The Loyola College in Maryland Graduate Catalogue contains university-wide policies and procedures that pertain to all graduate students. Students are responsible for the information in the general sections of the Catalogue as well as the parts that pertain to their specific program. This Handbook supplements the Catalogue and, in general, provides information not found in it. However, if the Handbook and Graduate Catalogue contain different information, the latter takes precedence.

Up-to-date announcements concerning the graduate programs in computing can be found at the Computer Science Department's web site, http://www.cs.loyola.edu/

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I. Technical Graduate Education in Computer Science at Loyola College

A. History

Loyola College is a member of the worldwide family of Jesuit universities, twenty-eight of which are located in the US. Loyola, like its sister schools, is noted for its academic excellence and its efforts to meet the needs of the community in which it is rooted. In that spirit, a Masters of Engineering Science (MES) program was established in 1978, under the leadership of Professor Bernard Weigman (now Professor Emeritus). Based in Hunt Valley, the MES program served engineers and offered three tracks: computer engineering, electrical engineering, and computer science. As the study of computing matured, the need for professionals skilled in software design and implementation grew. The computer science track attracted the majority of students in the program.

In 2002, the MES program was restructured and the Computer Science Department became its departmental home. The Computer Science track was restructured as an MS in Computer Science (MSCS), and a new program in the rapidly developing discipline of software engineering, the MS in Software Engineering (MSSE), was inaugurated. In 2006, a concentration in Web Development was added to the Computer Science degree program. (See the Curriculum section below for details on the degree programs.)

B. Computer Science

Computing education has a long history at Loyola. Growing out of the Physics and Engineering Departments, the Computer Science Department became a free-standing department in 1984. In 1990, the BS degree gained accreditation and today that degree continues to be accredited by the Computing Accreditation Commission (CAC) of the Accreditation Board for Engineering and Technology (ABET). (See Appendix A for the Computer Science Department Mission Statement.)

Today, the Department has five full-time tenured/tenure-track faculty members with diverse research interest ranging from software testing to information retrieval. All full-time faculty members are dedicated to both graduate and undergraduate education and teach in both degree programs. They are aided by affiliate faculty, most of whom are engaged full-time in a technical profession. Many have made a long-term commitment to the program.

C. Program Contacts

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Office</th>
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</table>
II. The Curriculum

Two graduate degree programs in computing are offered at Loyola College in Maryland: a Master of Science in Computer Science and a Master of Science in Software Engineering. In the Computer Science degree program, a special Web Development concentration is available.

Designed to meet the diverse needs of computer science professionals, the **Master of Science in Computer Science (MSCS)** degree offers a practitioner-oriented curriculum, which includes the study of advanced algorithms, computer networking, programming languages, operating systems, software engineering, and database systems. You may choose courses in object-oriented analysis, programming, and design as well as contemporary software engineering techniques. In addition to an Independent Study course, courses in graphics and human-computer interaction are among the advanced courses available to the interested and motivated student. The concentration in Web Development includes the study of advanced HTML coding and design, web development with servlets and JavaServer Pages, Java design patterns, and XML technologies. This degree program will accept qualified students with any undergraduate degree; a sequence of courses is available to prepare students for graduate study.

The professional having obtained the **Master of Science in Software Engineering (MSSE)** degree will have gained advanced skills in project and personnel management, modern analysis and design methods, and contemporary quality assurance techniques. Students will have many opportunities to develop these skills in project-based courses and in their respective workplaces. They will have deep understanding of the complex process of developing and maintaining large-scale software-based systems. This process involves detailed analysis, sophisticated techniques, and the knowledge of how the system interacts with other components. Software engineers are the professionals charged with this task. Besides being familiar with the fundamentals of computer science, a software engineer must know the technical and management techniques required to construct and maintain such complex software systems. The program of study includes approved Sellinger School of Business and Management Courses.

Both degree programs require 30 credit hours of graduate study. They include optional focused tracks. The technical requirement of each degree, including course descriptions, can be found at

http://www.catalogue.loyola.edu/catalogues/current/graduate/artsandsci/compsci.html

III. Registration for Courses

A. New students

The Loyola Graduate Programs in Computing (MSCS and MSSE) welcome students who are graduates of accredited four-year institutions. Students seeking the MSCS who have little or no formal experience with computing are expected to complete the preparatory courses. Students seeking an MSSE are expected to have an advanced degree or experience yielding a high degree of understanding of computer science. Acceptance decisions are made by the program director. Details on the application process can be found in the *Graduate Catalogue* (available at http://www.catalogue.loyola.edu) under the heading Graduate.

