

Here is a fun logic problem for cooperative logic groups to begin with:

A snail begins climbing up from the bottom of a thirty-foot deep well. The snail can climb up three feet each hour. However, the snail gets so tired from the effort that at the end of the hour it slips down two feet. How long will it take the snail to get out of the well?

Answer:

The answer is 28 hours. The snail climbs one foot per hour. After 27 hours the snail is 27 feet up the well wall. During the next hour the snail climbs up 3 feet and exits the well. It does not slide down 2 feet at the end.

College Connection

Santa Clara University

Editor’s note: *This dialog with Dan Lewis of the Computer Engineering Department at Santa Clara University is a continuation of our series of interviews with CSTA institutional members. Please share with your students these details about the computer science (CS) programs at Santa Clara University.*

Santa Clara University is a comprehensive Catholic, Jesuit university that provides a values-oriented curriculum to about 4,600 under-graduate students and 3,300 graduate students. For the 20th consecutive year, Santa Clara was ranked second among Master’s universities in the West in *U.S. News & World Report*. Students in the Department of Computer Engineering are offered two BS programs in Computer Science and Engineering (BSCSE) and Web Design and Engineering (BSWDE), as well as MS and PhD programs in Computer Science and Engineering, and an MS program in Software Engineering.

CSTA: What draws students to your program and what keeps them there?

Lewis: Santa Clara University is known for its quality academic programs, small classes taught by full-time faculty, personalized attention, and a beautiful campus located in the midst of Silicon Valley. Undergraduates in computing acquire extensive “hands-on” experience through our laboratory-intensive curriculum and project-based courses, and have excellent opportunities to participate in faculty research and for co-op work assignments in the local high-tech industry.

CSTA: What skills can students acquire before college that will help them succeed in your program?

Lewis: No prior courses in computing are necessary, but strong analytical and quantitative skills are essential. Students who did well with courses that require logical thinking (like geometry) usually also do well in computing.

CSTA: What cool careers are your graduates prepared for?

Lewis: Our graduates often take jobs in Silicon Valley at such companies as Apple, Cisco, HP, IBM, Sun, or one of the many startups, while those interested in graduate school have been admitted to schools such as Johns-Hopkins, Carnegie-Mellon, Stanford, UC Santa Cruz, Colorado, Cornell, and Georgia Tech. With their understanding of the relationship between the Web and society, our BSWDE graduates are not only prepared for technical jobs in information architecture and databases, network

engineering, user interface design, and overall system design, but also for positions in online journalism, online commerce, social and/or political networking, or Internet marketing.

CSTA: What topics will students study?

Lewis: All Santa Clara students follow a common university core—a collection of courses designed to prepare students to become thoughtful, ethical leaders in our fast-paced technological world. BSCSE students study software and hardware as well as the mathematical foundations of computation, with concentration options in information assurance, game development, robotics, and Web technologies. The BSWDE combines computing with graphic art and Web-related courses in communication and sociology to produce graduates who can analyze, design, and improve the computational infrastructure of the Web. These graduates can develop interactive multimedia content that is appealing, engaging, effective and easy to use, and which is guided by an understanding of and sensitivity to the social, political, ethical, and legal relationships between their work and those that it affects.

CSTA: Tell us a bit about the social environment of the program.

Lewis: A strong “esprit de corps” exists among our students, fostered through an active student ACM chapter and a number of departmental activities attended by both faculty and students, including a freshman lunch series, field trips to and guest speakers from Silicon Valley companies, a senior design contest and dinner, and the end-of-year barbeque. Students enjoy the San Francisco Bay Area’s Mediterranean climate, and often spend their weekends on the beach or skiing at Lake Tahoe.

CSTA: What distinguishes your school and program from others?

Lewis: Santa Clara University’s Jesuit commitment to educating the whole person in an environment that is academically excellent and ethically oriented sets us apart. Our students enjoy small class sizes of about 20 students, close personal attention due to a student-faculty ratio of 12:1, and unusual opportunities made possible by our proximity to Silicon Valley industry. In addition, Santa Clara’s BSCSE and BSWDE programs offer unique options within a regular four-year program for a one-quarter study abroad, a six-month co-op work experience, or a head start on a graduate degree through our combined five-year BS/MS option.

More information is available at www.scu.edu/engineering/cse.

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Bachelor Degrees awarded in 2007

Business	327,531
Social sciences and history	164,183
Education	105,641
Health professions and related clinical sciences	101,810
Psychology	90,039
Biological and biomedical sciences	75,151
Engineering	67,092
Computer and information sciences	42,170

Source: U.S. Department of Education,
National Center for Education Statistics
nces.ed.gov/programs/digest/d08/tables/dt08_271.asp