Computer Engineering

Computer Engineering is at the core of emerging technology in today’s world. Developments in cell phones, computers, and robotics have changed our lives. Valparaiso University’s Computer Engineering program supplements core engineering courses with advanced computer topics that prepare graduates to work in these dynamic fields.

You will explore applications for software, hardware and network systems while benefitting from a strong foundation in electrical engineering. Finally, you will be equipped for a career in digital design, embedded microcontrollers, computer architecture, computer networks, computer-aided design, and software development.

Committed to providing an outstanding undergraduate education, the Valparaiso University College of Engineering goes beyond developing technical competence. The Computer Engineering program strives to develop engineers with the insight and capability to produce products and systems that responsibly address social issues and use world resources wisely. Students are encouraged to develop teamwork and communication skills while engaging in hands-on laboratories taught by faculty.

In the Gellersen Center, undergraduate Computer Engineering students use state-of-the-art equipment in the electronics lab and the recently renovated and expanded digital systems laboratory. These facilities will be enhanced in fall 2011 with a 13,470-square-foot expansion of the Gellersen Center, the Donald V. Fites Engineering Innovation Center, which provides meeting and design spaces for senior Computer Engineering majors to collaborate with team members in Electrical and Mechanical Engineering.

Valpo is one of very few undergraduate institutions to own a virtual reality system. VisBox X2 allows Engineering students to visualize a project in three dimensions and aids in learning to perform computer-aided design and drafting, useful tools in professional situations.
Valparaiso University
College of Engineering
alumni are highly sought after by employers and graduate schools, earning consistent placement rates in the high 90 percent range every year — and 100 percent in eight out of the last 16 years.

Matthew Schuchhardt ’09 — Graduate school, Computer Engineering, Northwestern University, Evanston, Ill.

Christopher Handley ’09 — Applications Engineer, Okaya Electric America Inc.

Michael Kresca ’07 — Associate Engineer, Caterpillar Inc.

Michael Shine ’04 — Electronics Engineer, Federal Aviation Administration

Valparaiso University admits students of any race, color, national or ethnic origin, age, gender, disability, sexual orientation, or religion. (For full statement, see valpo.edu.)

Exceptional Faculty

All members of the departmental faculty hold PhDs. Most have extensive professional engineering experience, and all are entirely dedicated to undergraduate education. Expertise in the department spans the areas of computer simulation, microcontrollers, computer networks, robotics, nanoelectronic device design, and more, in a learning environment in which students benefit from small class sizes. Three members of the Computer and Electrical Engineering department have received university-wide awards to recognize their excellence as teachers and mentors.

Beyond-the-Classroom Opportunities

Internships and Co-ops — More than 75 employer-partners in 20 states participate in Valpo’s faculty-directed cooperative education program. Additional sites provide internship opportunities.

Research Opportunities — Students in the Computer Engineering program have the opportunity to work on undergraduate research projects with departmental faculty during the summer.

NanoK12 — Electrical and Computer Engineering students have worked to develop training material suitable for a nanotechnology program geared toward elementary and secondary school students, and teaching those students themselves.

Senior Design Project — A multidisciplinary senior design project allows Computer Engineering students to work on projects in teams with Electrical and Mechanical Engineering students, creating a real-world working environment.

Hesse Learning Resource and Assessment Center — The Hesse Center provides one-on-one tutoring for students in subjects including engineering, calculus and physics.

Recent Alumni

Valparaiso University College of Engineering alumni are highly sought after by employers and graduate schools, earning consistent placement rates in the high 90 percent range every year — and 100 percent in eight out of the last 16 years.

Matthew Schuchhardt ’09 — Graduate school, Computer Engineering, Northwestern University, Evanston, Ill.

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Learn More — In Person

Personal visits to the College of Engineering include individual meetings with faculty members. Call Valpo’s Office of Undergraduate Admission at 888.GO.VALPO or 219.464.5011 to schedule a visit. Find out more information on visits at valpo.edu/visit, and learn about Valpo students’ personal stories and experiences at valpo.edu/whatsyourpart.

Extracurricular Activities, Special Programs and Events

Design Expo — Each spring, Engineering students showcase their research and design projects.

Engineers Without Borders — Valpo’s chapter of this national organization is currently working with the village of Maesera in the Kilema district of northern Tanzania on a dual project to rehabilitate a local irrigation canal and provide sources of clean drinking water nearby every household. The Valparaiso University chapter was named the best in the nation in 2005.

Humanitarian Engineering — With this minor, students apply engineering concepts to help disadvantaged communities.

Society of Women Engineers — Valpo’s nationally recognized chapter of this organization promotes the advancement of women in the field of engineering. SWE members participate in service events, field trips, and other fun-filled activities.

Taum Beta Pi — Participation in exceptional service projects by Valpo’s chapter of this national engineering honor society is rewarded with undergraduate scholarships. The chapter was recently awarded a three-year scholarship for outstanding service performed from 2007-2010.

Valparaiso Independent Robotics Team — VIRT participants compete in the renowned Jerry Sanders Creative Design Competition. Valpo teams placed first in design and third overall in the 2010 event.

Institute of Electrical and Electronics Engineers — The IEEE promotes technological innovation through conferences, publications, technology standards, and related activities. Valpo students have participated in an IEEE professional ethics competition.