# **Loyola University Maryland**

# Handbook for Graduate Students in Computing



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This Handbook is intended to serve as a supplement to the Loyola University Maryland *Graduate Catalogue*.

The 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 provides, in general, information not found in the Catalogue. 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, <a href="http://www.loyola.edu/academic/computerscience">http://www.loyola.edu/academic/computerscience</a>. Further resources are found in Section VIII, Resources, on page 5.

# I. Technical Graduate Education in Computer Science at Loyola University Maryland

# A. History

Loyola University Maryland is a member of the worldwide family of Jesuit universities, twenty-eight of which are located in the U.S. 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. 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).

Today, the Department has seven 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 a dozen or so affiliate faculty, most of whom are engaged in full-time technical positions at leading industry and government organizations. Many affiliates have made a long-term commitment to the program.

# C. Program Contacts

Name	Position	Office	Voice Mail	Email
James Glenn	Chair, CS Dept.	DS 127	410-617-5394	jglenn@cs.loyola.edu
David Binkley	Professor, Program Director	DS 125	410-617-2881	binkley@cs.loyola.edu
Lewis Berman	Director of Program Operations	DS 122	410-617-2587	liberman@loyola.edu
Yaakov Chaikin	Web Programming Coordinator	n/a	n/a	yaakov@tbiq.com
Margaret Daley	Assistant Director	DS 127	410-617-2464	mdaley@loyola.ed

#### **II.** The Curriculum

Two graduate degree programs in computing are offered at Loyola University Maryland: a Master of Science in Computer Science and a Master of Science in Software Engineering. In the Computer Science degree program, optional Web Development and Networking tracks are 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. Special topics courses are offered; a sampling of recent topics includes Ruby on Rails, Big Data, and digital security-related topics. The concentration in Web Development includes the study of advanced coding and design with HTML, CSS, and other languages, web development with servlets and JavaServer Pages, Java design patterns, and XML technologies. The Computer Science degree program will accept qualified students with any undergraduate degree; a sequence of courses (600-level) is available to prepare students for graduate study (700-level).

A 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 up to two 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. Continuing 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 continuing students.

Alternatively, students may register by form during the mail-in period. Green graduate registration forms are available at each graduate center as well as the Evergreen campus. The advisor's signature is not required 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*.

# F. Financial Support

The Computer Science Department employs one to two graduate students as graduate assistants. The graduate assistants provide help to undergraduate students in computer science courses and perform programming or other duties as assigned. Inquiries about availability of these graduate assistant positions should be addressed to Margaret Daley, <a href="mailto:mdaley@loyola.edu">mdaley@loyola.edu</a>, (410) 617-2464. For other sources of financial support, visit <a href="mailto:http://www.loyola.edu/academic/computerscience/graduate/financial.aspx">http://www.loyola.edu/academic/computerscience/graduate/financial.aspx</a>.

#### 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 University Maryland 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 University's Honor Code, an excerpt of which is found in Appendix A.

# 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.

#### VIII. Resources

The Computer Science Department's web site is the primary online resource for graduate students in the MSCS, MSSE, and non-degree programs. The Department's home page found at:

http://www.loyola.edu/academic/computerscience

A "Graduate Portal Page" provides links to commonly used resources. The Graduate Portal Page can be viewed by selecting "Graduate" on the Department's home page or by going directly to:

http://www.loyola.edu/academic/computerscience/graduate.aspx

Available pages and tools of particular interest linked from the Graduate Portal Page are directions to each graduate center, this Graduate Handbook, information concerning financing your degree, catalog course descriptions, and an unofficial but useful and unique Course Predictor to help you plan your program. The Graduate Portal Page also has a link to Webadvisor for purposes of finding course sections and registering.

The Department maintains a **listing of internships and professional positions**, full and part time, for its students and alumni. This is not linked from any other Department page. You must navigate directly to its URL,

http://www.loyola.edu/academic/computerscience/jobs

The listings are posted as provided by external sources. The Department makes no guarantee as to their content or accuracy.

Enrolled graduate students may utilize the **Loyola-Notre Dame Library** on the Evergreen Campus. See:

http://www.loyola.edu/library/index.htm.

The University provides **online resources** for graduate students. These include an online graduate orientation, a graduate student organization, and other graduate student services. See Graduate Students web page at:

http://www.loyola.edu/department/gradstudents.aspx

# Appendix A: Loyola Honor Code

The Student Community of Loyola University 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 University 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 University.

**DEFINITION.** Out of concern for the University 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 University 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 University 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 University. 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.