

COMPUTER SCIENCE

COMPUTER SCIENCE 2013–2014

Why study computer science at the University of Denver?

The department of computer science offers cutting-edge and innovative graduate degree programs. The degree programs are:

- MS in computer science
- MS in computer science systems engineering
- PhD in computer science

The department of computer science is based in the University of Denver's School of Engineering and Computer Science. The school reflects two of the university's strongest traditions: academic integrity and a commitment to meeting student needs with dynamic new programs.

We are strong in research and particularly noted in software engineering, information security and privacy, and humane gaming.

Some of our other outstanding advantages include:

- Small classes taught by faculty, not teaching assistants
- Research-active faculty members who publish regularly, land impressive grants and win teaching awards
- An up-to-date curriculum that includes classes in modern software engineering, Web technology based on Linux and Microsoft servers and applications, Java, multimedia, mobile computing, networks, databases, cyber security and computer game development
- Students who create a peer culture defined by high expectations
- A small yet vital PhD program that enhances the department's intellectual atmosphere

At the University of Denver, you will find opportunities to research, study leading-edge technology and tools, and gain integrated knowledge. We emphasize interdisciplinary programs, so you will be ready to meet career challenges around the office or, if you choose, around the world.

In addition, Denver is a first-rate location for internships and jobs, as well as business and government partnerships. The campus is just minutes from the Denver Technological Center — home to many top tech companies — and we enjoy sweeping views of the Rocky Mountains.

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UNIVERSITY of
DENVER

Computer Science
Department of Computer Science
John Greene Hall, Room 100
2360 S. Gaylord Street
Denver, CO 80208
303-871-2453
<http://www.du.edu/cs>

DEGREE REQUIREMENTS

Type: Undergraduate + Graduate

Degree: BS/MS

The Department of Computer Science at the University of Denver offers a Dual Degree Bachelor of Science and Masters in Computer Science. The BS/MS in Computer Science encompasses the theory and techniques by which information is encoded, stored, communicated, transformed, and analyzed. It is concerned with the theory of algorithms (that is, effective procedures or programs), with the structure of languages for the expression of algorithms, and with the design of algorithms for the solution of practical problems. A central concern is the study of the computer systems (hardware and software) for the automatic execution of these algorithms prepares students for advancement in academic or industrial careers. The program is designed to provide students with a breadth of advanced knowledge in computer science, while permitting them to achieve depth in areas of current interest within the computing field, as well as the emerging technologies that will be gaining importance in the future.

The degree is strongly based in mathematics and, in fact, a student will automatically acquire sufficient credits for a minor in mathematics. One additional minor is required. The second minor may be in any discipline other than mathematics or computer science.

Total Credit Hours

183 (UG) + 36 (MS) qtr. hrs.

Required Courses

COMP 1671 Introduction to Computer Science I
COMP 1672 Introduction to Computer Science II
COMP 2300 Discrete Structures in Computer Science
COMP 2355 Introduction to Systems Programming
COMP 2370 Introduction to Algorithms and Data Structures
COMP 2673 Introduction to Computer Science III
COMP 2691 Introduction to Computer Organization
COMP 3351 Programming Languages
COMP 3361 Operating Systems I
COMP 3371 Advanced Data Structures and Algorithms
COMP 3200 Discrete Structures

Other Requirements

Students who intend to obtain a BS/MS in Computer Science must satisfy all the requirements of the Bachelor of Science degree as outlined in the University of Denver Undergraduate Bulletin. One of the two minor areas required in the B.S. program must be in mathematics. The other minor may be in any field. Upon completion of the BS requirements, the student must satisfy the 36 hours of required coursework for the MS.

The eleven courses listed above total 44 quarter hours. An additional 28 hours of 3000-level computer science electives are required. COMP 2400 or COMP 2901, or COMP 2555 may be used to satisfy 8 credits of the required 3000-level elective credits, but COMP 3904 may not be used in this way. In addition there are 3 COMP courses at the 4000-level (other than COMP 4991) are required of which at least one must be a designated "theory" class and one must be a designated "Advanced Programming" course and completion of three quarters of COMP4600 Seminar (0 credits).