B. Returning Students

Students are encouraged to discuss course selections each semester with their advisor prior to completing registration. Online registration is the preferred registration method for returning students. Alternatively, students may register by form during the mail-in period; however, they must obtain their advisor's signature.
on the registration form prior to submitting it to the Records Office. Students may register only for courses for which they have successfully completed all prerequisites.

C. Exemption from Courses
Preparatory courses may be waived if a student has completed equivalent course work or can demonstrate proficiency in the subject matter. With evidence of sufficient background, regular (non-preparatory) courses may be waived with replacement by substituting an alternate course. Decisions on waivers are made in writing by the director.

D. Transfer of Credits
Students are permitted to transfer up to six credits toward their degree for graduate courses taken at other institutions with the approval of the director, who may need appropriate course descriptions. Students may count up to two courses towards both an MSCS and MSSE degree.

E. Withdrawal from a Course
Students wishing to drop or withdraw from a course should discuss this with the instructor as well as their advisor. The course withdrawal policy and fee refund schedule can be found under "Academic Regulations and Policies" of the Graduate Catalogue.

IV. Academic Standards
It is expected that all graduate students will demonstrate high quality in all of their academic coursework. A student must maintain minimum academic standards. Failure to do so will result in dismissal from the program. Information about academic standards, integrity, probation, and dismissal can be found in the Graduate Catalogue. A student who has reason to question the accuracy of a letter grade (see the Graduate Catalogue for letter grade meanings) should refer to the Graduate Catalogue for appeal process information.

V. Academic Integrity
As outlined in the Graduate Catalogue, Loyola College is dedicated not only to learning and the advancement of knowledge, but also to the development of ethically sensitive, socially responsible persons. Students are expected to conduct themselves honestly in accordance with Loyola College's Honor Code, an except of which is found in Appendix B.

VI. Standards of Conduct
Loyola’s goal, to provide an atmosphere of “cura personalis,” care for the whole person, underlies the standards of conduct for students and faculty as set forth in the Gradate Catalogue.

VII. Professional Organizations
All students are encouraged to become Student Affiliate or Associate Members of the Association for Computing Machinery (ACM). The Computer Science Department sponsors a student chapter of Upsilon Pi Epsilon, a national computing honor society. Graduate students with an outstanding record of academic achievement are invited annually to be inducted into this society.
Appendix A: Computer Science Department Mission Statement

Computer science is a dynamic, vibrant field that, despite its relative youth in the academic community, provides students both a vigorous set of intellectual principles as well as excellent opportunities for employment. It is easy to see the broad and rapid spread of computer technology throughout business and academia creating the need for well-educated professionals to staff and lead this revolution. A more important and lasting revolution may be the spread of computing concepts as businesses go to e-commerce models, biology becomes computational, psychology is enriched with a cognitive, computational branch, philosophy comes to terms with algorithmic limits of knowledge, physics grapples with information theory and complexity, linguistics constructs theories of language acquisition on computational theorems, artists produce art by heuristic principles, communication goes digital, and almost every other discipline collaborates with a computer scientist on a cutting edge project.

The mission of the Computer Science Department is to educate the next generation of computer professionals and to participate in the multidisciplinary education of all students.

The Computer Science Department Mission

To educate the next generation of computer professionals who will

- Embody the best ideals of a liberal Jesuit education as knowledgeable, caring, ethical, well-spoken men and women with critical and reasoned judgment.
- Be proficient in computer languages, development tools and hardware.
- Be able to lead the development of high quality solutions to real problems in today’s technology using well-established principles of engineering, and be able to evaluate those solutions by rigorous means.
- Understand well the fundamental principles of computer science theory in order to become lifelong learners who can build and understand tomorrow’s technology.
- Be effective at written and oral communication, be able to read and write technical papers and reports and present results.

To ensure that all students on campus have opportunities to

- Explore computing to gain an understanding of fundamental computing principles and computing applications important to their chosen discipline.
- Pursue in-depth interdisciplinary studies to master the application of computing in their field of study.

The Computer Science Department Principles and Values

In carrying out its mission, the Computer Science Department uses these principles of pedagogy and ethical values to guide their work with students.

