
LUC CS MS Programs Documentation

Release

CS Department

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Welcome to all students interested in the graduate programs for the Computer Science Department of Loyola University Chicago!

If you have questions about information here, please contact the Graduate Program Director, gpd@cs.luc.edu, 773-508-8150.

See the Course Handbook for [programs](#) and [courses](#).

If you want another format of this document (html, pdf, ebook), see [Download Other Formats](#).

PROSPECTIVE STUDENTS

1.1 Overview of Loyola MS Programs' Strengths

- Committed faculty teaching small classes, commonly 15-25 students
- Many project based classes with big concepts for all, which students get to develop in their own way in their individual projects, with active individual support from the instructor
- Flexibility and breadth: About ½ of each program is electives which can vary from business-centric, data-centric, networking and security, software engineering, to core computer science. Many students come in not knowing exactly what they are most interested in. Students can sample different areas, choose to change the degree program in the middle, and still have all their courses count toward the final degree.
- Enroll part-time or full-time, and back and forth, as you choose
- Strong advising/support throughout: as students inquire about the program, apply, plan initial courses, and as experience evolves
- Lots of data on and opportunities for internships and jobs: Internships can count in the academic program. High regard of our program in industry smooths job transition.
- Strong encouragement toward independent study with individual professors in a wide variety of areas
- Finish full-time in 16 months; less if you can get two courses of transfer credit
- Opportunity for discipline changers to be accepted and take prerequisites with us on a compressed schedule
- Options for a mix of face-to-face and online classes. *Now the IT degree is available either campus-centric or entirely online.*
- International students with insufficient English can get conditional admission combining initial ESL with later MS study.

Look in the courses document for the details of the individual [Masters Programs](#).

Arrange a *Visit*.

1.2 Admissions

No application deadline for plain admission: Applications are continuously evaluated and students will be promptly admitted to the nearest starting term or semester. Earlier admission means that you get to register online for classes earlier, and some classes may fill up. In particular, registration for fall starts in April, for spring in late October, and for summer in February. It is to your advantage to be admitted before those times for the earliest access to registration.

While *regular* admission does not have a deadline, see *New Student Assistantships*, for *application deadlines to be considered for such an award*.

Prerequisites: Please note that you can apply and be accepted without having all the undergraduate prerequisites listed for degree programs. See the section of the course document on [prerequisites](#).

Questions: If you have questions after reading the information below, contact the Graduate Program Director at gpd@cs.luc.edu. You are encouraged to *Visit*.

1.2.1 Requirements for All Applicants

For admission to the graduate degree program in the Department of Computer Science, submit the items below that are not listed as optional. You may also submit further items if you feel they would help bolster your admissions case. If you are an international student please *also* note the [Additional Requirements for International Applicants](#).

1. Completed application form, preferably completed [online](#) with *no fee* or alternately [downloaded](#) and delivered on paper *with a \$50 fee*.

This form is used for many programs in the graduate school, and not all graduate programs are available to students in all locations:

2. Those who would like to get financial assistance see [Teaching Assistantships](#) or for non-departmental financial aid see http://www.luc.edu/finaid/responsibilities_rights.shtml.
3. Submit official English transcripts of all undergraduate work and any post-baccalaureate work either
 - by official electronic submission between your institution and Loyola or
 - still in sealed envelopes sent from the academic institution. *Do not open such envelopes yourself*. If you do not have easy access to the sealed official documents, you can *initially* submit copies for a *conditional* admission.

You can send a transcript *in the semester before your graduation*, showing all the courses you will be having for graduation, even though grades are still missing from the final courses, and still be eligible for conditional admission. *Do not send transcripts too early* to show a listing of all the courses you will end up taking for your degree. In all cases final officially-sent transcripts are required by the end of your first semester at Loyola.

4. GRE scores are not required for admission. If you choose to submit them, Loyola's institutional code is 1412; the department code is not needed. GRE scores, however, are expected if you are applying for a merit award ([Teaching Assistantships](#)), and if you are not already a Loyola student.
5. Three letters of recommendation. These are usually from referees familiar with your academic work, however, if you have been out of school for a long time, then letters of recommendation from co-workers or supervisors will be acceptable.

1.2.2 FAFSA for U.S. Students/Permanent Residents

Though *not* a requirement, U.S. citizens and permanent residents are strongly encouraged to fill out the online FAFSA form at <https://fafsa.ed.gov/>. This not only facilitates loans, but also can help getting on-campus jobs.

1.2.3 Additional Requirements for International Applicants

Do not forget the [Requirements for All Applicants](#). Here are *additional* requirements and an option for international student admission to the graduate degree programs in the Department of Computer Science.

1. Students with transcripts issued by International universities or colleges must be *evaluated* by an outside evaluator for GPA calculation and determining if the degree is equivalent to an American Bachelor's degree (four-year degree or 3-year degree with an extra year of study after that): Applicants may send international transcripts for a general evaluation with **Grade Average** to ECE for international evaluation and *allow 4-6 weeks* for them to evaluate transcripts and get the results to Loyola. [Educational-Perspectives](#) can also be used as an alternative to

ECE. *No other transcript evaluation service is accepted by Loyola.* If you are in a rush, you can pay extra for expedited service. If you do *not yet have your undergraduate degree*, it is important that you send transcripts to the evaluator when all your final courses are shown, though some without grades. This is usually *in your final semester*. The evaluators can only determine the equivalence to a US 4-year degree if they see all the relevant courses listed on the transcript (again, possibly some without grades yet). The conditional admission requires the university to receive another official transcript, showing degree completion, though this transcript can be sent to Loyola during your first semester here as a student.

A suggested exception to getting the general transcript evaluation: If you have international graduate level coursework after 4 years of college level work, see *Further International Transcript Credit Transfer Requirements*.