Advanced Programming Requirement

Students must also choose and complete two courses from the following list of COMP courses that include an advanced programming component. Students must complete at least two of the courses listed below at the University of Denver. These courses must be approved by an advisor. The current pre-approved list includes:

COMP 4362 Operating Systems II
COMP 3352 Elements of Compiler Design
COMP 3353 Compiler Construction
COMP 3621 Computer Networking
COMP 3422 Database Organization & Management II
COMP 3801 Introduction to Computer Graphics
COMP 3802 Advanced Computer Graphics

DEGREE REQUIREMENTS (CONTINUED)

Math Minor Requirement

Minimum of 20 quarter hours in MATH courses numbered 1951 or higher. Discrete Structures in Computer Science (COMP 2300) may be counted toward the math minor.

Courses not covered by the foregoing two sentences must be approved in writing by a mathematics faculty advisor.

For students entering DU Fall 2010 or later: At least 50% of the required credit hours for minor must be completed at the University of Denver

All electives, especially the MATH and COMP electives, should be selected in close consultation with an academic advisor from the Computer Science Department. The courses for the non-mathematics minor (see Minor courses above) should be selected in consultation with an academic advisor from the department in which the minor is administered.

Sample Schedule

Year 1	COMP1671: Intro to CS 1 MATH1951: Calculus 1 FSEM Foreign Language 1	COMP1672: Intro to CS2 MATH1952: Calculus 2 WRIT1122 Foreign Language 2	COMP2673: Intro to CS3 COMP2300: Discrete Structures WRIT1133 Foreign Language 3
Year 2	COMP2370: Data Structures & Algorithms MATH 2XXX/3XXX Elective AI-Natural SI-Natural	COMP2691: Comp Organization COMP2355: Systems Programming AI Society SI-Natural	COMP Elective MATH1953: Calculus 3 SI-Society SI-Natural
Year 3	COMP Elective COMP Elective Minor Course 1 SI-Society	COMP3361: Operating Systems ASEM Minor Course 2 Elective	COMP Elective Minor Course 3 Elective Elective
Year 4	COMP3351: Program. Lang COMP Elective Minor Course 4 Elective	COMP3200: Adv Discrete Structures Minor Course 5 Elective Elective	COMP3371: Adv Data Structures & Algorithms COMP Elective Elective
Year 5	COMP3XXX/4XXX Elective COMP 4XXX Theory COMP4600: Seminar	COMP3XXX/4XXX Adv Programming COMP3XXX/4XXX Elective COMP4600: Seminar	COMP3XXX/4XXX Elective COMP3XXX/4XXX Elective COMP4600: Seminar

DEGREE REQUIREMENTS (CONTINUED)

Type: Graduate
Degree: Master of Science

The MS program in computer science prepares students for advancement in academic or industrial careers. The program is designed to provide students with a breadth of advanced knowledge in computer science, while permitting them to achieve depth in areas of current interest within the computing field, as well as the emerging technologies that will be gaining importance in the future.

Degree Requirements

Requires 48 quarter hours of graduate-level course work including:

COMP 3351 Programming Languages
COMP 3361 Operating Systems
COMP 3371 Advanced Data Structures and Algorithms
COMP 3200 Discrete Structures

3 COMP courses at the 4000-level (other than COMP 4991) are required of which at least one must be a designated "theory" class.

Advanced Programming Requirement

Students must also choose and complete two courses from the following list of COMP courses that include an advanced programming component. Students must complete at least two of the courses listed below at the University of Denver. These courses must be approved by an advisor. The current pre-approved list includes:

COMP 4362 Operating Systems II
COMP 3352 Elements of Compiler Design
COMP 3353 Compiler Construction
COMP 3621 Computer Networking
COMP 3422 Database Organization & Management II
COMP 3801 Introduction to Computer Graphics
COMP 3802 Advanced Computer Graphics

Seminar Attendance Requirement

Students must complete three quarters of COMP4600 - Seminar (0 credits). A passing grade is required for successful completion.

Non-thesis option

A maximum of 12 quarter hours may be earned in Independent Study (COMP 4991), provided the student

can find an advisor for such independent study.
No thesis is required.
Not eligible for support (GTA, GRA)

Thesis Option

A maximum of 12 credits may be earned for thesis credits (COMP 4995).

A thesis is required.

Students should also note the following:

A maximum of 8 quarter hours may be earned in approved courses outside the COMP designation, including transfer credits from another university. Such credit must be approved in writing by an advisor from the computer science faculty. A student receiving any support from the department (GTA, GRA) must complete the degree requirements as per the Thesis option.