1. The department wishes to foster a community of scholars who work together with students and faculty on challenging problems.
2. The department recognizes that their students are a diverse group of individuals, each with their own talents, skills, motivations and career objectives. The department promises to do its best for each student, challenging the stronger students and providing a caring, supportive environment for all.
3. The department follows the high standards established by national accreditation boards in managing its BS degree program. Even though there is no accreditation for graduate computing programs, the high standards in the undergraduate program permeates the graduate programs in computing as well.
4. The department encourages students and faculty to undertake tangible projects that benefit the disadvantaged.
5. The department provides strong support for faculty scholarship and research in order to maintain the skills and knowledge required to continue teaching in such a dynamic discipline.
Appendix B: Loyola Honor Code

The Student Community of Loyola College in Maryland Formally Declares Itself A Unified Body Which Will Conduct Itself According to An Academic Code of Honor, Following the Jesuit Ideal of Cura Personalis and Keeping Within the School Motto - "Strong Truths Well Lived"

The Honor Code states that all students of the Loyola Community have been equally entrusted by their peers to conduct themselves honestly on all academic assignments. Our goal is to foster a trusting atmosphere that is ideal for learning. In order to achieve this goal, every student must be actively committed to the pursuit and its responsibilities, and is therefore called to be active in the governing of the community's standards. Thus, all students have the right, as well as the duty, to expect honest work from their colleagues. From this, we students will benefit and learn from the caring relationships that our community trustfully embodies.

The students of this College understand that having collective and individual responsibility for the ethical welfare of our peers exemplifies a commitment to the community. Students who submit materials that are the products of their own minds demonstrate respect for themselves and the community in which they study. These students possess a strong sense of honor, reverence for truth and commitment to Jesuit education. Accordingly, students found violating the Honor Code will be appropriately reprimanded in the belief that they will, with the support of their peers, learn from the mistake. This Code not only requires students to understand the ideals of Truth and Personal Care as the two strongest educational factors expressed in Cura Personalis, but also calls them to demonstrate a general concern for the welfare of their colleagues and the College.

DEFINITION. Out of concern for the College and the academic community, each student at Loyola must maintain the highest standards of academic honesty. In order to uphold this degree of excellence, the Honor Code requires students to report any act of academic dishonesty. All students of the College are expected to understand the meaning of this Code. Ignorance of the Code is not a valid reason for committing an act of academic dishonesty. The following will constitute violations of the Code and are defined below: cheating, stealing, lying, plagiarism, and the failure to report a violation.

Cheating: The use of unauthorized assistance or material or the giving of unauthorized assistance or material for the use of another in the carrying out of an academic assignment. Students will be expected to follow the rules set by a course instructor as presented on a written syllabus.

Stealing: The wrongful taking of another's property or knowledge, either by force or in secret. This also applies to the property of the College library.

Lying: A false statement (in an academic matter) made with the conscious intent to mislead others.

Plagiarism: "The act of appropriating the literary composition of another, or parts, or passages of his writing, of the ideas, or the language of the same, and passing them off as the product of one's own mind" (Black's Law Dictionary, 5th Edition). All quoted material must be recognizably cited as the work of another author. Phrasing or ideas that are not a student's own must also be clearly credited to the original author.

Failure to report a violation: The conscious failure to report any student who has committed a breach of this Code.

WITNESSING ACADEMIC DISHONESTY. In order to be an effective part of the community, individuals must understand and accept their responsibility for maintaining the well-being of the community and the College. All students and faculty members must report a breach of the Honor Code in the following manner:

1. **Faculty Reporting an Incident**
   A. Faculty members witnessing a breach of the Code by a graduate student are free to intervene as they see fit at the time of the infraction.
   B. Following this, they must report the infraction in writing to the Department Chair.

2. **Students Reporting an Incident**
   A. Students witnessing an infraction by another student should discreetly inform any faculty member present while the infraction is being committed. If this is not possible, students must report the breach on their own according to step B below.
   B. After a breach of the Code has occurred, witnesses must report the incident of an Honor Code violation in writing within one week to the Department Chair.

3. **Proceedings Following a Report**
   A. Once a report is made, the Department Chair will notify the student's advisor. If deemed appropriate, a
Professional Assessment Review will be conducted, which may include appointing a Professional Assessment Review Committee.

B. The Professional Assessment Review Committee is empowered to make specific recommendations for further action, in accordance with the Professional Assessment Review process.