Informatics Department
Master of Science Degrees
2020 Guidebook

NOTE: The Informatics Department has two Master of Science Degrees – a Master of Science in Human Computer Interaction and a Master of Science in Informatics (with an optional track in Animal Informatics), which follow the policies, described in this 2020 Guidebook and the University Graduate School Bulletin 2020-2021. This 2020 Guidebook does not substitute for the official University Graduate School (UGS) Bulletin. Always consult the UGS Bulletin for further details and official explanations.

It is the student's sole responsibility to fulfill all requirements of their Master of Science degree as described in this 2020 Guidebook and the UGS Bulletin. Review these documents each semester and consult with the Luddy SICE Graduate Studies Office for help.

This 2020 Guidebook contains text from the University Graduate School Bulletin, and the Office of International Services. We use this text with their permission, and we appreciate their cooperation.

VALUES

All students must abide by the Indiana University *Code of Student Rights, Responsibilities, & Conduct*, http://www.indiana.edu/~code/. This applies to scholarship, any role the student may have as an Associate Instructor (AI), relations with colleagues, relations with students, and compliance with academic standards with respect to academic ethics.

In particular, if students are not familiar with the concept and best practices of avoiding any hint of plagiarism in American universities, they should become familiar with these standards. The Code provides a series of documents describing the behaviors, ideals, and goals for Indiana University.

EXPECTATIONS OF STUDENTS

We expect you to develop as a scholar, an instructor-mentor, and a professional. As a doctoral student and in your career, it is expected that you maintain professionalism and high standards in your interactions with faculty, staff, colleagues, and students as well as in your role as a researcher or associate instructor.

SCIENCE, TECHNOLOGY, ENGINEERING OR MATHEMATICS (STEM)

Informatics is in the science, technology, engineering or a mathematics (STEM) field. Informatics international students are eligible for a STEM OPT Extension. For more information about the STEM OPT Extension and a list of qualifying STEM majors, go to https://ois.iu.edu/living-working/employment/f1/optional/stem-opt.html.

MASTERS' PROGRAMS OF STUDY

Master of Science in Human Computer Interaction
The School website contains a full description of the MS in Human Computer Interaction program.

Master of Science in Informatics
The School website contains a full description of the MS in Informatics program.

LENGTH OF PROGRAM

Both the MS in Human Computer Interaction and the MS in Informatics require 36 credit hours. It typically takes two years to complete the MS in Human Computer Interaction and the MS in Informatics – 9 credit hours per semester for 4 semesters. Masters students will enroll full-time each semester. The student's advisor, program director, and the Director of Graduate Studies must approve exceptions. During the summer between Year I and Year II of their studies, students often take an internship.

FULL-TIME STATUS

A student must be enrolled in a minimum of eight (8) credit hours each semester to be considered full-time. Audited courses are not counted in the definition of "full-time study." It is imperative that international students maintain full-time status to remain in visa compliance. For questions about visa compliance, contact the Office of International Services (ois@iu.edu).

PART-TIME STATUS

Approval must be given for a student to be enrolled as a part-time student (less than 8 credit hours). Email the Luddy SICE Graduate Studies Office for additional information (gradvise@indiana.edu).

A leave of absence allows Informatics graduate students to deal with unforeseen events that interfere with their academic progress. During a leave, the student is not expected to make progress toward the degree. Although the student may complete coursework from previous terms during a leave, the student may not attend class or use the leave to catch up on current coursework, prepare for exams, work on the capstone, and/or the master's thesis project.

Leave of Absence Eligibility
To be eligible for a leave, the student must be enrolled full time in an Informatics graduate program and have completed at least one semester (a minimum of nine credits) in the program. The student must be in good academic standing—if they are on academic probation, they are not eligible for a leave.

Requesting a leave before the term begins
You may request a leave of absence as early as six months prior to the leave start date. You can request up to 12 consecutive months of relief from coursework and academic requirements. The maximum period that you may be on leave is 24 (nonconsecutive) months or four regular academic terms. Leaves can be taken for extended or intermittent periods of time provided that the total length of the leaves is 24 months or less.

Requesting a leave after the term begins
If you wish to take a leave of absence after the term has begun, you are encouraged to first contact your department's director of graduate studies to discuss whether you can remain registered (e.g., by taking incompletes). If your program cannot reasonably accommodate your situation, you can request a leave.

