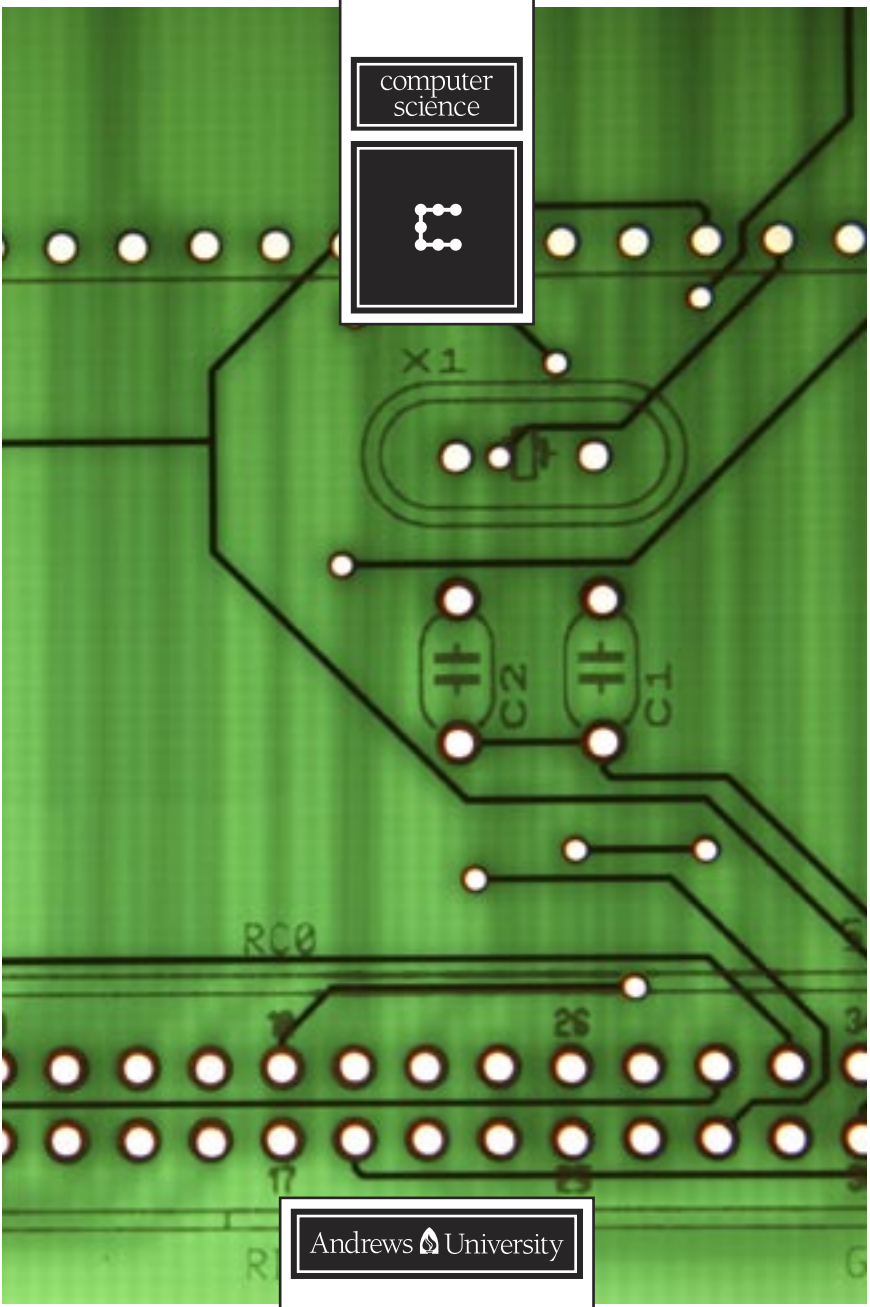
computer
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Andrews University

COMPUTER SCIENCE

COMPUTER SCIENCE IS ONE OF THE MOST LUCRATIVE FIELDS ON THE MARKET TODAY.

The Andrews University Engineering and Computer Science Department offers a Bachelor's degree in Computing with an emphasis in Computer Science or Software Systems. Andrews Computing students get the opportunity to work interactively in a real-world environment on projects that range from computer graphics to web applications.

COMPUTER SCIENCE

Why Computer Science?

Since the area of Computing is so vast, potential students are sometimes confused as to what computing is all about. So what is Computing? Contrary to popular belief, the field of Computing:

Involves Working with People as well as Computers

Whether you lead research and development teams in a high tech lab, or care for the database and networking needs of a corporate clientele, Computing is certainly one of the most people-oriented disciplines that exists.