Those students living abroad and seriously considering Loyola can write to the Graduate Program Director at gpd@cs.luc.edu about waiving the transcript evaluation fee. Be sure the *rest* of your application is submitted when making this request, so it can be properly considered. Official notification of a passing English test score must be included at that time. Requesting that Loyola handle the evaluation will require *extra time*, since the transcript forms must be received first by Loyola and sent off again to Educational Perspectives.

2. International students (with the exception of U.S. citizens or permanent residents) must have their English tested *before* any kind of admission. There are different routes depending on the results.

The Loyola Graduate School accepts just three approaches to the English requirement, and a few explicit exceptions:

- The usual way is to earn at least 79 on the Internet-based TOEFL test (or 550 on the paper-based test) or at least a 6.5 (overall band score) on the IELTS academic test. *The official results must come to Loyola directly from the testing agency.* Loyola's institutional code is 1412; the department code is not needed.

With lower scores, see the other options below.

Having your university courses officially offered in English does *not* exempt you – though it should make passing the English exam easier.

You can *retake* an English exam as many times as you need *before* admission to get up to a passing grade.

If taking one of these tests, be sure to sign up for an early test date, since results usually take 2-3 weeks to be delivered *officially* to Loyola.

- If you have a TOEFL in the range 70-78 or IELTS of 5.5 or 6, then you may be admitted conditionally to the new ICAP program:

You will be required to take an English Placement Test administered by our English Language Learning Program (ELLP) to determine your placement in ESL preparation courses. The results of that exam will determine the required ESL courses you must take during your first term at Loyola. You will take ESL classes until your English language skills are strong enough for success in degree program courses. If you receive a final grade of at least a B+ in all of your advanced or bridge ESL courses, you will be invited to take an exit exam at the end of the term. A combination of your course-work and exit exam score will be used to determine your readiness for degree work in the following term. It is important to note that if testing indicates further language study is needed, you will be required to continue in the ELLP for another term. For more information about Loyola's ELLP, please contact ELLP@luc.edu, or 773-508-3880.

We offer ICAP admission to students who have demonstrated their academic abilities in the classroom, but may need additional English language preparation and support to succeed in the degree program at Loyola University Chicago. Students in this program are classified as full-time graduate students.

You can choose to bring up your English score to the level of regular admission some other way and apply again later for regular admission. However the ICAP program gives you conditional admission, and allows you to be on campus for various Computer Science activities, like seminars, hackathons,

- If you have not had an English test or the result is too low for ICAP, and you want to improve your English at Loyola, in preparation for possible graduate study, you can *first* apply to our full-time ESL pro-

gram, <http://www.luc.edu/esl/>, and do well enough in courses and a comprehensive exam. Only sufficient achievement in Loyola's ESL program is a substitute for one of the standardized tests above. Enrollment in an ESL program at another school is not a substitute for the TOEFL or IELTS. With any other ESL program one of the standardized tests is still required.

NOTE: Loyola's ESL is a separate program from the Graduate School. If you were admitted directly to our ESL program, not to the Graduate School's ICAP program, then appropriate certification from this ESL program merely satisfies the English requirement for Graduate School applicants. It does not imply the Graduate School Dean's approval for your admission. All other parts of your application remain to be considered (but see the note below).

- The English requirement is *waived* only for students who satisfy at least one of the following:
 - U.S. citizens and permanent residents.
 - Students with Bachelor's or higher degree from accredited institutions in the United States, United Kingdom, Ireland, Canada, Australia or New Zealand, who primarily attended their classes in those countries. Students are exempt who will complete one of these programs before matriculation at Loyola, even if they have further degrees from another country. Note: Graduating from a program offered in English from any *other* country does *not* exempt the student from the English requirement.

Note: If you do not yet have the necessary test results for one of the above avenues, and your application is complete except for the English requirement, then the Graduate Program Director (GPD) is happy to look at your application and *informally* let you know if you should expect the GPD's recommendation for admission, *after* obtaining a sufficient official English score for one of the routes above. Later, the Graduate School Dean's approval is still needed for final admission.

3. International applicants who will be on an F-1 visa (including those who are seeking financial aid from the department) are encouraged to submit proof (affidavit) of financial support to our International students office *simultaneously* with filing their application. The form should be linked on the page <http://luc.edu/iss/forms.shtml> under something like the name, Declaration of Finances for Graduate & Professional Students. This will help save a lot of time in processing the visa papers, namely I-20 or IAP-66. Students who are chosen for the merit awards or scholarships will be notified regardless of their financial standing or ability to support themselves financially.

International students requiring an F-1 visa should consult the [International Students and Scholars](#) page for further information.

Though there is no admission deadline, be sure to leave time to get the necessary official English test results and transcript evaluations to Loyola before admission, and allow time after admission for obtaining a visa. If the process takes too long, you can request to roll your admission over to the next semester.

1.3 Program Costs

The Master's program has a 10-course requirement (once undergraduate prerequisites are satisfied). The tuition fees for graduate students in the department is \$1033 per credit hour for year 2017–2018. All of the graduate courses in our programs are 3 credit hours per term. Hence the fee per course through summer 2017 is \$3099. The tuition fees for the entire Master's program, which has a 10-course requirement, is \$30990, plus any incremental increases in tuition for courses taken in later academic years. For more information on smaller semester fees please refer to the [Bursar's](#) pages.

See also [Teaching Assistantships](#) and [Non-Departmental Financial Awards](#).

GENERAL INFORMATION

2.1 Visit

The Computer Science Department administrative offices are located in the Doyle Center, with entrance at 1052 W Loyola Ave. General Loyola visitor information is at <http://www.luc.edu/visit.shtml>. See the link to the Lake Shore campus map, where Doyle Center is labeled 6 (may be labeled as preschool). The main department phone number is 773-508-8150.

