresented student populations, largely with students of color, which is exactly what is needed to bring in new talent to the actuarial field.

In 2018, actuaries made a median salary of $102,880. The best-paid 25 percent made $141,760 that year, while the lowest-paid 25 percent made $76,720. The median per hour wage is $52 and the job outlook for the field is growing at an above average rate of 18%. Typically, actuaries work full time in an office setting but some actuaries who work as consultants may travel to meet with clients. Actuaries need a bachelor’s degree, typically in mathematics, actuarial science, statistics, or some other analytical field. Students must complete coursework in economics, applied statistics, and corporate finance, and must pass a series of exams to become certified professionals. Typically, students will want to have passed at least one or two of the actuarial exams before job-seeking in the actuarial field. However, some jobs will hire you as a trainee and allow you to work as you study and pass the series of exams. Students also should take classes outside of mathematics and business to prepare them for a career as an actuary. Coursework in computer science, especially programming languages, and the ability to use and develop spreadsheets, databases, and statistical analysis tools, are valuable. Classes in writing and public speaking will improve students’ ability to communicate in the business world.

Two professional societies—the Casualty Actuarial Society (CAS) and the Society of Actuaries (SOA)—sponsor programs leading to full professional status. The CAS and SOA offer two levels of certification: associate and fellow. The CAS certifies actuaries who work in the property and casualty field, which includes automobile, homeowners, medical malpractice, and workers’ compensation insurance. The SOA certifies actuaries who work in life insurance, health insurance, retirement benefits, investments, and finance. Both professional societies require applicants to complete certain educational coursework in economics, finance, and mathematical statistics while in college.

High school students should be proficient in mathematics and focus on taking as many advanced math courses available at their school. Courses such as pre-calculus and trigonometry are recommended. If students have the opportunity to take dual-enrollment/dual-credit college level math or statistic courses while in high school, it could support proficiency prior to enrolling into college.

Due to the COVID-19 pandemic we had to redesign the High School Actuarial Day event to make it virtual. College Access is once again partnering with the actuarial organizations for a career exploration in actuarial science, which will be hosted via Zoom and Google Classroom in select Chicago high schools during the week of February 8-12, 2021. This time, it will be a Virtual High School Actuarial Week to allow more flexibility to teachers and high school counselors on fitting this event within their already full school days.

Our 2021 Actuarial Science Week was held February 8th through February 12th. Over 40 actuary science professionals participated in the event facilitating programming for more than 200 students. Students and staff from four high schools joined the virtual festivities including Leo Catholic High School, DePaul College Preparatory High School, John F. Kennedy High School, and Prosser Career Academy.

You can read more about the 2018 event here.
Feel free to browse the articles linked below for more information on Actuarial Science.

For more information about the actuarial majors at DePaul:
Math and Actuarial Science student organizations at DePaul:

The DePaul Gaming League is the Esports program’s recreational gaming league. DGL hosts a number of single-day tournaments throughout the school year, and DePaul community members are welcomed to sign up to participate. Tournaments span a variety of PC and Console games, including Rocket League, League of Legends, Overwatch, Valorant, Mario Kart, and Super Smash Bros.
**PEER GUIDE SPOTLIGHT: A STUDENT PERSPECTIVE ON CYBERSECURITY**

By Samuel Oden

My name is Samuel Oden. I am a sophomore at DePaul, studying Cybersecurity. Before choosing DePaul I’ve always wanted to be a Software Engineer, until my Junior year of high school where I was selected to do a summer program at DePaul called College Connect. With my interest in the STEM field, they offered a Cybersecurity course and I couldn’t be more thrilled to join.

During that year I met an influential professor, Dr. Sherevski, who is a Grad professor for Cybersecurity at DePaul. The engaging tasks of using the Linux program, breaking through firewalls, creating firewalls, learning the basics of hacking, etc... The College Connect program brought a lot of insight into actually studying Cybersecurity. During my first two years as a student at DePaul, they have offered a wide variety of sources and classes while being in the STEM field, providing critical information about the career field. I have focused on programming languages such as Python, and soon Java. While also taking different technical Networking courses such as “Introduction to Local Area Networks” and “Applied Networks & Security”. Researching my requirements I have found that there will be more of an immersive experience by my Junior and Senior year with systems and security-based courses.

Occupations consist of roles like a Security Analyst, Security Engineer, Security Architect, Security Administrator, Security Software Developer, with an average salary of around 70-90k a year, which can increase throughout your experience in the field. I have even been told by professors that the National Security Agency(NSA) is also a great place to have a career in, working for the government, etc... Being formally from a CPS school, I didn’t get a lot of exposure to what I’m studying now, so DePaul’s STEM programs have helped me significantly so far into finding what I want to specialize in and make this a fun learning experience in the process as well.

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**S.T.E.M RESOURCES**

**DePaul Resources:**
- College Connect Summer Program

**College Connect Summer Enrichment Program**

**External Resources:**
- Actuarial Science at DePaul Video
- Actuarial Summer Academy
- Make it at DePaul
- DePaul's Master's in Artificial Intelligence
- The Summer CHA Programs
- The Game, Cinema, & Animation Summer Academy

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