Offers Job Security in a Variety of Positions

The U.S. Bureau of Labor Statistics has actually predicted a workforce crisis over the next decade due to faster than average employment growth and a shortage of labor in computer related fields (www.bls.gov.) According to the online 2004 statistics, systems administration, support specialists, and similar computer related occupations account for seven of the top ten fields for fastest employment growth. The fact is that, with the computer as the indisputable tool of the future, you couldn't pick a field with more career options than Computing.

Is Versatile

If you want to be versatile and marketable, Computing is the perfect choice, as one of the most dynamic and applicable fields. It can open up job opportunities in so many different work environments that the selection is often overwhelming. Indeed, nowadays it's difficult to find anything that does not have a team of computing professionals behind it. A Computing degree, therefore, enables you to work in any field you like.

COMPUTER SCIENCE

OUR MISSION

We aspire to be a place of choice for engineering and computer science education where dedicated students and faculty grow together to reach their God-given potential for service to society and the church. We embrace a thoughtful respect for diversity of viewpoints, a caring stewardship for our God-given home, a marked excellence in our chosen vocations and a profound faith in the leadership of God in our lives. We commit ourselves to the creation of a nurturing environment where all students willing to work diligently will succeed.

"ANDREWS UNIVERSITY NOT ONLY PROVIDED THE TOOLS TO BE SUCCESSFUL THROUGH ACADEMIC TRAINING BUT PROVIDED QUALITY, HANDS-ON WORK EXPERIENCE THAT ENSURED MY CREDIBILITY IN THE WORK PLACE AS A NEW COLLEGE GRADUATE. "
-KURT F. ALLEN,
SYSTEMS ANALYST, WHIRLPOOL CORP.

CHOOSE ANDREWS

ANDREWS HAS ALWAYS BEEN ON THE CUTTING EDGE OF COMPUTING PROGRAMS

Choose Andrews

Andrews University has always been on the cutting edge of Computing programs, offering opportunities that you'd be hard pressed to find anywhere else. Read on to discover more about the Andrews Advantage.

Outstanding Faculty

The greatest strength of the Andrews University Computing program is its faculty. As a computing major, you'll study under a dedicated and reputable team of experts, whose scholarly achievements and qualifications speak for themselves. But perhaps more importantly, this academic excellence is packaged within a Christian, family-like setting. This allows you to freely interact with professors who are not only dedicated to your academic development, but also to your personal and spiritual development.

Amazing Atmosphere

Those who come to the Andrews University Engineering and Computer Science Department for the first time soon discover that it has a personality of its own. For starters, the surprising level of cultural diversity offers a unique cosmopolitan flavor that you wouldn't expect to find outside a large state university. In the Computing program, you'll work alongside students and teachers from places like Kenya, Norway, and Singapore. More importantly, a unifying Christ-centered philosophy helps fuse this diverse international crowd into a close-knit Christian family- one that hangs together both in and out of the classroom.

OUR STUDENTS ARE CHALLENGED:

- To identify, formulate, and solve engineering and computing problems, and to design and carry out experiments that will support these solutions,
- To apply the theories of science, mathematics, engineering, and computing in order to creatively design practical and economical solutions to defined problems,
- To work effectively in teams with other disciplines to generate design solutions that are sensitive to societal values and environmental impact,
- To develop broad competencies and focused proficiencies in their chosen discipline and to demonstrate skills in the use of modern engineering and computing tools,
- To advance in their disciplines through research and internships, to address contemporary issues, and to adopt the practice of life-long learning,
- To practice critical thinking and effective communication,
- To demonstrate high professional and ethical values in their work,
- To achieve a well-rounded, Christ-centered life perspective through the integration of the entire curriculum.

CHOOSE ANDREWS

First-Rate Facilities

Learning about Computing requires not only capable teachers, but also the proper tools. The Andrews University Engineering and Computer Science Department computer lab is stocked with state-of-the art computers running modern operating systems. Computing students also have access to the available engineering labs.

Unique Opportunities

It's hard to top the facilities, atmosphere, and professors you'll find, but that's not all that the Andrews University Engineering and Computer Science Department has to offer. The structure of the program itself creates unique educational opportunities for students. For example, one innovation you'll find at Andrews is the combination of Computer Science and Engineering into a single department. The synthesis of these two complementary programs enables students to gain a more unified, real-world understanding of the field as they interact on projects and research.