While the current Graduate Program Director (GPD) is often available by phone, you would do well to confirm a face to face meeting time by email, gpd@cs.luc.edu.

2.2 Department Office and Personnel

The following folks are here to help you.

Table 2.1: Computer Science Department Personnel

Person	Role	Contact e-mail
Andrew N. Harrington, PhD	Graduate Program Director	gpd@cs.luc.edu
Konstantin Läufer, PhD	Department Chair	chair@cs.luc.edu
Cecilia Murphy	Graduate Program Secretary	cmurphy@luc.edu
Miao Ye	Computer Systems Manager	my@cs.luc.edu
Jeanmarie Rom	Department Secretary	jrom1@luc.edu

2.3 Graduate School Offices

The main office of the Graduate School is on the fourth floor of the Granada Center on the Lake Shore Campus. This office handles admissions and financial aid, and houses the permanent files of all students throughout their graduate careers. The phone number for the Graduate School is (773) 508-3396.

Table 2.2: Graduate School Personnel

Person	Role	Contact e-mail
Sue Penckofer, PhD	Associate Dean	SPENCKO@luc.edu
Jessica Horowitz, PhD	Associate Dean	jhorow@luc.edu
Elaine Goetz	Office Assistant	egoetz@luc.edu

We strongly recommend that you contact the department faculty and staff first unless your matter absolutely requires direct Graduate School assistance, and then your contact is most likely Ms. Goetz.

2.4 Graduate Program Director

Regardless of the MS program in which you're enrolled, your first adviser will be the Graduate Program Director (abbreviated **GPD**), gpd@cs.luc.edu. The current director is Dr. Andrew N. Harrington. You are expected to confer with him about your initial course of study in pursuit of your degree. You should be assigned an advisor for later semesters, to consult about the progression of your academic program. The GPD is also available for further discussion of your progress in the program and your future plans.

2.5 Student ID Cards

After registering for classes, Student ID cards, which give access to library borrowing and other privileges, are available from Corboy Law Center, 25E. Pearson or the Campus Card Office, Sullivan Center, Room 117. See <http://www.luc.edu/campuscard/> for more information.

2.6 Computer Services

The University maintains several Computer Centers which are available for your use in Sullivan Center, Information Commons, and at 25 E. Pearson.

All university students are responsible for reading and following http://www.luc.edu/its/itspoliciesguidelines/policy_acceptableuse.shtml.

An account on the student email system is created automatically for each new student. Both the GPD and the Graduate School will use this account to communicate with you. It is therefore *crucial that you check your Loyola e-mailbox on a regular basis*. Having your e-mail forwarded to another account can be risky. Some students find the mail doesn't always get delivered. If you find that you are not receiving regular and frequent communiqués from the Department, please notify the Secretary.

Students are encouraged to consult the Systems Handbook for more information about departmental and university computing resources. See <http://syshandbook.cs.luc.edu/>.

2.7 Key Web Resources

You are also encouraged to keep abreast of the following departmental web resources:

Table 2.3: Key Department Web Sites

URL	Description
http://www.luc.edu/cs	Main Web Site for the CS Department
http://gradhandbook.cs.luc.edu	This handbook's permanent location
http://courses.cs.luc.edu/html	Course Catalog with course descriptions and MS Programs Curriculum
http://syshandbook.cs.luc.edu	Computer Systems Handbook covering labs, servers, and other computing needs
http://jobs.cs.luc.edu	Informal job postings
http://blog.cs.luc.edu	CS Department Blog

2.8 Summer Sessions

Summer sessions are offered through the Department each year, running from May to August. There are two 6-week sessions and an overlapping 8-week session. Three to five graduate-level courses are generally offered over these summer terms, plus:

- *Independent Study* with a department faculty member is encouraged for research-minded students. If you are starting in the summer, this does not generally make sense.
- *Internships (COMP 499)*.

2.9 Housing

Most graduate students choose to find their own off-campus apartments using the ads in the Reader, the Tribune, and other publicly available sources. Loyola's Department of Residence Life also offers single- and double-occupancy apartments for graduate students on the Lakeshore Campus and the Water Tower Campus, though these fill rapidly. For additional information, please see the links in <http://www.luc.edu/gradschool/gradstudcmty.shtml> under Where To Live.

2.10 Transportation

Parking is available near the Water Tower Campus, although it is rather expensive. For sites listed in <http://www.luc.edu/campus transportation/general information/watertowercampus/> you can have your parking stub stamped at the information desk at the 25 E. Pearson building to receive a discount. As a current student, you will also want to acquaint yourself with the University's inter-campus shuttle bus service. Public buses and the "El" run frequently between campuses and to other points in the city.

There is also parking available near the Lake Shore Campus. The main parking structure is adjacent to Sheridan Road and to the Halas Sports Center. The fee for one-day parking on campus is \$7.00 or more. At peak class times, available parking can sometimes be scarce. Street parking in the community immediately surrounding campus is scarce. It is also restricted to residents during certain hours, so be sure to read the signs carefully to avoid being ticketed by the police.

Further information on parking and longer term parking permits is available at <http://www.luc.edu/parking/>. For information on the shuttle, see <http://www.luc.edu/transportation/shuttlebus.shtml>.

2.11 Publication

Research-oriented graduate students (especially those pursuing the [Thesis Option](#) in MS CS) are encouraged to pursue the publication of one or more journal articles during their graduate career. In the current job market, publication is an important means of demonstrating to prospective employers a high level of motivation and professional competence. It can also be helpful for your future pursuits as a doctoral student elsewhere.

