

# ITM Undergraduate Student Handbook Fall 2019

## Information Technology and Management Bachelor's Degrees

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### Information Technology & Management Mission

Educate and inform students to prepare them to assume technical and managerial leadership in the information technology field.

### About the Department of Information Technology & Management

Courses from our department are available at Illinois Tech's Chicago Mies Campus live or via videoconferencing, at remote locations via IITV and the Internet, and on rare occasions at our Rice Campus in Wheaton. Courses are offered on a semester basis with the fall semester beginning in late August and the Spring semester beginning in mid-January. Because of the strong hands-on emphasis of these programs, many courses will include a laboratory or laboratory exercises. Lecture courses normally will meet two days a week for 75 minutes each session, or once a week for 150 minutes. Lab courses normally will meet two days a week for 100 minutes each session, or once a week for 200 minutes. We have many adjunct faculty members who work each day in the discipline they are teaching, so many course offerings are in the evening or on Saturday morning when they are available to teach. To meet the needs of full-time students, we offer as many daytime classes as possible, and in most cases these courses will be available online for part-time students. Lecture-only evening courses normally run 6:25pm to 9:05pm one day each week. Evening courses with laboratories will normally run from 5:35pm to 9:05pm one day each week.



### Course Philosophy

Information Technology & Management courses are a careful blend of theory and practical application.

- ♦ **Applications:** A core goal of the Department of Information Technology & Management is to teach you practical, hands-on, applied knowledge that can lead to immediate employment in the information technology field. To this end, ITM courses will teach the latest applications and tools used in the field, maximizing your opportunities to make hands-on use of these application and tools. In many instances courses will be tracked to existing industry certification requirements, giving immediate employment credibility to course content. Course tracking will be to vendor-neutral certifications to the greatest extent possible but this does not preclude the teaching of vendor-specific material when appropriate.
- ♦ **Theory:** While the stress of courses in the Department of Information Technology & Management is principally practical, given the scope and rapidity of change within the information technology industry a solid grounding in theory is necessary to equip you to cope with the emergence of new technologies and to advance in your career in the field. A good grounding in theory is necessary to meet the goals of a university education, equipping you with critical thinking skills and the ability to see beyond “plug-and-chug” solutions all too commonly found in information technology training courses. This allows you to reason out solutions to problems rather than relying on canned solutions and blind adherence to procedure.

### Program Objectives & Outcomes

#### Bachelor of Information Technology & Management Objectives

The Bachelor of Information Technology and Management degree produces graduates who are able to:

- ♦ Problem solve and create innovative answers to provide technology solutions for the problems of business, industry, government, non-profit organizations, and individuals.
- ♦ Perform requirements analysis, design and administration of computer and network-based systems conforming to policy and best practices, and monitor and support continuing development of relevant policy and best practices as appropriate.
- ♦ Apply current technical and mathematical concepts and practices in the core information technologies and recognize the need to engage in continuing professional development.

### ***Bachelor of Science in Applied Cybersecurity and Information Technology Objectives***

The Bachelor of Science in Applied Cybersecurity and Information Technology degree produces graduates who are able to:

- ◆ Problem solve, create, and effectively communicate innovative answers to provide technology solutions for the problems of business, industry, government, non-profit organizations, and individuals.
- ◆ Perform requirements analysis, design and administration of computer and network-based systems conforming to policy and best practices, and monitor and support continuing development of relevant policy and best practices as appropriate.
- ◆ Design and implement an enterprise security program using both policy and technology to implement technical, operational, and managerial controls, which will technically secure enterprise information assets and resources to deter, detect, and prevent the success of attacks and intrusions.
- ◆ Investigate information security incidents and violation of law using computer resources in a manner such that all evidence is admissible in a court of law.
- ◆ Apply current technical and mathematical concepts and practices in the core information technologies and recognize the need to engage in continuing professional development..

### ***Bachelor of Information Technology & Management Student Outcomes***

Bachelor of Information Technology and Management graduates should be able to:

- (a) Analyze a problem and identify and define the computing requirements appropriate to its solution
- (b) Design, implement, and evaluate a computer-based solution to meet a given set of computing requirements
- (c) Communicate effectively with a range of audiences about technical information
- (d) Make informed judgments in computing practice based on legal and ethical principles
- (e) Function effectively on teams to establish goals, plan tasks, meet deadlines, manage risk, and produce deliverables
- (f) Identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems
- (g) Assist in the creation of an effective project plan.

### ***Bachelor of Science in Applied Cybersecurity and Information Technology Student Outcomes***

Bachelor of Science in Applied Cybersecurity and Information Technology graduates should be able to:

- (a) Analyze a problem and identify and define the computing requirements appropriate to its solution.
- (b) Design, implement, and evaluate a computer-based solution to meet a given set of computing requirements.
- (c) Communicate effectively with a range of audiences about technical information.
- (d) Make informed judgments in computing practice based on legal and ethical principles.
- (e) Function effectively on teams to establish goals, plan tasks, meet deadlines, manage risk, and produce deliverables.
- (f) Identify and analyze user needs and to take them into account in the selection, integration, evaluation, and administration of computer-based systems. [IT]
- (g) Apply security principles and practices to the environment, hardware, software, and human aspects of a system. [Cybersecurity]
- (h) Analyze and evaluate systems with respect to maintaining operations in the presence of risks and threats. [Cybersecurity].