The Andrews Advantage

The Andrews University Computing Program clearly offers an unparalleled academic experience. It is therefore no surprise that the Andrews University Engineering and Computer Science Department has earned a reputation for excellence in the computing field and graduates have had little trouble moving into the workforce. As a Computing major, you could join the more than 800 Andrews Computer Science alumni who are currently employed in the field. They all got their start right here by recognizing the Andrews Advantage.

COMPUTER SCIENCE

Degree Programs

BS: Computing

- Emphasis in Computer Science
- Emphasis in Software Systems
- Minor in Computer Science

Career Info

A computing degree can take you practically anywhere. Here are a few of the employment options you'll have:

- Computer Programmer
- Computer Applications Software Engineer
- Computer Support Specialist
- System Administrator
- Computer Systems Analyst
- Database Administrator
- Computer Teacher
- Networking
- Web Application Developer

ANDREWS COMPUTING PROGRAM CLEARLY OFFERS AN UNPARALLED ACADEMIC EXPERIENCE

CURRICULUM GUIDES:

CLICK TO SEE GUIDE

- Bachelor of Science: Computing With a Computer Science Emphasis
- Bachelor of Science: Computing With a Software Systems Emphasis

BACHELOR OF SCIENCE IN COMPUTING:
COMPUTER SCIENCE EMPHASIS

COMPUTER SCIENCE focuses on a study of the computer as well as on its role in an application area. Areas of interest include artificial intelligence, compilers, computer architectures, computer graphics, computer networks, operating systems, program development, and analytical theory. A degree in Computing with the Computer Science emphasis prepares students for graduate study, employment in computer systems/networks, administrative/development, software development/maintenance, and for careers in education.

Freshman Year—1st Semester		Total Credits	16CR
CPTR151	COMPUTER SCIENCE I		4CR
MATH141	CALCULUS I		4CR
HIST117	CIVILIZATIONS & IDEAS I		3CR
GEN ED	SCIENCE		4CR
HLED120	FITNESS & WELLNESS		1CR

Freshman Year—2nd Semester		Total Credits	17CR
CPTR152	COMPUTER SCIENCE II		3CR
MATH142	CALCULUS II		4CR
GEN ED	SCIENCE		4CR
ENGL115	ENGLISH COMPOSITION		3CR
RELT100	GOD AND HUMAN LIFE		3CR

Sophomore Year—1st Semester		Total Credits	16CR
GEN ED	RELIGION		3CR
CPTR276	DATA STRUCTURES & ALGORITHMS		3CR
PEAC	PHYSICAL ACTIVITY		1CR
ENGL215	ENGLISH COMPOSITION		3CR
COMM104	COMMUNICATION SKILLS		3CR
CPTR460	SOFTWARE ENGINEERING		3CR

CURRICULUM GUIDE

Sophomore Year—2nd Semester		Total Credits	15CR
MATH355	DISCRETE MATH		3CR
CPTR467	DATABASE CONCEPTS & THEORY		3CR
GEN ED	SOCIAL SCIENCE		3CR
IDSC211	CREATIVITY & THE ARTS		3CR
GEN ED	COMPUTING ELECTIVE		3CR

Junior Year—1st Semester		Total Credits	16CR
CPTR440	OPERATING SYSTEMS OBJECT-ORIENTED		3CR
CPTR427	PROGRAMMING MICROPROCESSOR		3CR
ENGR385	SYSTEMS		3CR
PEAC	PHYSICAL ACTIVITY		1CR
HIST118	CIVILIZATIONS & IDEAS II		3CR
GEN ED	RELIGION		3CR

Junior Year—2nd Semester		Total Credits	16CR
ENGR310	PHILOSOPHY OF SERVICE		2CR
STAT340	COMPUTING ELECTIVE		3CR
CPTR152	PROBABILITY THEORY w/STAT APPLICATION		3CR
GEN ED	SOCIAL SCIENCE		3CR
ELEC	ELECTIVE		4CR
GEN ED	SCIENCE		1CR

Senior Year—1st Semester		Total Credits	17CR
ENGR491	PROGRAMMING LANGUAGES		3CR
ENGR450	FIELDWORK		2CR
ELEC	COMPUTING ELECTIVE		3CR
ELEC	ART/HUMANITY		3CR
GEN ED	RELIGION		3CR
ELEC	ELECTIVE		3CR

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CURRICULUM GUIDE

Senior Year—2nd Semester		Total Credits	12CR
ENGR492	FORMAL THEORY OF COMPUTATION		3CR
ELEC	COMPUTING ELECTIVE		3CR
ELEC	ELECTIVE		3CR
ELEC	ELECTIVE		3CR

Total Credits Needed for Graduation: 125CR

Suggested course outline: It may not be necessary to take these courses in the order shown. An academic advisor will consult with you in this regard.