Prerequisites

COMP 1671 Introduction to Computer Science I
COMP 1672 Introduction to Computer Science II
COMP 2370 Introduction to Data Structures and Algorithms
COMP 2673 Introduction to Computer Science III
COMP 2691 Introduction to Computer Organization
COMP 2300 Discrete Structures in Computer Science

DEGREE REQUIREMENTS (CONTINUED)

Type: Dual or Joint Degree Programs

Degree: Master of Science in Computer
Science and Engineering

The MS in computer science and engineering is a unique degree, combining curriculums from both computer science and engineering. The degree allows more of a hardware emphasis than exists in traditional computer science master's degrees and more of a software emphasis than existing engineering master's degrees. Detailed information regarding this program may be obtained from the department of engineering.

Degree: Juris Doctorate/Master of Science in
Computer Science (JD/MS)

The JD/MS dual-degree combines curriculums from computer science and law. Detailed information about this program may be obtained from either the Sturm College of Law or the department of computer science.

Type: Graduate

Degree: PhD

The department currently has faculty to support PhD students in the following areas:

- Artificial Intelligence
- Computational Geometry
- Humane Games
- Graphics
- Networks
- Parallel and Distributed Algorithms
- Security and Privacy
- Software Systems Engineering

Total Credit Hours:

90 qrt. hrs.

Degree Requirements applicable to all PhD Students:

- A minimum of 90 quarter hours beyond BA or BS Degree.
- Completion of a written dissertation that makes a significant contribution to the research literature in computer sciences.
- Completion of a tool requirement.
- 3 quarters minimum of COMP4600 – Computer Science Seminar

Additional Degree Requirements applicable to PhD Students without a Master's Degree in Computer Science

- Must complete the requirements of the Computer Science Master's Degree with a thesis option within 3 years (9 quarters).

Additional Degree Requirements applicable to PhD Students with a 2 year Master's Degree in Computer Science or Related Field

- May take a proficiency test in the four required courses for Master's Degree. The test may be offered at a time other than the official final exam time of the term. A grade of B+ (B plus) or better must be obtained in the test.
- If the student chooses not to take the proficiency test, the student must register and attend classes for the four required courses. A grade of B+ (B plus) or better must be obtained in the courses.

Course selection

Of the 90 quarter hours, at least 36 must be at the 4000 level. Up to 24 credits may be taken in other relevant disciplines, as approved by the Computer Science Department Graduate Committee. Courses should be chosen in consultation with, and are subject to the approval of, the student's advisor.

Qualifying & Dissertation Examinations

Qualifying Exam

Every PhD student must pass the Qualifying Exam. It consists of two parts, the Breadth Requirement and the Written and Oral exam.

(a) Breadth Requirement: To fulfill the Breadth Requirement the student must take 5 graded courses (20 Quarter Credits) at the 3000 and 4000 level (not including independent study, internship, or independent research). At most, two may be at the 3000 level. At least three must be at the 4000 level. The course work should cover at least three distinct areas. Five areas should include a sequence of 3000 and 4000 level courses. The GPA in these courses must be at least 3.7/4.0. No course with a grade below a B may be used to fulfill this requirement. Graduate computer science courses taken at another university and transferred for credit at DU may be applied to the Breadth requirement up to a maximum of 2 courses (8 quarter credits).

(b) Written and Oral Exam: Before being admitted to this exam, the student must have fulfilled the Breadth Requirement.

The student selects an area of examination from the list of areas in Table 1. The Written part of the exam is a take home exam. It is handed out on a Friday and is due the following Tuesday. The Oral Exam is held the following Friday. The take home exam consists of a set of research questions, a set of related papers and instructions. The student should prepare a written report of at least 10 but no more than 20 pages with answers to the questions. Study guides or other relevant material to prepare for the exam can be obtained from the chair of the examination committee. The oral portion of the exam is based on a student presentation in which the student explains and

DEGREE REQUIREMENTS (CONTINUED)

defends his/her answers. During the Oral Exam, questions in other areas of computer science may also be asked.

A failed exam may be retaken once (in the same or another area). Sufficiently prior to the exam date, the department chair will appoint an examination committee of three tenure-track faculty. One of the committee members must be in the area in which the examination will be held. The student's advisor is allowed to be on the committee. The committee creates the take home exam and grades it. After the Oral Exam, the committee makes a recommendation to the CS faculty on whether the student passes or fails. If the faculty agrees, the committee recommendation stands. If there is a disagreement, the faculty as a whole decides.

