Computer Information Systems · Information Systems Audit and Control · Actuarial Sciences · Data Analytics · Mathmatical Sciences

FIVE STEM MAJORS

Bentley's STEM Majors Bring New Advantages to a Business Education

Bentley University's five STEM-designated undergraduate majors provide distinct advantages to business students looking for a science- or technology-related career.

Bentley offers five degrees with the designation: Computer Information Systems, Information Systems Audit and Control, Actuarial Science, Data Analytics, and Mathematical Sciences.

By incorporating a STEM focus into Bentley's innovative business university curriculum, students gain an advantage in the job market. "In the business world, the application of technology is prominent across every industry. Knowing how different types of systems work across different industries is crucial," says Computer Information Systems major, Joshua Steigerwald '21, from Naples, Florida. "As long as technology is used I will always have a job in the future. Also, I have a love for computers and it comes to me naturally."

Extended Training For International Students

The designation has international implications, as well. While all international students are eligible to obtain Curricular Practical Training (CPT) to take advantage of both paid and credit-bearing internship opportunities during their studies, international students undertaking a STEM degree are also eligible for an extended Optional Practical Training (OPT) period at the completion of their studies.

"With a STEM degree, international students will now have the ability to extend that training period by 24 months," says Suzanne Cuccurullo, dean of Undergraduate Admission at Bentley University. "This can really help students in terms of getting valuable professional work experience and, perhaps the ability to work with their employer on obtaining an H1B working visa."

The extended training gives international students an advantage over non-STEM graduates.

"The biggest value you get is the possibility of a two-year extension on your OPT," says Eugenia Yanes Barreto '20, a Computer Information Systems major from Valencia, Venezuela. "While I chose my major mostly because I love it, the extension had a great appeal to my parents when I presented the idea.

"It is a great incentive for employers to consider hiring you over other international candidates," she adds.

Opening Doors In Business And Technology

Domestic students get a leg up with a STEM-designated major, too. Nicole Perez Torres '20, originally from Quito, Equador, is a Computer Information Systems major with a Health and Industry Liberal Studies major and minor in Finance.

"It is a harsh reality, but there is a significant gender gap in the STEM workplace as the percentages of women that are graduating with such a major remain low when compared to average. However, there are many companies that are willing to promote women inclusion and are commonly sponsoring multiple initiatives to achieve this."

While interning with Deloitte sophomore year, Nicole took part in the WINning program, which focuses on a series of workshops to help female college students create a professional network with top female Deloitte executives. Later internships with EY have introduced her to the EY Professional Women's Network.

The skills acquired as a STEM major have also contributed greatly to Nicole's business education, giving her exposure to such top tools as Access/Oracle database management and Java/Python coding and programming.

"I'm not only learning how to perform specific tasks, but growing into an analytical thinker who enjoys problem-solving exercises," she says. "I consider these skills to be critical for a business career, as businesses are constantly evolving and facing new challenges."

STEM-Designated Majors at Bentley

Data Analytics

The ability to work with numbers and data is critical to the modern workforce. Every area of business, science, entertainment and, increasingly, the humanities is becoming more data-driven. And, as the field of business analytics grows, so does the demand for qualified professionals with deep analytical experience. In fact, Forbes magazine reports that, while today's business leaders have more and more data at their fingertips, they lack the highly skilled workforce needed to harness this information and turn it into successful practice.

The Data Analytics major prepares graduates to add value to any organization through quantitative decision-making from both structured and unstructured data.

Curriculum was heavily influenced by market research on the skills and experience you'll need to get ahead in this emerging field. Coursework combines mathematical modeling and business-world pragmatism, including a mix of statistics, computer science and mathematics.

Actuarial Science

Our Actuarial Science major prepares you to excel in a field that is actively seeking talented, analytically oriented students who understand mathematics and financial theory. Actuaries are highly sought after by companies that analyze large amounts of historical data to assess risk and forecast long-term patterns. You will gain a strong foundation in the discipline through courses that emphasize math, finance and risk management.

The mix of business and traditional actuarial science experience is a valuable skill set for employers. With a Bentley degree in Actuarial Science, you not only will develop excellent analytical skills, but also understand how this important information relates to an organization's broader operations. You all will learn how to communicate these complex issues to all levels of your organization.

In addition, the Actuarial Science major offers preparation for up to four actuarial exams (Exams P, FM, IFM and LTAM) and all of the necessary VEE (Validation by Educational Experience) credit.

Information Systems Audit and Control

In today's business world, many traditional accounting functions are now performed in systems that require a specialized set of technical and financial knowledge. The major in Information Systems Audit and Control (ISAC) provides you with an opportunity to combine your interests in accounting and technology — and develop a distinct set of expertise in high demand by businesses.

As an ISAC major, you will take courses in accountancy, computer information systems, and information and process management. You will learn about accounting principles and concepts, and receive specialized education about accounting information systems and auditing. Other required courses focus on security, enterprise systems, design and data management.

Computer Information Systems

Successful business strategies in 21st century organizations depend on integrating information technology in planning, production, marketing and management. Bentley's Computer Information Systems (CIS) graduates are among the most highly sought-after business professionals in today's job market.

Our CIS degree focuses on essential information technologies, providing specific expertise to analyze, design and develop information systems ranging over all business functions, and across every industry. You also will learn how to recognize the ethical implications in all business decisions and how to incorporate these considerations into business decision-making.

Mathematical Sciences

Businesses need people who can collect and understand data, reason analytically and apply mathematical models to real-world problems. Our Mathematical Sciences major equips you with these important skills by focusing on applications of mathematics and statistics. In addition, you'll complete a Business Studies major or minor, providing a background in business fundamentals. This combination of strong quantitative skills and business fundamentals is highly attractive to a broad range of employers.

As one of the nation's leading business schools, our combination of both math and business courses provides a strong theoretical and practical background that is in demand by today's leading organizations.

STEM OPT Extension

Optional Practical Training (OPT) is temporary employment that is directly related to an F-1 student's major area of study. Eligible students can apply to receive up to 12 months of OPT employment authorization before completing their academic studies (pre-completion) and/or after completing their academic studies (post-completion). However, all periods of pre-completion OPT will be deducted from the available period of post-completion OPT.

If you have earned a degree in certain science, technology, engineering and math (STEM) fields, you may apply for a 24-month extension of your post-completion OPT employment authorization if you:

- Are an F-1 student who received a STEM degree included on the STEM Designated Degree Program List (PDF)
- Are employed by an employer who is enrolled in and is using E-Verify
- Received an initial grant of post-completion OPT employment authorization based on your STEM degree