Ways to prepare for this goal are 1) to read journals in your fields of interest regularly in order to become familiar with both current scholarship and the requirements of scholarly publication; 2) to approach seminar papers, especially those in your field(s) of interest, as potential publications, possibly even as publications targeted to a particular journal. In developing a paper for publication, students are of course well advised to work closely with their seminar instructors or faculty mentors.

2.12 Conference Presentations and Travel Funding

Presentation of conference papers is an important part of students' professional development, and MS CS students working on a thesis in particular should aim to give at least two papers during their graduate careers — preferably including professional and not just graduate-student conferences.

Each semester the Graduate School has funds to support graduate student travel for the purpose of presenting papers or chairing sessions at conferences. Since funds are limited, students should apply immediately upon acceptance of their papers or sessions. Application is through <http://gsps.luc.edu>, under internal awards.

2.13 Career Center

The University's Career Center, where each student entering the job market should establish a dossier containing letters of recommendation, is located in Sullivan Center, Room 295 (773-508-7716), with a very helpful website: http://www.luc.edu/career/RamberLink_Login.html

Students are encouraged to check our information jobs listings as well at <http://jobs.cs.luc.edu>. We are routinely contacted by employers who are seeking interns, consultants, and "permanent" employees.

2.14 Teaching Opportunities

In addition to occasional teaching assignments for Graduate Assistants (e.g. to help their instructor when he/she needs to be absent), a number of teaching opportunities are available to experienced graduate students and graduates who have gained experience since leaving our department (with a preference for the latter). The University requires that you have the MS degree; the Department requires that you have taken a wide range of challenging courses, especially in foundational areas such as algorithms, languages, systems, and software engineering with a solid record of achievement in all.

2.15 Department Awards

Each year the Department recognizes exceptional graduate students in all of our degree programs. Awards are given for academics and service as described in <http://www.luc.edu/cs/academics/awards/>.

REGULATIONS AND PROCEDURES

This section covers specific policies of the Computer Science Department and makes reference to some of the most important governing policies and procedure of the Graduate School, http://www.luc.edu/gradschool/academics_policies.shtml, but this Computer Science Handbook *does not attempt to duplicate the statement of all Graduate School policies*.

The Graduate School takes deadlines very seriously. All Graduate School key academic and administrative deadlines and starting dates are listed at http://www.luc.edu/gradschool/key_dates.shtml.

3.1 Course Loads

A full-time student will usually carry three courses in fall and spring semesters. Students can also choose to be part-time. This is an *academic* policy. Be sure to see if you have separate constraints due to a loan program for domestic students or due to federal visa policy for international students.

We do not encourage students to take more than 3 courses a term, and you should contact the Graduate Program Director if you need to take more than 3 courses in a term for any reason. It is explicitly prohibited to enroll in more than 3 courses to hold a space in a course. Many of our courses fill up quickly, so you should only register for courses that you truly plan to complete. No one is allowed to take more than 12 credit hours in Fall or Spring.

This means most students finish the program in 16 months: Three fall/spring semesters for 9 of the courses, and the intervening summer for one course. Some students take an extra summer course, leaving a reduced load for the last semester, when it may be particularly convenient to devote time to a job or job search.

3.2 Registration

Both new and continuing students must complete the process of registration before every semester in which they are either enrolling in classes. Also there is a special course conferring full-time registration for MS Computer Science students opting to complete a thesis and who are only writing a thesis that semester. For details on choosing courses see *Course Selection* and *Advising* below.

Students must maintain continual registration throughout their years in the program unless they explicitly apply for and are approved for a *Leave of Absence*. You must also announce your decision to come back from a Leave of Absence with an email to the Associate Dean of the Graduate School. Only after the Graduate School accepts your letter announcing your plan to return, will you be allowed to register for classes. Forgetting this can cause lots of hassle and delay in registration for the semester when you do wish to resume.

After registration opens you can register yourself through LOCUS for most courses with just your student ID number.

New students should get course advising first from the department, and all others are welcomed to get advising from their advisor listed in Locus.

*You cannot register yourself for Comp 490 or 499 as both require permission of the GPD or instructor of record. See sections *Independent Study* and *Internships (COMP 499)*.*

In any course where there is a note about *consent or permission required*, you must make a direct emailed request to the department, *clearly stating* the course and *section* (if more than one is offered) and *semester*, and number of *credits* if that is variable. If you are asking for a course that requires permission of the instructor, please add your direct request to an approving email that you forward from the instructor. The department then gives consent and *does your registration administratively*. Within a few days you should confirm in Locus that your request was correctly entered.

It is in your best interest to register early, to get into sections you want. Registration blocks can get in your way. Common examples are an immunization block, a Dean of Students data block, a conditional admission block, or a bursar block. Students have been given late fees or had a lot of trouble due to delay from such blocks. One misleading feature in LOCUS is that all MS students have a Dean's time limit block, but it does not activate until you have been an MS student for five years - do not worry about that one.

You are strongly encouraged to check in Locus weeks before registration opens, to see if a block appears, and get it addressed so it will not delay your registration.

In Locus you can see the kind of block that is present by clicking on the red blocked symbol (a slash mark through a circle). Do check.

The only block that the GPD has power to address is a probation block, and that requires you to contact the GPD and have a talk. Asking for department help for other blocks is only going to waste everyone's time. Instead deal with the office that added and controls the block: wellness center, Dean of Students, GPED, bursar...

Blocks can also suddenly appear later, so check again a few days before registration opens. Also, you may want to swap courses while it is still allowed in the first week of classes. Shortly before classes start, also check for a block.

3.3 Course Selection

Even before you get access to our registration system, you can still look for courses you are interested in.