To request a leave after the semester has begun, you must submit your request through the Luddy SICE Graduate Studies Office and contact the Student Advocates Office to arrange a full withdrawal. A full withdrawal can impact international student visas, tuition payments, student loans, fellowships, and health insurance. Registrar deadlines will determine the amount of tuition that can be refunded.

Leave of Absence Approval Process
All leave requests are reviewed and granted on a case-by-case basis and must be approved by the student's program director and the Informatics Director of Graduate Studies. Contact the Luddy SICE Graduate Studies Office for more information (gradvise@indiana.edu).

All completed applications that are reviewed by the admissions committee are considered for financial awards which Informatics may be offering. If a student is offered admission, the student's admit letter will detail the financial award, if any.

Every year, the school has limited funds to distribute. Depending on the number of applications received and the competitiveness of those applications determines the number of financial awards.

Funding, if awarded, may take the form of a (1) 10-hour-per-week appointment for duties within the School of Informatics, Computing, and Engineering, (2) fellowship award, and (3) travel award.

If students are awarded a 10-hour-per-week appointment, students are required to fulfill their appointment responsibilities of grading finals and other administrative duties through the end of finals week for both the fall and spring semesters. Please refer to IU's official academic calendar for official dates. Failure to fulfill appointment responsibilities may result in termination of the appointment.

TRAVEL FUNDING

To enhance academic and professional goals, students will have opportunities to travel in the United States and abroad. If a student is awarded travel funding, the student's admit letter will detail the travel award amount. Funding is limited to one trip per academic career. The faculty secretary will verify fund availability upon receipt of the travel request form. Travel funds are intended to allow a student to attend and actively participate in an Informatics-related conference (e.g. as a presenter, volunteer). The School will fund travel, hotel, food, and/or registration fees. Items such as alcohol, entertainment, etc. are not allowed. The student is expected to pay the difference, if any, between funds provided and their actual travel costs. Travel requests must be submitted and approved prior to travel.

GRADUATE CREDIT

Although Informatics master's degrees are conferred at the school level, Informatics generally adheres to University Graduate School policy for transfer of graduate credits. Only courses listed in the University Graduate School bulletin or specifically allowed by it may be counted towards the requirements for a degree offered by the University Graduate School. These courses are ordinarily numbered by the 500 level or above. In certain cases, courses at the 300 and 400 level have been specifically approved for graduate credit; all such courses are listed in the University Graduate School bulletin. Normally, these courses require a higher level of performance and significantly more work (such as an increased number of readings, additional papers, extra class sessions, oral class presentations) for the graduate students than for the undergraduates.

NOTE: Before enrolling in an undergraduate course, please consult the Luddy SICE Graduate Studies office.

SUBSTITUTIONS AND EXCEPTIONS

Any course substitution or exception must be approved in advance. Email the Luddy SICE Graduate Studies Office for additional information (gradvise@indiana.edu).

GRADES

The minimum overall GPA of a grade of B (3.0) for all Ph.D. Informatics courses is required. A student whose semester GPA falls below a grade of B (3.0) will be put on probation. The student must raise their semester and cumulative grade point average to a B (3.0) or higher by the end of the following semester. Failure to do so may result in academic dismissal from the program. A student whose cumulative GPA falls below a grade of B (3.0) for two consecutive semesters (excluding summer) may result in academic dismissal from the program.

GRADE APPEALS

If a student believes there has been an error in calculating the final grade in a course, the student may appeal that grade. For information on the grade appeal process, please follow the instructions provided by the Student Advocates Office at https://studentaffairs.indiana.edu/student-support/advocates/index.html.

ACADEMIC EXPECTATIONS

All students must (1) maintain cumulative and semester GPAs of 3.0 or above; (2) complete coursework in a timely manner; (3) maintain academic integrity; (4) maintain a good academic standing; and (5) conduct themselves in accordance with the Indiana University's *Code of Student Rights, Responsibilities, & Conduct,* http://www.indiana.edu/~code/. Failure to maintain any of the above requirements will result in the student being placed on academic probation or dismissal from the program. Funding may be in jeopardy as well.

ACADEMIC PROBATION

A student will be placed on academic probation if the student's cumulative or semester GPA falls below a 3.0 and/or if a student fails to make satisfactory progress in the program. To return to satisfactory progress status, students must bring their cumulative and semester grade point averages to 3.0 or higher by the end of the next semester. Failure to do so may result in academic dismissal from the program.