Preliminary Examination

Following successful completion of the Qualifying Examination, each student will prepare a dissertation proposal and take the Preliminary Examination. Passing this examination admits the student to Ph.D. candidacy. The dissertation proposal should be prepared in close consultation with the student's advisor, and should be available to all committee members at least two weeks prior to the examination. It should reflect an extensive critical literature survey, and contain an accurate assessment of the state-of-the-art in the area of research, a precise statement of the problem to be solved, motivation for pursuing the research, and evidence to the effect that there is a good likelihood the problem is solvable with reasonable effort.

For full-time students, the Preliminary Examination must be taken within 5 quarters of passing the Qualifying Examination. Successful completion of the Preliminary Examination results in agreement between the student and the committee as to what will constitute successful completion of the dissertation research. The committee may choose to reconvene the examination to allow the student to further research the problem, complete additional course work, or revise the dissertation proposal document.

The examining committee consists of at least 3 Computer Science faculty members, including the advisor. The preliminary exam is a one hour oral closed exam. If a student passed the preliminary exam, but subsequently switches advisor and hence topic, the preliminary exam must be repeated within one year to ensure capability of the student and feasibility of the project.

Possible Thesis Proposal Outline

1. Intro
 - a. Problem
 - b. Research questions, scope
2. Background
 - a. Lit search
 - b. Open Problems
 - c. Analysis with respect to research questions
3. Approach
4. Preliminary results
5. Plan for completion of work including timeline
6. Risks and risk mitigation
7. References

Dissertation Defense

After the dissertation has been completed, the student must defend it in a final examination, as specified by the Office of Graduate Studies.

Tool requirement

It is strongly recommended that students satisfy their tool requirement by demonstrating proficiency in a modern computer typesetting system suitable for writing technical papers that include mathematical equations and graphics. The faculty advisor must approve the specific system used to satisfy this requirement. Other options include reading competency in two languages selected from French, German, and Russian; a series of outside courses in another discipline; or significant laboratory experience involving computer science.

FACULTY

Anneliese K. A. Andrews

Professor
PhD, Duke University
Research areas: software engineering, performance modeling

Joel Cohen, Emeritus

Associate Professor
PhD, University of Maryland
Research areas: computer algebra, symbolic mathematical computation, applied mathematics, number theory

Chris Gauthier Dickey

Assistant Professor
PhD, University of Oregon
Research areas: networks, security, multiplayer games

Rinku Dewri

Assistant Professor
PhD, Colorado State University
Research areas: information security and privacy, network risk management, multi-criteria decision analysis

Scott T. Leutenegger

Professor
PhD, University of Wisconsin-Madison
Research areas: humane games and game education, spatio-temporal databases, performance modeling

Mario A. Lopez

John Evans Professor
PhD, University of Minnesota, Twin Cities
Research areas: geometric computation, multidimensional and spatio-temporal databases, geographic information systems, computer music

Matthew Rutherford

Assistant Professor
PhD, University of Colorado at Boulder
Research areas: software engineering, distributed systems

Nathan Sturtevant

Assistant Professor
PhD, University of California, Los Angeles
Research areas: artificial intelligence, heuristics, multiplayer games

Ramki Thurimella

Professor and Department Chair
PhD, University of Texas at Austin
Research areas: computer networks and security, mobile computing, bioinformatics, algorithm design

LECTURERS

Cathy Durso

Lecturer
PhD, Massachusetts Institute of Technology

Susanne Sherba

Lecturer
PhD, University of Colorado at Boulder

Jeffrey Edgington

Lecturer
PhD, University of Denver

COURSE DESCRIPTIONS

COMP 3200 Discrete Structures (4 qtr. hrs.)

Discrete mathematical structures and non-numerical algorithms; graph theory, elements of probability, propositional calculus, Boolean algebras; emphasis on applications to computer science. Cross-listed as MATH 3200. Prerequisites: MATH 2200 or COMP 2300 and COMP 1672 or COMP 1771.

COMP 3341 Multimedia Systems (4 qtr. hrs.)

This course covers fundamental issues in design and implementation of multimedia applications. This course also covers technologies in multimedia systems such as multimedia data representation, compression, coding, networking, data management, and I/O technologies. Prerequisite: COMP 3361.

COMP 3351 Programming Languages (4 qtr. hrs.)