Some time before registration opens there should be a link under <http://www.luc.edu/cs/schedules/> labeled with the name of the upcoming semester with a detailed list of courses to be offered.

Before that, or looking further ahead, you can look at the long-term schedule, showing what courses are planned for what semesters: <http://courses.cs.luc.edu/html/longtermschedule.html>. This is particularly useful if you find too many courses that interest you for a given semester: look at the long-term schedule to see which of those courses you could defer until it is offered again.

Detailed descriptions of most of these courses are in <http://courses.cs.luc.edu/html/#graduate-courses>.

Comp 271 is the prerequisite for most graduate courses, but Comp 413, Intermediate Object-Oriented Programming, is a prerequisite for the most advanced software courses. Many students, with even a strong undergraduate computer science background, have not had the subject matter described in <http://courses.cs.luc.edu/html/comp413.html>. If you are in either the MS in SE or CS program, and have not had much of this material, it is a good course to *start* with (offered every fall and spring, and likely summer), since it is required of both programs, and you want to be able to later get into the courses that have it as a prerequisite. IT students who want to mix in more software-centric electives should also consider Comp 413.

Note, SE and CS students with prior experience with the Comp 413 material can replace the Comp 413 course requirement: after consulting with your advisor, substitute one of the courses which has Comp 413 as a prerequisite.

Caution to Computer Science program students: Comp 460 is required, and it is not offered every semester: You may not be able to defer it! Make sure you have arranged a place in your plans that fit with the semesters that it is offered and *following* your prerequisite preparation in algorithms.

3.4 Advising

Newly admitted students should first consult with the Graduate Program Director before registering for courses. A discussion with the GPD is particularly important if there is any question of a student's prerequisite preparation.

Before the *next* registration period, you should be provided an individual faculty advisor for the rest of your studies. This advisor should be listed in Locus. Later registration choices should be taken up with your advisor.

3.5 Online Courses

While the majority of our courses are face to face in regularly scheduled class sessions (likely with *some* online interaction), other courses can be done *totally* online. The learning objectives and outcomes of online courses are the same as for face-to-face classes, but obviously with a somewhat different delivery.

There are many models that an instructor can choose for online: Parts can include recorded video presentations, synchronous whole-class sessions, synchronous small-group sessions, 1-1 with instructor online, threaded discussions, wiki contributions, totally asynchronous involvement as long as you are active each day,

There should be notes in the course list beside an online course. Unfortunately if you look directly in Locus, you do not see it with the course title, but need to click on the section link. If you want more details about the format, contact the instructor.

The [long-term schedule](#) includes an indication of what courses to expect to be online.

At least part-time completion of an online MS IT degree is possible, though it will restrict elective options, and only some tracks can be completed full-time.

If you are only taking courses online, you would do well to be in the program with code ITEO-MS (IT Entirely Online). This will give you an advantage in signing up for online courses before other students.

F-1 visa students: Note that in the semesters that you are supposed to be full-time, you may have only one online course, and at least one course must not be online. If you are not required to be in school in a semester (commonly summer), there are no restrictions. Please confer with the Office of International Programs for details and confirmation.

3.6 Independent Study

If you are doing an independent project for Comp 490, you need to find a faculty member to supervise your project and have the faculty supervisor email the department secretary to register you. This does not generally make sense in your first semester but is possible in exceptional circumstances. It helps if you and the faculty member are familiar with each other. Talk to your instructors outside of class, and take advantage of community seminars and events to meet and get to know faculty! It is particularly helpful when you want to do something that the professor already wants done. At the other end of the spectrum, a student might just propose something that sounds interesting to a potential faculty supervisor who knows the student is self-motivated. Or a project could end up somewhere in between: something the professor is interested in, with a particular twist that appeals to the student....

The typical approach is for the student to meet with the faculty member and then confirm the details of the agreement in an email to the faculty supervisor, being sure to include the exact *semester and credit hours* that you have agreed on. The supervisor then forwards the email with his or her approval to the *graduate secretary*, so she can register you. Your agreement does *not* go to the GPD, unless you will end up with a total of more credits of 490+499 than the normal 6 credit limit.

These courses are for 1-6 credits. See the section below on variable hour courses. We rarely allow students to take more than 6 total credits in their overall program for the sum of Independent Study and Internships, but do allow further high-level independent study in exceptional circumstances.

In most cases, we recommend that you and your independent study advisor fill out a *request for course title form*, which is available at <http://www.luc.edu/media/lucedu/gradschool/pdfs/Request%20for%20Course%20Title.pdf> The Graduate Program Director must sign this form. This is very useful when someone else is reading your transcript: Plain “Independent Study” on your transcript is totally uninformative!

3.7 Internships (COMP 499)

First, you need to find a job for the period of the Internship. There are online, searchable listings through the university career center, <http://www.luc.edu/career>. (The Computer Science department also maintains an *informal* jobs list at <http://jobs.cs.luc.edu>.) When you find a job, contact the GPD and get your job description approved. Internships are for 1-6 credits. See *Variable Credit Courses*.

Download the **MOU Form**, *read it*, print, fill out *both pages*, and return. Please read this carefully before asking questions of the GPD. It contains a description of the details of your academic requirements for the course. You will also need your job supervisor’s signature. Get the finished form to the GPD, so we can register you for the course for the proper number of credits. Please do not ask us to register you if you are not simultaneously submitting the completed MoU.

The form can be scanned and emailed or turn in paper to the department staff. If you are doing *Curricular Practical Training (For F-1 students)*, turn in the CPT form at the same time.