GRADUATION

All graduate students are encouraged to participate in Commencement. Indiana University hosts two university wide commencement events – Winter and Spring. The majority of the students attend the Spring Commencement. Students who finish their degree during the fall can attend the Winter or Spring Commencement. The solemn yet colorful academic pageantry can provide a fitting culmination to a period of intense study and work. Future IUB commencement dates are available here: https://commencement.indiana.edu/about/future-dates.html. Prior to each event, information will be distributed with instructions on how to register for the Indiana University Commencement Event. Visit https://commencement.indiana.edu/index.html for detailed information. Be sure to watch for these emails as many of the deadlines are time sensitive.

In addition to Indiana University's Commencement Event, the Luddy School of Informatics, Computing, and Engineering hosts a Celebration Event. The Luddy Graduate Student Office will send more information on that event, so watch out for those emails as well.

DIPLOMAS

Master's students' diplomas will read "Master of Science in Human Computer Interaction" or "Master of Science in Informatics" depending on the degree the student earned.

TRANSCRIPTS

The transcript and diploma will reflect the degree earned as either the Master of Science in Human Computer Interaction or Master of Science in Informatics.

REGISTRATION

To help with the registration process, students are given an Informatics Course Planning Checklist and a Course Registration Form. Ph.D. and MS Informatics students meet with their advisor prior to registering to plan courses for the upcoming semester. MS Human Computer Interaction (HCI) students follow the career plan presented during orientation. The student may email gradvise@indiana.edu to schedule an appointment.

Some courses require course permission from the instructor and/or the department prior to enrollment. This information is found in the Schedule of Classes which is located at http://registrar.indiana.edu/calendars/schedule-of-classes.shtml. If the course is listed as requiring permission from the instructor or the department, students must contact via email the instructor and/or the department listed for the course to obtain permission. The email reply must be forwarded to gradvise@indiana.edu.

Independent study classes and all research classes taken prior to entering candidacy require that the student and the instructor define the study/rotation, including the deliverables. Students should complete the Informatics Independent Study/Rotation/Research Agreement, obtain the signed permission of the instructor supervising the study/rotation, and submit it to gradvise@indiana.edu along with the Course Registration Form.

After all approvals are secured, students should complete the Course Registration Form and ask their advisor to sign it. (Advisor approval is not required for MS HCI students.) Students should then send registration and agreement forms to gradvise@indiana.edu. The Luddy SICE Graduate Studies Office will process the form and notify students by email of any issues or that students may proceed with registration for the term.

Students then register for courses via one.iu.edu.

Instructions for how to register are found at websites for Student Central https://studentcentral.indiana.edu/register/steps-register/index.html and the Enrollment and Student Academic Information Bulletin http://enrollmentbulletin.indiana.edu/pages/registration.php?t=fall#procedure

WAITLIST

If a course is shown as full, the student should add themselves to the waitlist, which serves as a place holder in the registration line. When students who enrolled in the course drop or when the enrollment cap is expanded, students on the waitlist will be admitted into the course in order. Note: The waitlist runs for the last time on the Thursday before the first day of classes. Anyone on the waitlist is removed and needs to register for class as soon as the last waitlist runs. The Drop if Enroll feature allows a student to enroll in another course while waitlisted for their course of first preference. Students must remember to cancel this feature if they decide to remain in the class of their second choice. The Swap feature allows a student to delay dropping a course until they are safely enrolled in their new class.

CHANGES TO REGISTRATION

Permission. Any deviations from a student's approved Course Registration Form requires that the

student request approval from the advisor (for MS Informatics students) or from the program director (for MS HCI students) if the course to be dropped/added is a program core course or otherwise required. Approval should then be conveyed in writing (email or signed document) to the Luddy SICE Graduate Studies Office, gradvise@indiana.edu.

*Fees/Refund. Starting two business days after the student's <u>initial</u> registration, a system access fee of $8.60 is charged every calendar day the student makes one or more successful adjustments to their schedule. A $23 late schedule change fee is assessed for each course dropped after the first week of classes. The late schedule change fee also applies to a section change, a change of arranged hours, or an audit change.

Students are responsible for paying all drop and add fees. 100% of tuition is refunded for a course dropped during the first week of classes. After the first week, the amount of tuition refunded (if any) for a dropped course depends on the type of session the course is and when the course is dropped.

*Fees are current at the time of publication and are subject to change.

Withdrawal. During the automatic withdrawal period (see <u>Registrar's Official Calendar</u> for exact dates), students who withdraw will be assigned an automatic grade of W. Withdrawals after that period are only possible with the Dean's approval, given solely for urgent reasons such as illness. Instructors may award an F grade for a student who is failing and withdraws after the automatic withdrawal period.