CONNECT

Details on courses for the Computer Science major as well as general education requirements for the degrees are available on our website, www.andrews.edu/COT or in the Andrews University Bulletin. Apply online or download an application at connect.andrews.edu.

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WEB: WWW.ANDREWS.EDU/COT

ENROLLMENT MANAGEMENT
PHONE: 800.253.2874
EMAIL: ENROLL@ANDREWS.EDU
WEB: CONNECT.ANDREWS.EDU

BACHELOR OF SCIENCE IN COMPUTING:
SOFTWARE SYSTEMS EMPHASIS

SOFTWARE SYSTEMS is an applied study of computing, focusing on the development and maintenance of software in an application area. A minor in an application area is included as a part of the degree. Typical minors might include one of the sciences, behavioral science, or business. Supervised "real world" projects are a requirement for this degree. A degree in Computing with Software Systems emphasis prepares students for employment in developing and maintaining commercial applications and for graduate studies in applied computing such as software engineering.

Freshman Year—1st Semester		Total Credits	16CR
CPTR151	COMPUTER SCIENCE I		4CR
ELEC	COURSE FOR MINOR		3CR
BHSC100	PHILOSOPHY OF SERVICE		2CR
IDSC321	SCIENTIFIC INQUIRY		3CR
RELT100	GOD & HUMAN LIFE		3CR
HLED120	FITNESS & WELLNESS		1CR

Freshman Year—2nd Semester		Total Credits	15CR
CPTR152	COMPUTER SCIENCE II		3CR
MATH182	CALCULUS w/APPLICATIONS		3CR
IDSC322	SCIENTIFIC INQUIRY II		3CR
ENGL115	ENGLISH COMPOSITION		3CR
HIST117	CIVILIZATION & IDEAS I		3CR

Sophomore Year—1st Semester		Total Credits	16CR
GEN ED	RELIGION		3CR
CPTR276	DATA STRUCTURES & ALGORITHMS		3CR
PEAC	PHYSICAL ACTIVITY		1CR
ENGL215	ENGLISH COMPOSITION		3CR
COMM104	COMMUNICATION SKILLS		3CR
CPTR460	SOFTWARE ENGINEERING		3CR

CURRICULUM GUIDE

Sophomore Year—2nd Semester		Total Credits	15CR
MATH355	DISCRETE MATH		3CR
CPTR310	DATABASE APPLICATION PROGRAMMING		3CR
GEN ED	SOCIAL SCIENCE		3CR
IDSC211	CREATIVITY & THE ARTS		3CR
ELEC	COURSE FOR MINOR		3CR

Junior Year—1st Semester		Total Credits	16CR
CPTR440	OPERATING SYSTEMS OBJECT-ORIENTED		3CR
CPTR427	PROGRAMMING		3CR
CPTR450	NETWORK COMPUTING & ARCHITECTURE		3CR
PEAC	PHYSICAL ACTIVITY		1CR
HIST118	CIVILIZATIONS & IDEAS		3CR
GEN ED	RELIGION		3CR

Junior Year—2nd Semester		Total Credits	16CR
ELEC	GEN ED		3CR
ELEC	COMPUTING		3CR
ELEC	COURSE FOR MINOR		3CR
GEN ED	SOCIAL SCIENCE		3CR
ELEC	COURSE FOR MINOR		3CR
GEN ED	SCIENCE		1CR

Senior Year—1st Semester		Total Credits	16CR
CPTR466	GROUP PROJECT		2CR
BHSC300	FIELDWORK		2CR
ELEC	COMPUTING		3CR
ELEC	ART/HUMANITY		3CR
GEN ED	RELIGION		3CR
ELEC	COURSE FOR MINOR		3CR

021208

CURRICULUM GUIDE

Senior Year—2nd Semester		Total Credits	15CR
ENGR492	PROBABILITY THEORY w/STAT APPLICATION		3CR
ELEC	COMPUTING		3CR
ELEC	COMPUTING		3CR
ELEC	COURSE FOR MINOR		3CR
ELEC	COURSE FOR MINOR		3CR

Total Credits Needed for Graduation: 125CR

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