There are three related but different terms: **job**, **internship**, and **CPT**, *Curricular Practical Training (For F-1 students)*. You can have a job and not have it be an internship for academic credit, or you can have a job that goes on longer than an academic internship. Also if you are doing an academic internship, your job employer does not need to classify your position as “internship”. If you are doing an academic internship, the **MOU** indicates only two small requirements for your employer during your time in the academic internship: The bulk of your duties must be related to doing computer science in the real world, and the supervisor will write a few line email at the end of the time of the academic internship indicating your successful completion of all the hours required for the academic internship.

3.8 Curricular Practical Training (For F-1 students)

You should consult with the *Office for International Programs(OIP)* for the full legal details of CPT.

Here are a few of the important points. If you get a job on campus, like the considerable number of students who have worked for Loyola’s Information Services, you do not need to be doing CPT and no CPT restrictions apply. If you want to work off campus for pay, then you need to be doing CPT, and there are a number of requirements.

First of all, you need to have been a full-time F-1 student anywhere in the United States for two semesters. Optionally, this could include *F-1 Summer Full-time Status*.

To start CPT you must get an application submitted in one of two routes. In both cases with the CPT application you should provide a written job offer (which can be an email) from the prospective employer. The completed CPT application must be delivered to the International Office, and they will issue the work permit. The form to start CPT can be found [here](#).

The CPT can be tied to an academic course in either of two ways. You get a GPD signature on the CPT application differently in the two cases. *Be sure to completely fill out the form except for the GPD signature and date before looking for a signature!* Do not leave the GPD to guess which of the two options you want:

- You can take the Comp 499 course specifically for *Internships (COMP 499)*, with the regular tuition charge per credit. Get the form with your MOU and job offer to the GPD, and the GPD will get the application completed and forwarded to the OIP with the job offer.
- For no extra tuition you can generally tie it to a course you are already planning to take. There is a section of the CPT application for this. You can pair the internship with a course in the same semester, *or pair a fall course*

and an internship in the *previous summer*. If you do the no-extra-tuition option, you are able to work but you *get no further credit toward graduation*. You may need to send the CPT form and job offer to the OIP yourself.

Students generally scan and email the CPT form to the GPD, making sure the option chosen above is clearly indicated.

3.9 F-1 Summer Full-time Status

F-1 visa students who do not start in summer, do not need to study at all in the summer as long as they are full-time in each fall and spring until they finish. For them, summer courses are optional. (In the semester that you finish up, you are automatically full-time, even if you have only 1-2 courses left, though the GPD does need to confirm with the OIP when your 1-2 courses allow you to finish.)

F-1 students starting in summer do need to be classified as full-time. Also students who start in spring may find it convenient to be full-time in summer to allow *Curricular Practical Training (For F-1 students)* to start a semester earlier than otherwise.

To have summer count automatically as full time for an F-1 student, you can take 9 credits in total among all the different summer sessions. This is hard to do for two reasons: It is a lot of work to cram 3 courses into 12 weeks, and we offer a limited number of courses in summer, so it may be hard to fit your interests with 3 courses. These restrictions allow for a possible opening: With permission from the GPD and OIP, you can get a waiver so you are allowed to take fewer courses (generally 2) and still be counted as full-time. You can ask the GPD to approve this reduction in summer because of the issues listed above.

Be sure to check with the OIP for the exact current details and correct forms to ask the GPD to sign.

3.10 Variable Credit Courses

Comp 490 and 499 are for 1-6 credits. Up to 6 credits total can be counted toward graduation, counting all the times you register for these two courses. (In practice that usually means 3 or 6 credits since all other courses are 3 credits.) You do not need to take a multiple of three credits at a time. What matters is the total, when it is time to graduate.

3.11 Graduate School of Business Courses (GSB)

Our students can sometimes get into GSB courses. They broaden the Computer Science offerings and let you take GSB courses at the Graduate School's much lower tuition rate.

Unless a GSB course has specifically been mentioned as being allowed to count toward our department's MS degrees, but sure to check first with the GPD.

There are a number of special considerations coming from the fact that GSB courses are *quarter* courses. They have the same holidays as in The Graduate School semester system, but exam times or term start times or both are different. Because of the different term starting times, and the fact that GSB students have priority in their school's courses, it is usually only practical to consider fall and summer GSB courses, when the term starts are close. Our students generally need to wait until shortly before the term starts to be admitted to a GSB course with space in it. This means our students generally need a backup plan.

You cannot register yourself in any case: be sure to make a direct request to the GPD, close to the time the course starts, to see if there is space, and the GPD will arrange your registration through the GSB:

1. Include a direct request like "Please register me for INFS 496 Section 001." *not* an indirect question like "Would it be OK if I register for....?"
2. Include your full name and Student ID number.

3. Explicitly acknowledge the GSB's different drop deadlines.
4. It is also possible to request a swap for an alternate conflicting Comp course.

The time of dropping the course is crucial in determining its effect. Be aware of the GSB deadlines for getting the course dropped with no trace and the later deadline for avoiding tuition.

3.12 Graduation

Degrees are conferred in May, August, and December. You must apply for graduation **way in advance** of graduation or the official conferral of your degree will be **postponed**. The GPD will not be able to appeal this for you. Note that there are only graduation *ceremonies* in May.

Deadlines: December 1 for Spring, February 1 for Summer graduation, August 1 for Fall graduation. See the discussion of ceremonies below if you want to participate in a graduation ceremony and you graduate in Summer or Fall.

Procedure: Go into Locus and submit your application for graduation *by the deadline*. That is all you need to do if you are on time. There is no penalty for guessing early about when you will graduate, but you will need to apply again for the actual time.

You can apply up to 15 days later, *with a penalty fee and walking a piece of paper around*: see <http://www.luc.edu/media/lucedu/gradschool/pdfs/LATE%20Application%20to%20Receive%20a%20Degree.pdf> In case the URL changes, it should be listed on the Graduate School Forms page under Late Application for Graduation.