FALL 2020 AND SPRING 2021 TERM 2020 REGISTRATION FEES

For delaying and/or changing initial enrollment, various fees are charged. Students are responsible for paying all registration fees

Students are strongly encouraged to review registration and fee information from IU's <u>Student Central</u> website. Student Central is your one-stop-shop for all things related to financial aid, scholarships, the registrar, and the bursar. The site contains the schedule of classes, steps to register, IU's Official Calendar, payment due dates, and more.

REFUNDS

For course dropped in the first week, the full tuition of the course is refunded. In the second, third, and fourth weeks of regular term courses, refunds are 75%, 50%, and 25%, respectively. Later drops receive no refunds.

NOTE: Course-specific deadlines refer to full-term courses only. Consult the <u>Official Calendar</u> at https://registrar.indiana.edu/official-calendar/index.shtml for dates relevant to partial-term courses.

To register for classes, a student will need their IU network ID username, passphrase, and DUO to log into one.iu.edu.

How to Register for Classes and Enrollment Shopping Cart (https://kb.iu.edu/d/anig)

- **Determining whether students have holds on their record** (https://kb.iu.edu/d/anig#holds)

- **Viewing class permissions** (https://kb.iu.edu/d/anig#perm)

- **Using the Enrollment Shopping Cart** (https://kb.iu.edu/d/anig#cart)
    - Adding classes (https://kb.iu.edu/d/anig#adding)
    - Registering from the shopping cart (https://kb.iu.edu/d/anig#regcart)

- **Using Class Registration** (https://kb.iu.edu/d/anig#regdrop)
    - Registering for classes (https://kb.iu.edu/d/anig#regclass)
    - Dropping a class (https://kb.iu.edu/d/anig#dropclass)
    - Editing classes with variable credit (https://kb.iu.edu/d/anig#variable)
    - Swapping classes (https://kb.iu.edu/d/anig#swapping)

- **Viewing class schedule details** (https://kb.iu.edu/d/anig#det)

Additional steps on how to register are available through the UITS Knowledge Base: http://www.kb.iu.edu/data/anig.html

Tuition, fees, and all other charges (e.g., IU Health Center, IU Library) are billed to the student on their Bursar bill. Payments are due the 10th of the month. For a list of the Bursar Bill Due Dates go to https://studentcentral.indiana.edu/pay-for-college/pay-bill/due-dates.html. Students should refer to Student Central for information regarding paying their bill. Student Central is closed to in-person traffic.

MASTER OF SCIENCE IN HUMAN COMPUTER INTERACTION (MS HCI)

The Master of Science Degree Program in HCI/d consists of 36 credit hours of studies, normally taken over two consecutive years, evenly distributed as 3 classes or 9 credit hours per semester.

First Year
During your first two semesters enrolled in our program, you will take 4 required classes and 2 elective classes. 2 required classes will be offered in Fall and 2 in Spring. If you start this Fall and continue this Spring that would be the usual sequence. If you start this Spring and continue in the following Fall that will also work out fine. The classes are now designed to be order independent for the first year.

The first year, <u>order-independent required classes</u> are:

I541 – Introduction to HCI/d (3.0 Credits). Eli Blevis (Fall 2020, 20:00-22:30 synchronous Tuesdays) This class focuses on Design Methods and themes in HCI/d. We will have many invited discussions with faculty, alumnix, and people from industry. There will be a weekly small project that you can complete on your own. There will be opportunities to present your work, receive feedback, and offer feedback to others in a manner structured to be sure that everyone feels equally invited to participate and speak. Learning outcomes: Know Design Methods in HCI/d research and practice; Know a broad range of themes in HCI/d research and practice.

I542 – Foundations of HCI/d (3.0 Credits). Hamid Ekbia (Fall 2020, 20:00-22:30 synchronous Thursdays)
Foundations of HCI offers a survey overview of the field of Human-Computer Interaction Design. It introduces the main themes of HCI set generally in a historical context. Learning outcomes: Acquire HCI/d literacy.

I543 – Interaction Design Methods (3.0 Credits). Norman Su (Spring 2020, 20:00-22:30 synchronous Tuesdays, TBC)
This class focuses on Ethnographic and Formal Methods in HCI/d. It might be better named "Qualitative Methods for Insight and Action." Learning outcomes: Learn and apply ethnographic and formal methods in HCI/d research and practice.