## **Undergraduate and Graduate Bulletins**

Specific requirements for completion of your degree are in the applicable university bulletin. In most cases the bulletin in force in the year you entered the program governs your curriculum. Illinois Tech bulletins are published annually online only at <http://bulletin.iit.edu/>. The ITM Undergraduate Bulletin is at <http://bulletin.iit.edu/undergraduate/colleges/applied-technology/information-technology-management-school-applied-technology/>.

## **Graduate Course Differentiation**

When courses are offered with both undergraduate and graduate students enrolled in common lecture and/or lab meetings, expectations, outcomes, assignments, and grading standards will be differentiated within the courses to reflect the higher level of achievement expected of graduate students. In accordance with expectations of our university accrediting agency, there must be a clear differentiation between undergraduate and graduate work in these cross-listed courses as described below.

- ◆ **Course Numbering:** Some courses are offered with both undergraduate and graduate sections sharing the same classroom instruction and instructor; this is reflected by the fact that the course will have both a 4XX and a corresponding 5XX section numbers. As an example, ITMO 440 has a corresponding ITMO 540 course offering. Graduate students may not enroll in any 4XX course except as a prerequisite.
- ◆ **Syllabus:** Undergraduate and graduate sections shall each have their own syllabus even when taught in the same lectures. These will reflect differences in course outcomes, learning objectives, and assignments.
- ◆ **Assignments:** Identical assignments for graduate and undergraduate students in a cross-listed course may be assigned, and may be graded to different standards for graduate students reflecting higher expectations. Undergraduate students enrolled in the undergraduate sections of cross-listed courses are not expected or required to bear a graduate-level assignment workload.

## Faculty Office Hours

Faculty members will be available to you outside of class.

- ♦ **Full-Time Faculty:** Full-time faculty members and adjunct faculty members who are full-time Illinois Tech employees will establish and publish/post reasonable office hours. Office hours and location must be given on any course web sites or Blackboard and office hours should be posted prominently on the faculty members' office door. The location and times of office hours should match the location (Rice Campus or Mies Campus) and times (day or evening) of the course. Faculty members should be present in their office for all posted office hours. When teaching a course that includes part-time students, faculty members should accommodate them by having some office hours on evenings and/or weekends. Additionally, faculty members must be available via email or other electronic means.
- ♦ **Adjunct Faculty:** Adjunct faculty members should maintain one to two hours of physical presence office hours if possible, and must be available via email or other electronic means. They may keep virtual office hours via a chat application or instant messaging, but must ensure all students understand clearly how to contact them if this is their office hour method. Adjunct faculty members who are Illinois Tech staff members may elect to hold office hours in the office assigned to them for their staff position.

## Communications

The Department of Information Technology and Management has several paths to communicate with students.

- ♦ **Illinois Tech Email:** Your official hawk.iit.edu email address is the primary method of communication between the ITM Department and you. It is important that you check your email often, and any requests from you to advisers or faculty members should come from your university email address. If we receive email from you from another address, you can expect that any response will go to your iit.edu email address, or that faculty members may not respond.
- ♦ **ITM Weekly Newsletter:** Any announcements, news and calendar events from the ITM Department will be published in our weekly newsletter which will be sent to your iit.edu email every Friday during the fall and spring semesters, and occasionally during the summer term.
- ♦ **ITM Loopback Blog:** Important announcements, news and calendar events from the ITM Department as well as IT industry news will appear on the ITM blog, [http://blogs.iit.edu/itm\\_loopback/](http://blogs.iit.edu/itm_loopback/). Student bloggers are welcome as well; if you would like to blog on Loopback, please contact Ray Trygstad, [trygstad@iit.edu](mailto:trygstad@iit.edu) or 630.447.9009.
- ♦ **The ITM Facebook Group:** <https://www.facebook.com/ITMatIIT/>.

## Academic Honesty

As you study in our program, you will be required to submit research papers, programs, labs, quizzes and examinations. These works are very important because they are the metric—the measurement—of our ability to impart knowledge and information to you; and of your ability learn, recall and apply this knowledge and information. If you do not submit work that is your own work, we have no way to measure the success of our efforts to educate you. If you are not being academically honest—if you are cheating, you are not allowing us to adequately measure our success—or your success. Our single largest problem in the Information Technology and Management program is with research papers. Many students in our program have come from other nations where secondary school and undergraduate programs never required completion of research papers, but the ability to research a topic and present the results of that research in a research paper is absolutely required in graduate education in the United States. If this is not a skill you already possess, you must learn it to be a success in our program.

We have had reports of students boasting to employers during Curricular Practical Training that they “got through” our program by cheating. To us, this seems to be just stupid: why would you boast about being dishonest? Frankly we are very upset by this as it is completely unfair to the students who study and work hard in our program, and we are taking every step to be sure that *no one* who cheats repeatedly in our program will receive a degree from Illinois Tech.