Graduation Ceremonies are only in May: If you have only *one* course left for summer, you can ask to participate in the *previous* May graduation. This one course can be 490/499 for more than 3 credits. To do this you must apply for summer graduation by the deadline listed above and promptly email the GPD, asking for approval to walk in the May ceremony. If you graduate in the Summer or Fall, you can choose to return to participate in the *following* May graduation ceremony (unless you already participated in the previous May graduation, as discussed above).

3.13 Leave of Absence

Once you start graduate school, the default assumption is that you will be enrolled each fall and spring until you sign up for graduation and graduate. If you need to interrupt your studies before that, the Graduate School requires that you apply for a leave of absence through the gsps system, under student forms in <https://gsps.luc.edu/>.

After being approved for a leave, you will need to notify the Associate Dean of the Graduate School of your intent to enroll before you can register for classes and resume study. See the address under *Graduate School Offices*.

If you *neglect to request a Leave*, the return process is longer and less sure: You need to fill out the **Reinstatement** form, <http://www.luc.edu/media/lucedu/gradschool/pdfs/Reinstatement%20Request.pdf>, and return it to the GPD (preferably as an emailed electronic scan).

Note: Besides the reinstatement form itself being filled out you need to return a document with two other parts:

- The reason for your absence. (The form says reason for reinstatement - but it means reason for *absence*.)
 - Timeline to graduation: When you plan to be back and when you plan to finish.
-

3.14 Dropping a Course, Avoiding Extra Bills

You should always be able to withdraw yourself from the course in LOCUS, no matter how you got registered for a course: by yourself in LOCUS, by a request to the department staff, or off of a waiting list. If you are sure you want to withdraw from a course, do not waste time emailing the department for help, just do it yourself. The date that the withdrawal is entered into LOCUS affects whether you get a W on your transcript, and whether tuition is still due. Different dates apply. Be sure to look at the Academic Calendar for the given semester. Once you are registered, merely not attending class does **NOT** extend these dates.

- Withdrawal with no trace: Generally by the end of the first week of full Fall and Spring semesters. Generally only through the first Tuesday of the semester for Summer session.
- Withdrawal with only a W on the transcript, and no tuition due: Generally during the second week of Fall and Spring semesters. Sometime during the first week in summer sessions. Be sure to check the Academic Calendar at <http://www.luc.edu/academics/schedules/>. A W has no academic consequences. It is just a historical record of you changing your mind.
- Withdrawal later during classes: W on the transcript and a partial or complete tuition penalty. Do not get yourself into this situation just by not paying attention!

3.15 Changing your chosen MS Program

It is easy to switch between our MS degree programs in the department. Through the gsp system under student forms in <https://gsp.luc.edu/>, find Change in Degree Seeking. You will need to include a statement about why you want to change the program. Do think carefully. The Dean is less likely to approve a request to return to your original program!

You are likely to need to select a program by Locus code, which are not all really informative:

- ITEC: Information technology (allowing face-to-face)
- ITEO: Information technology entirely online
- SWEN: Software Engineering
- COMP Computer Science

These all have alternatives ending with “D”, for dual, like SWEN-MS D: *these are only for Loyola BS/MS students.*

3.16 Transfer Credit

The GPD must initiate an approval of course transfer after the first month of classes but also before the end of your *first* semester. *Email the GPD as a reminder*, after the first month of classes and after we also have your transcript (and course by course evaluation for international credits - see [Further International Transcript Credit Transfer Requirements](#)). Do not delay! Your official transcripts need to show B or better in relevant courses. For conditionally admitted students, Loyola must already have the relevant official transcript.

Although official transcripts are needed to forward the request to the Grad School for final approval, you are welcomed to show unofficial transcripts to the GPD to see if you have appropriate courses (but still send a reminder when the official documents are in).

Note: All courses, including graduate courses in your first 4 years since the start of college, are considered part of your undergraduate education. Only if you do MS work *past* the four years of academic work can transfer credit be considered.

3.16.1 Further International Transcript Credit Transfer Requirements

International transcripts need only a *general* evaluation with GPA by ECE, <http://www.ece.org/>, or Educational Perspectives, <http://www.educational-perspectives.org/>, for *admission*, but they need a *course by course* evaluation to *transfer* international graduate credit. If you are expecting to get transfer credit, it is most economical to ask for the course by course evaluation the *first* time transcripts are submitted to an evaluator.

3.17 Grades

The grading system used in the Graduate School is as follows:

Table 3.1: Grading System

Grade	Grade Points
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00

Grades of C-, D or F are unfortunately possible. They cause enormous issues for two reasons:

- They do NOT count as credits toward the MS degree
- However, they ARE counted in the GPA - an enormous drag on the cumulative GPA!

Table 3.2: Other Grading Codes

Grade	Explained
I	Incomplete
W	Withdrawal
WF	Withdrawal, Failure

For further information on Loyola's grading policy, consult the Graduate School Catalog located here: http://www.luc.edu/gradschool/academics_policies.shtml.

Graduate students in the Computer Science Department are expected to maintain an average of not less than B (3.0) during their course of study. Those who fail to meet this requirement may be dismissed by the Graduate School. No more than two grades of C or C+ can be counted toward the degree (while further such grades do drag down the GPA).

3.18 Incomplete Grade

Faculty may assign the grade of I to a student who has not completed the assigned work by the end of the term for some good reason. This grade is *not* assigned automatically. It is up to the student to explain the circumstances and work out a plan with the instructor before the end of the course, including a deadline, for completing the work for the course.

Under the Graduate School regulations, a student has one semester to complete the course (and summer counts as a semester!). If the student does not turn in the work by the deadline, the I grade will automatically become an F. Please read the new policy on the Graduate School web page at http://www.luc.edu/gradschool/academics_policies.shtml#grades1.