I561 – Meaning and Form in HCI/d (3.0 Credits). (Studio Class) Eli Blevis (Spring 2020, 20:00-22:30 synchronous Wednesday Section and Thursday section, TBC) This class focuses on project and presentation skills. It will involve service learning (not for profit) client partners and/or practice learning (for profit) client partners conditions permitting. At the very least, we will invite people from industry or the community to offer feedback on project presentations. Learning outcomes: Learn and apply project and presentation skills with emphasis on visual literacy in HCI/d.

<u>Electives</u>
In addition to these classes, you will need to take an elective for each semester. So far, the list of electives offered is the following:

Fall

- I507 Introduction to Health Informatics
- I527 Mobile and Pervasive Design
- I540 Human-Robot Interaction I540
- I549 Advanced Prototyping I549
- I590 Product Management
- I566 Technology Innovation
- I590 Cross Platform Mobile Programming I590, basic JS programming experience required
- I590 Seminar in ACI I590, animals, environment, and sustainability as a design space
- I590 Disney: Tech Tourism & Leisure
- I590 Advanced Information Ethics
- I590 Creating Virtual Assets
- I590 Introduction Virtual Reality
- Z532 Information Architecture for the Web (ILS)

Spring

- I512 Direct Observation and Design (2022)
- I530 Field Deployments
- I537 Graduate seminar on Usable Privacy and Security
- I567 Design Strategy I567 (preference given to HCI/d MS students)
- I568 Technology Entrepreneurship
- I590 Creativity and Innovation in Technology
- I590 Android Programming (for non-technical students Hamid Ekbia)
- I590 AI and the Future of Work
- I590 Smart Cities
- I590 Journal Article Writing
- I590 Designing from Data I590 Kate Wehner
- I590 Legal and Social Informatics of Security I537
- I590: Usable AI
- I604 HCI/d Design Theory
- I609/709 Advanced Seminar in HCI/d (Open to MS students)
- Z515: Information Architecture Z515 (ILS).

In addition to these electives, you may select any class numbered 500 or higher with permission of the director. There are some additional classes available as electives throughout the university.

The electives give you an opportunity to focus on your individual interests. The learning outcomes are: Develop track focused competencies in HCI/d and {health, security, education, strategy, enterprise, ACI, HRI, design theory, production skills, prototyping skills, ...}.

Second Year

For the second year, we have also taken into account that some of you will be offset by a semester. The second year required classes are:

I544 – Experience Design (3.0 Credits). Erik Stolterman (Fall, Tuesdays and Thursdays 16:55-18:10, TBC)

Designers are increasingly focusing on creating experiences, rather than interfaces. This shift in focus implies a corresponding shift in the conceptualization, methodologies, and practice of HCI/d. The class may involve service learning (not for profit) client partners and/or practice learning (for profit) client partners conditions permitting. Learning outcomes: Learn and apply project and presentation skills with emphasis on experience design.

I694 – Capstone Thesis/Project in HCI/d I or II (3.0 Credits). Andy Hunsucker and Dana Habeeb 2 Sections, Fall and Spring, Mondays and Wednesdays 15:15-16:30 or 16:55-18:10, TBC)
In this class, you will synthesize all that you have learned to create an individual thesis project with the guidance of the Faculty instructors and other Faculty. The class may involve service learning (not for profit) client partners and/or practice learning (for profit) client partners conditions permitting. Learning outcomes: Synthesize prior learning outcomes to create an individual project or thesis demonstration of mastery in HCI/d.

MASTER OF SCIENCE IN INFORMATICS (MSI)

The Master of Science in Informatics (MSI) is a 36-credit degree program offered by the Informatics Department in the School of Informatics, Computing, and Engineering. Of the required 36 credit hours, at least 27 credits must be taken in approved Informatics courses. The remaining 9 credits can be any graduate level course within or outside of the School of Informatics, Computing, and Engineering, including Computer Science, Data Science, Information and Library Sciences, Intelligent Systems Engineering.

The courses that each student takes must have a coherent focus within the general field of informatics.

Each M.S. in Informatics student will be assigned a faculty advisor who will guide the student in the selection of courses. Students should be able to complete the degree in four semesters of full-time – 9 credits of graduate work per semester.

Electives. The student must take 9 credits of any graduate level course within or outside of the School of Informatics, Computing, and Engineering, including Computer Science, Data Science, Information and Library Sciences, Intelligent Systems Engineering. The courses that each student takes must have a coherent focus within the general field of informatics.