Programming language as a component of software development environment; binding, scope, lifetime, value and type of a variable; run-time structure-static, stack-based and dynamic languages; parameter passing-call by reference, value, result, value-result and name; subprogram parameters; role played by side effects, dangling pointers, aliases and garbage; garbage collection; data abstraction - study of object-oriented, functional, and logic languages. Prerequisites: COMP 2370, COMP 2691, and COMP 2355.

COMP 3353 Compiler Construction (4 qtr. hrs.)

Design and implementation of a major piece of software relevant to compilers. Prerequisite: COMP 3352.

COMP 3361 Operating Systems I (4 qtr. hrs.)

Operating systems functions and concepts; processes, process communication, synchronization; processor allocation, memory management in multiprogramming, time sharing systems. Prerequisites: COMP 2355, COMP 2370, and COMP 2691.

COMP 3371 Advanced Data Structures & Algorithms (4 qtr. hrs.)

Design and analysis of algorithms; asymptotic complexity, recurrence equations, lower bounds; algorithm design techniques such as incremental, divide and conquer, dynamic programming, randomization, greedy algorithms, etc. Prerequisites: COMP 2370, MATH 3200.

COMP 3381 Software Engineering I (4 qtr. hrs.)

An introduction to software engineering. Topics include software processes, requirements, design, development, validation and verification and project management. Prerequisite: COMP 2370.

COMP 3382 Software Engineering II (4 qtr. hrs.)

Continuation of COMP 3381. Topics include component-based software engineering, model-driven architecture, and service-oriented architecture. Prerequisite: COMP 3381.

COMP 3400 Advanced Unix Tools (4 qtr. hrs.)

Design principles for tools used in a UNIX environment. Students gain experience building tools by studying the public domain versions of standard UNIX tools and tool-building facilities. Prerequisites: COMP 2400 and knowledge of C and csh (or another shell), and familiarity with UNIX.

COMP 3410 World Wide Web Programming (4 qtr. hrs.)

Creating WWW pages with HTML, accessing user-written programs via CGI scripts, creating forms, imagemaps and tables, and Java programming principles and techniques. Prerequisite: COMP 2355.

COMP 3421 Database Organization & Management I (4 qtr. hrs.)

An introductory class in databases explaining what a database is and how to use one. Topics include database design, ER modeling, database normalization, relational algebra, SQL, physical organization of records and clocks, heap files, sorted files, hashing, extendible hashing, linear hashing and B trees. Each student will design, load, query and update a nontrivial database using the Oracle DMBS. Prerequisite: COMP 2370.

COMP 3501 Introduction to Artificial Intelligence (4 qtr. hrs.)

Programming in LISP and Prolog with applications to artificial intelligence; fundamental concepts of artificial intelligence; emphasis on general problem-solving techniques including state-space representation, production systems, and search techniques. Prerequisites: MATH 2200, COMP 2370.

COURSE DESCRIPTIONS (CONTINUED)

COMP 3621 Computer Networking (4 qtr. hrs.)

An introduction to computer networks with an emphasis on Internet protocols. Topics include; network topologies, routing, Ethernet, Internet protocol, sockets, operating system impact and client/server implementations. Prerequisites: COMP 2355 and COMP 2370. Co-requisite: COMP 3361.

COMP 3701 Topics in Computer Graphics (4 qtr. hrs.)

COMP 3702 Topics in Database (4 qtr. hrs.)

COMP 3703 Topics-Artificial Intelligence (4 qtr. hrs.)

COMP 3704 Advanced Topics: Systems (4 qtr. hrs.)

COMP 3705 Topics in Computer Science (1 to 4 qtr. hrs.)

COMP 3801 Introduction Computer Graphics (4 qtr. hrs.)

Fundamentals of graphics hardware, scan conversion algorithms, 2D and 3D viewing transformations, windows, viewports, clipping algorithms, mathematics for computer graphics, graphics programming using a standard API. Prerequisites: COMP 2370, MATH 1952 or 1962, and MATH 2060.

COMP 3821 Game Programming I (4 qtr. hrs.)

An introduction to computer game programming. Use of a game engine to create 3D computer games. Topics to include game scripting, simple 3D asset creation, incorporation of assets, keyboard/mouse event handling, animation, game phases and score keeping. Prerequisite: COMP 2370.

COMP 3822 Game Programming II (4 qtr. hrs.)