Although it is not uncommon for graduate students to take an occasional Incomplete, it is of course better not to take an incomplete when possible. Making up an incomplete course often proves harder than students expect, particularly if much time has elapsed since the end of the course. In any case, faculty members have various policies regarding Incompletes, so it is advisable to discuss the matter with your instructor as early as possible if you anticipate the need for an Incomplete.

3.19 Academic Honesty

Although academic dishonesty can take many forms, in our field it manifests primarily as plagiarism of text or source code. The Graduate School Catalog defines plagiarism as “the appropriation for gain of ideas, language or work of another without sufficient public acknowledgment that the material is not one’s own.” As a graduate student, you very likely have a good understanding of the boundaries of what is acceptable and what is not. If you are ever uncertain, it is of course best to consult your instructor, the GPD or another faculty member.

The penalty for an instance of plagiarism is, at a minimum, failure on the assignment, which may well be tantamount to failure in the course. A serious breach or a pattern of dishonesty can lead to expulsion from Loyola. Although quite rare in our department, cases have occurred in the past and have resulted in dismissal.

3.20 Grievance Procedure

Students, faculty, and administrators are strongly encouraged to resolve any problems they encounter in the academic process through informal discussion. If you are unable to resolve a problem with a member of the staff or faculty, or if you wish to lodge a formal complaint, you should first meet to discuss the matter with the GPD. If the problem cannot be satisfactorily resolved by the GPD, it will be taken up by the Department Chair. Unfortunately fully addressing a grievance within the department can take considerable time. The student must be patient. If a student is not satisfied with the decision within the department, then *after* the departmental decision, not earlier, the student may wish to initiate a grievance in writing to the Dean. Further information can be obtained from the Graduate School office.

TEACHING ASSISTANTSHIPS

Each year the Computer Science department offers a small number of graduate assistantships for new and continuing students. Assistantships are competitive and target students with exceptional interpersonal and computing background, regardless of which degree you are pursuing. Teaching-assistantship duties are assigned for up to 19.5 hours per week in computer labs, in support of faculty teaching or research projects, or in network or web support in the department.

New merit awards are not given for summer semesters.

Research Assistantships in computer science may also be available from time to time depending upon the availability of faculty research grants. Other units of the university sometimes offer TA awards for computer science students. There is no separate application for seeking a research assistantship or TA awards in other units of the university. All applications are initially reviewed by the Graduate Program Director.

4.1 New Student Assistantships

New applicants to the Master's programs in computer science should get an email from the GPD when admission is first recommended. This email should have a link near the end to a form to apply for a TA award. Be sure to note the application *deadlines* in the list below.

- Have your application complete by the **deadline** date of *March 15 for Fall admission* or *October 15 for Spring admission*. Promptly fill out the form at the link provided by the GPD when acknowledging your admission recommendation. Make sure in your application that you had an *email address that you check regularly*, or update your current email address with the GPD (gpd@cs.luc.edu).
- Have excellent undergraduate performance, including all MS prerequisites.
- International students should have a strong TOEFL, IELTS or Loyola ESL score. Students with under a 105 TOEFL or 7.5 IELTS will generally not be considered at all, and higher scores are preferable.
- Submit excellent letters of recommendation for graduate admission.
- Submit official GRE scores.

For new students who receive an assistantship, it is customary for the department to make a commitment to the end of the academic year, with an understanding to continue for up to a total of three semesters if funds are available for the next academic year, and if the students maintain their academic and work standards.

The aim is to announce the awards before April 15 for Fall, and in November for Spring.

If you miss these deadlines you may apply in your first semester or later as a *current* student.

4.2 Current Student Requirements and Deadlines

Continuing students' *recent academic experience at Loyola* is the most important consideration in giving a new award.

Continuing students will get an *emailed reminder to their Loyola address several weeks before the deadline*. The reminder will include the URL for an online form to fill out as your application. Note that the deadlines are *earlier* than for just admitted students:

Continuing students fill out the online form by *March 1 for Fall awards*, and by *October 1 for Spring awards*.

Students who have already been given an award for the upcoming semester should not fill out the form. Initial awards for current students are generally finalized after the awards to new students are completed.

4.3 Possible English Exam Given By Loyola

Awardees who did not grow up in the US may be required by the Graduate School to take an extra English test on campus, *even if they have other English language certifications*. The standards for TA's are *higher* than the entrance requirements. Someone who did not score high enough on the Loyola test will be required to take ESL in the first semester after the exam, and *pay the extra tuition* - TA tuition awards may not be used. The cost has generally been about the same as one regular graduate academic credit.

4.4 Graduate School Policies

Further information about Graduate awards is at <http://www.luc.edu/gradschool/FundingGrad.Education.shtml>, including formal acceptance of awards, and details of stipend payment and tuition awards.

4.5 Non-Departmental Financial Awards

Only the merit awards discussed above are administered by the Computer Science Department. General information about other financial aid is at http://www.luc.edu/finaid/responsibilities_rights.shtml. Remember *FAFSA for U.S. Students/Permanent Residents*.

DOWNLOAD OTHER FORMATS

In addition to the html version on the server, <http://gradhandbook.cs.luc.edu>, we also provide the following formats for offline reading:

- [PDF](#) for printing or desktop reading
- [ePub](#) (for e-reading devices, e.g. e-readers, tablets, or Adobe Digital Editions on desktop)

All these different formats are generated using the incredible [Sphinx](#) documentation tools from the [Python](#) community.

You can view the source text files from which all versions are derived at <https://github.com/LoyolaChicagoCS/gradhandbook>. The site also shows a change log.

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