M.S. in Informatics Requirements	Credits
Informatics Courses approved by advisor and Director of Graduate Studies, Informatics	27 cr.
Electives (any graduate level course within or outside the School of Informatics, Computing, and Engineering) Must be approved by advisor and Director of Graduate Studies, Informatics	9 cr.
Total Credits to Graduate	36 cr.

MASTER OF SCIENCE IN INFORMATICS (MSI) ANIMAL INFORMATICS TRACK

The Master of Science in Informatics (MSI) Animal Informatics Track is a 36-credit-hour degree that features 27 credit hours in informatics courses and 9 credit hours of electives of any graduate-level coursework within or outside of the Luddy School of Informatics, Computing, and Engineering. The program will appeal to students who have a general interest in animal informatics as well as those who have a specific interest in creating tangible objects, studying animal cognition, applying data science, and using 3D imagery, including capture, analysis, and data visualization.

First Year (18 cr)

Fall	Spring
I514 Seminar in ACI (3 cr)	I512 Direct Observation and Design (3 cr)
I511 ACI Methods (3 cr)	I513 Usable Artificial Intelligence (3 cr)
I590 Prototyping with Arduino Tools (3 cr)	I699 Independent Study (3 cr)

Second Year (18 cr)
- At least 9 credits from the following electives:

Qualitative Methods and Design
- INFO I512 Direct Observation and Design
- INFO I527 Mobile and Pervasive Design OR CSCI P535 Pervasive Computing
- INFO I530 Field Deployments
- INFO I440/I540: Human-Robot Interaction
- INFO I543 Interaction Design Methods
- INFO I544 Experience Design
- INFO I590 Environmental Policy and Health Design
- INFO I590 Technology Entrepreneurship
- INFO I604 Human-Computer Interaction Design Theory
- INFO I709 Animal and/as Technology

IoT Systems and Physical Fabrication
- INFO I400/I590 Makerspace: Design and Fabrication
- INFO I440/I540 Human-Robot Interaction
- INFO I527 Mobile and Pervasive Design OR CSCI P535 Pervasive Computing
- INFO I549 Advanced Prototyping
- CSCI P442 Digital Systems OR ENGR E314/E514 Embedded Systems
- ENGR E537 Rapid Prototyping for Engineers

Mobile App Development
- INFO I400 Cross-platform Mobile Programming
- INFO I527 Mobile and Pervasive Design OR CSCI P535 Pervasive Computing

Virtual Reality Platform
- INFO I304/I590 Intro to Virtual Reality

- INFO I442/I590 Creating Virtual Assets
- INFO I443/I590 Building Virtual Worlds
- INFO I444/I590 Artificial Life in VR
- CSCI B453 Game Development

Data Analytics
- INFO I413/I513 Usable Artificial Intelligence
- INFO I422/I590 Data Visualization
- INFO I526/CSCI P556 Applied Machine Learning
- INFO I601 Introduction to Complex Systems
- INFO I606 Network Science
- CSCI B555 Machine Learning
- CSCI B565 Data Mining
- ENGR E434/E534 Big Data Applications
- ENGR E484/E584 Scientific Visualization
- ENGR E511 Machine Learning for Signal Processing
- ENGR E533 Deep Learning Systems
- GEOG G588 Applied Spatial Statistics

Artificial Intelligence and Cognition
- INFO I413/I513 Usable Artificial Intelligence
- INFO I440/I540 Human-Robot Interaction
- CSCI B551 Elements of AI
- CSCI B657 Computer Vision
- BIOL L453 Sensory Ecology
- BIOL Z460 Animal Behavior

Geospatial Information System
- GEOG G336/G535 Environmental Remote Sensing
- GEOG G436/G536 Advanced Remote Sensing
- GEOG G438/G538 Geographic Information Systems
- GEOG G439/G539 Advanced Geographic Information Systems
- GEOG G478/G578 Global Change, Food and Farming Systems
- GEOG G439/G639 GIS & Environmental Analysis

Website and Database Design
- INFO I435/I535 Management, Access, and Use of Big and Complex Data
- ILS Z511 Database Design
- ILS Z515 Information Architecture
- ILS Z517 Web Programming
- ILS Z532 Information Architecture for the Web
- ILS Z556 Systems Analysis & Design

Technology Entrepreneurship
- INFO I436/I566 Technology Innovation
- INFO I438/I568 Technology Entrepreneurship

- Up to 9 credits of advisor-approved independent research/study, including any approved fieldwork and final project work with any IU faculty affiliated with the Animal Informatics program, including faculty in the Center for the Integrative Study of Animal Behavior, the

O'Neill School of Public and Environmental Affairs, the Cognitive Science program and other departments in the College of Arts and Sciences, the Environmental Resilience Institute, the Stone Age Institute, and professionals working in external institutions such as the Indianapolis Zoo, the Indiana Department of Natural Resources, the USDA, U.S. Fish and Wildlife, and corporations and nonprofits such as Elanco, the Bee Corp, WildCare, and local farms and animal shelters.