An introduction to computer game engine programming. Major class goal is to understand how game engines are created by building subsets of a game engine. Non-exhaustive set of topics include how terrains are generated, how animations are supported, how particle systems are implemented, how physics systems are coded, and how support is provided for higher level scripting languages. All coding will be done in low-

level graphics languages. Prerequisites: COMP 3801 and COMP 3821.

COMP 3904 Internship/Co-Op in Computing (0 to 10 qtr. hrs.)

Practical experience in designing, writing and/or maintaining substantial computer programs under supervision of staff of University Computing and Information Resources Center. Prerequisites: COMP 2370 and approval of internship committee (see department office).

COMP 3991 Independent Study (1 to 10 qtr. hrs.)

Cannot be arranged for any course that appears in the regular course schedule for that particular year.

COMP 3992 Directed Study (1 to 10 qtr. hrs.)

COMP 4362 Operating Systems II (4 qtr. hrs.)

Continuation of COMP 3361. Case studies of existing operating systems programming. Prerequisite: COMP 3621

COMP 4372 Theory of Algorithms (4 qtr. hrs.)

NP-completeness; lower bound theory; approximation algorithms; amortized complexity and data structures, randomized algorithms. Assorted topics such as string algorithms, graph algorithms, linear programming, computational geometry. Prerequisite: COMP 3371.

COURSE DESCRIPTIONS (CONTINUED)

COMP 4384 Secure Software Engineering (4 qtr. hrs.)

This course is concerned with systematic approaches for the design and implementation of secure software. While topics such as cryptography, networking, network protocols and large scale software development are touched upon, this is not a course on those topics. Instead, this course is on identification of potential threats and vulnerabilities early in the design cycle. The emphasis in this course is on methodologies and paradigms for identifying and avoiding security vulnerabilities, formally establishing the absence of vulnerabilities, and ways to avoid security holes in new software. There are programming assignments designed to make students practice and experience secure software design and development. Prerequisites: COMP 3381 & COMP 4555. COMP 3621 is highly recommended. Students must be able to implement complex programs in C, C++ and Java.

COMP 4600 Seminar in Computer Science (0 to 4 qtr. hrs.)

Preparation and presentation of lectures on some aspect of current research in computer science; topics not generally encountered in formal courses, may include robotics, pattern recognition, parallel processing, computer applications. 10- to 15- page paper with bibliography required.

COMP 4621 Computer Networking (1 to 4 qtr. hrs.)

COMP 4701 Special Topics-Computer Graphics (1 to 4 qtr. hrs.)

COMP 4702 Advanced Topics-Database (3 qtr. hrs.)

COMP 4703 Adv Topics-Artificial Intell (1 to 4 qtr. hrs.)

COMP 4704 Advanced Topics-Systems (3 to 4 qtr. hrs.)

COMP 4705 Advanced Topics-Programming (1 to 4 qtr. hrs.)

COMP 4708 Special Topics-VLSI (3 qtr. hrs.)

COMP 4709 Special Topics-Computer Security (3 qtr. hrs.)

COMP 4721 Computer Security (4 qtr. hrs.)

This course gives students an overview of computer and system security along with some cryptography. Some network security concepts are also included. Other concepts include coverage of risks and vulnerabilities, policy formation, controls and protection methods, role-based access controls, database security, authentication technologies, host-based and network-based security issues. Prerequisite: COMP 3361.

COMP 4991 Independent Study (1 to 10 qtr. hrs.)

Cannot be arranged for any course that appears in regular course schedule for that particular year.

COMP 4992 Directed Study (1 to 10 qtr. hrs.)

COMP 4995 Independent Research (1 to 17 qtr. hrs.)

Research projects undertaken in conjunction with a faculty member.

COMP 5991 Independent Study (1 to 17 qtr. hrs.)

COMP 5995 Independent Research (1 to 17 qtr. hrs.)

For More Information

A complete description of the program's official offerings and requirements is available from the department at <http://www.du.edu/cs>.

The University of Denver is an Equal Opportunity institution. We admit students of any race, color, national and ethnic origin to all the rights, privileges, programs and activities generally accorded or made available to students at the University. The University of Denver does not discriminate on the basis of race, color, national and ethnic origin in administration of our educational policies, admission policies, scholarship and loan programs, and athletic and other university-administered programs. University policy likewise prohibits discrimination on the basis of age, religion, disability, sex, sexual orientation, gender identity, gender expression, marital status or veteran status. Inquiries concerning allegations of discrimination based on any of the above factors may be referred to the University of Denver, Office of Diversity and Equal Opportunity.