The Office of International Services (OIS)
OIS is your comprehensive resource for all matters related to international study. OIS offers services including advising on and facilitating compliance with U.S. visa and immigration regulations, assisting with financial matters and planning, and offering ongoing orientation and other educational, cultural, and social programming. Students can find detailed information about OIS and their services on their website.

Many OIS services and approvals, including OPT and CPT requests and I-20 extensions, are requested through an online system called Atlas. When the system asks for contact information for your department or advisor, please use gradvise@indiana.edu.

Full-time Status
International students should note that SEVIS regulations are stringent about having a full course load, and that it is essential to check with International Services well in advance of any event that might affect visa status (e.g., dropping a course) to avoid the risk of deportation for being out of status. Check OIS for links to information on staying in status, to be sure that you are aware of the current policies.

Completion dates for Visa Purposes
International students are considered to have completed their degrees as soon as they have completed the degree requirements, regardless of whether they have filed for the degree. Consequently, it is essential to make sure that post-graduation visa arrangements are in place before completing the requirements. Please contact International Services for details; they are experts on these rules.

Optional Practical Training (OPT)
Optional Practical Training (OPT) is employment related to a student's major field of study prior to or shortly after graduating. The date of graduation is normally the end of the semester in which they take the last courses needed for the degree, regardless of whether the student will receive a grade of Incomplete in one of these courses. Even if the student has an Incomplete that prevents receiving the degree, they should expect the OPT to be processed using the normal completion date for their last courses (the last day of finals). Refer to the OIS website for detailed information regarding OPT. When asked for department or advisor contact information, please use gradvise@indiana.edu.

Internship and Curricular Practical Training (CPT)
Curricular Practical Training (CPT) is a work authorization that allows students with an F-1 visa to engage in an off-campus academic internship that is an *integral part* of their academic curriculum. CPT requirements can be found on the Office of International Services website.

CPT Policies and Requirements
U.S. Immigration regulations are extremely complicated, change often, and differ depending on each student's specific situation. Please consult with the Office of International Studies for the most up-to-date policies and requirements. Our understanding of current immigration regulations for F-1 students include:
•   • A student must have been in full-time, F-1 status for at least one full academic year – 30 weeks of instruction -- to be eligible for CPT.

•   • Employment must not begin until the date authorized in the I-20 issued by OIS.

In addition, the Informatics Department may have several additional policies to ensure that internships are considered an *integral part* of the academic curriculum and thus eligible for CPT. It may be possible to waive these requirements in extenuating circumstances.

•   • Students are typically not permitted to have CPT during their last semester in the program.

•   • **For M.S. students,** internships during the Fall and Spring semesters must be either conducted in Bloomington or conducted remotely while the student is physically in Bloomington. For this reason, the majority of internships take place during the summer after the first year in the program.

•   • **For Ph.D. students,** internships must be approved by their faculty advisor (or the DGS if they do not have an advisor).

CPT Application Process
The CPT application process can take several weeks so it is very important to begin as early as possible. This is especially true during the Spring semester, when the Luddy Graduate Studies Office and OIS must process hundreds of applications.
The CPT application begins after you have received an offer(s) from employer(s) and have decided to accept one of them. Then follow the following steps:

1. Review and follow the SICE Career Services Recruiting Guidelines.

2. Accept only one offer from one employer. Withdraw all pending applications, cancel all scheduled interviews, and cease seeking employment or internships elsewhere. It is not ethical to continue searching for a job after you have already accepted an offer.

3. Obtain an offer letter listing the following details:

• Name of Company

• Physical address – No P.O. box

• Contact phone number

• Email of employer/supervisor

• Your job title

• A full job description, with job duties listed

• Start date and end date of employment. Please ask the employer to include the specific phrase "or date of authorization" when giving the start date. For example, "The candidate will begin the training opportunity on October 1, 2020, or date of authorization, whichever is later." (This helps prevent additional delays if CPT is not approved by the original date.)

• Total hours you will be working 35

4. Upload the offer letter to the Luddy CPT Application,

5. Wait for Luddy Graduate Studies Office to review your CPT application. You will need to enroll in an IU approved course during the CPT period.. We will advise you which course to enroll in, depending on your particular circumstances. The enrollment must be completed before OIS will be able to approve your CPT request.

6. Upload Offer Letter in Atlas. Follow the instructions carefully and upload your offer letter into Atlas for OIS Approval. When OIS approves the offer letter, they will notify you by email with instructions for completing the Academic Advisor Form.

7. Complete the Academic Advisor Form. Indicate the Luddy Graduate Studies Office as the Academic Advisor, and use gradvise@indiana.edu as the email address on the Academic Advisor form (and on any other OIS-related communication).

8. Wait for OIS to review the CPT application. CPT approval typically takes about two weeks after the request has been *approved by the department,* which is typically several days after you complete the Academic Advisor Form.

9. Watch for and complete surveys from Career Services about your internship. These surveys are important because they help IU attract top employers, including helping to find future internships and full-time positions for you.

10. Upon completion of the Internship, provide the Luddy Graduate Studies Office with an Exit Letter, a formal letter from the employer stating that the terms of employment or internship were satisfactorily completed. For M.S. students, a Summary Report by the student, detailing the internship experience in relation to their program of studies, is also required. This letter is used to assign a grade for the IU course. The exit letter (and report) should be emailed to the Luddy Graduate Studies Office (gradvise@indiana.edu) for review. If an exit letter (and report for M.S. students) are not both submitted, a grade of Incomplete will be posted; unless these materials are submitted, the Incomplete grade will automatically turn to an F after 1 year.

RESOURCES

COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS)
For information about the Counseling and Psychological Services (CAPS) for students, go to: http://healthcenter.indiana.edu/counseling/.

DISABILITY SERVICES FOR STUDENTS (DSS)
The Disability Services for Students Office (DSS) can approve accommodations and support services for a student who has a disability. For information about support services or accommodations available to students with disabilities and for the procedures to be followed by students and instructors, go to: https://studentaffairs.indiana.edu/disability-services-students/.

FORMS
From time to time, students will need access to both internal and external forms. The internal forms are on the School website under Graduate Forms at https://luddy.indiana.edu/academics/grad-programs/graduate-forms/index.html. There students will find a variety of internal forms. External forms which are managed by the University Graduate School, the Office of the Registrar, etc. are located in one.iu.edu. Contact the Luddy SICE Graduate Studies Office for assistance.

LUDDY SICE GRADUATE STUDIES OFFICE (GSO)

The Luddy SICE GSO team seeks to enhance the Informatics graduate student's experience by providing information, resources and network opportunities. They provide administrative services to graduate students, faculty, and staff by (1) being responsive to their needs; (2) adhering to university and school policies and procedures; and (3) administering Informatics degree audits, posting grades, and awarding graduate degrees.

The Luddy SICE GSO will encourage students to complete their academic program in a timely manner. If there are questions, email or schedule an appointment with Renee Kiser at gradvise@indiana.edu.

SICE CAREER SERVICES

Career Services provides opportunities and resources that will empower students to define their career goals, develop professional life skills, obtain related experience, and realize their career potential. To schedule an appointment with a School of Informatics, Computing, and Engineering's career services specialist, email sice+careers@indiana.edu.

VETERANS SUPPORT SERVICES BENEFITS

Veterans Support Services is here to meet the needs of Indiana University students who are veterans, service members, or children or spouses of disabled veterans. Veterans who wish to use their VA benefits to pay their educational expenses should make contact with the Office of the Registrar as soon as possible, as well as review the necessary steps for securing VA benefits via the following link: www.veterans.indiana.edu. Students should contact Veterans Support Services at 812-856-1985. For general questions and answers on Veterans' benefits, visit these sites:

- U.S. Department of Veterans Affairs Education Service
- Indiana Department of Veteran Affairs
- Veteran's Affairs Vocational Rehabilitation and Employment

AI Assignment Questions
aiassign@indiana.edu

Office of International Services
ois@iu.edu

Student Central/Bursar/Registrar
scu@indiana.edu

Student Employee/Human Resources Questions
sicepay@indiana.edu

Technology/Building Access Questions
sicehelp@indiana.edu

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