- ♦ **Plagiarism:** The code of conduct governing writing by students at Illinois Tech requires original writing, prohibits plagiarism and provides severe sanctions for plagiarism. Original writing consists of thinking through ideas and expressing them in your own way. Plagiarism is submitting written material that contains words that are directly quoted without placing the quotation in quotation marks or as a paragraph that is set off from your text and is not accompanied by a citation of the source. It can also be a statement of a fact that is not regarded as “common knowledge” without citation of the source. Every single sentence or clause that you directly quote and every fact that is not common knowledge that you cite **MUST** have a properly formatted citation in the text **AND** a related entry in your bibliography. The presence of one sentence or substantial phrase in your submitted work that is a direct quote and does not have the source properly cited and included in your bibliography is automatically plagiarism. Submitting the words of others as your own work is cheating and will not be tolerated in our program.
  - ✍ **Writing Assistance:** Often students will find material online and cut and paste this material directly into work they submit with no citation. The main reason we find that students do this is a lack of confidence in their ability to express their thoughts well in written material. We would far prefer to see a student's own ideas—no matter how poorly expressed—than seeing someone else's ideas written well! If you are at Illinois Tech's Mies Campus, there is a Writing Center, ([http://www.iit.edu/csl/hum/resources/writing\\_center.shtml](http://www.iit.edu/csl/hum/resources/writing_center.shtml)), and the staff there will go over your paper with you line by line to help you with your grammar and use of language. They are there to help you learn to write better by explaining each correction to you as they are made. In addition, research librarians in Galvin Library are there to assist you in ensuring that your citations and bibliography are correctly formatted; it is their job to assist you and you should not hesitate to ask them.
  - ✍ **Time Pressure and Research:** Another reason students will plagiarize is that they are pressed for time and need to assemble a research paper in a very short period of time. The solution to this problem is very, very simple but represents a level of self-discipline many students have difficulty with: students need to start their research and writing with enough time to do a thorough and complete job in their own words.

- ✍ *Plagiarizing by Paraphrase:* When a writer uses a source, substitutes words and sentences, or even changes the order but keeps the meaning of the original, a citation is required. In the example given below, the original is on the left. The paraphrase on the right constitutes plagiarism. The writer could avoid plagiarism here by acknowledging the source and providing a proper citation.

**Original:** It is not generally recognized that at the same time when women are making their way into every corner of our work-world, only one percent of the professional engineers in the nation are female. A generation ago, this statistic would have raised no eyebrows, but today, it is hard to believe.

**Paraphrase:** Few people realize now that women are finding jobs in all fields, that a tiny percentage of the country's engineers are female. Years ago this would have surprised no one, but now it seems incredible.

- ✍ *Mosaic Plagiarism:* Here the writer lifts phrases and terms from the source and embeds them in his own prose. An example follows in which the lifted phrases are underlined:

The pressure is on to get more women into engineering. The engineering schools and major corporations have opened wide their gates and are recruiting women zealously. Practically all women engineering graduates can find attractive jobs. Nevertheless, at the moment, only one percent of the professional engineers in the country are female.

Mosaic plagiarism is sometimes caused by careless note taking. However, it looks dishonest and is judged as such. The use of quotation marks around the original wording and citation avoid the problem of plagiarism. Often a better approach is to use full paraphrasing or to quote directly—with appropriate citations.

- ◆ *Quoting and Referencing Material:* Ultimately we expect that any course work that you submit will contain your own words and not the words of others. You must be scrupulous about separating and referencing the words of others. Faculty members will normally consider unseparated or unreferenced text that others have written to be plagiarism.
- ✍ *Citations:* Plagiarism can be avoided by providing citations for the sources of any material, including ideas, phrases, or sentences that you have used in your paper. A number of different systems are available for providing citations. The key to all of them is that the writer must clearly identify for the reader the sources of all material (including ideas) that have come from somewhere else. If you wish to use the words of others, in most cases you may if you do two things:
  - ✓ Separate the words of others from those of your own. For one or two lines, place the words in quotation marks or for longer passages quote or indent the words using different font styles.
  - ✓ Properly reference the words. See the reference information provided in the Paper Format document for your course, or in the "Writing Research Papers" section of this handbook on page 17 below.
- ✍ *String Quotation Problem:* Sometimes a student will write a paper consisting of a string of quotations. It is usually much better for a student to provide his or her own analysis and write the paper in his or her own words. Many professors will reject a paper consisting primarily of material quoted from other sources because they do not view such a paper as the student's own work. Due to this, many instructors may limit the amount of material that you may quote directly in an assignment. If no guidance is present, as a general rule properly attributed quoted material should not exceed 33% of the content of your paper.
- ◆ *Collaboration/Copying:* Some students in our program have found themselves pressured by classmates to give them answers to problems and assignments for courses they have already completed. This is also clearly cheating—it is dishonest and is unacceptable; students who give out this information are equally guilty of academic dishonesty as are those who ask for this information. If you are asked to do this the only acceptable answer is to just say NO. It benefits neither you nor the students who are copying your answers.
- ◆ *Sharing of Completed Course Work Online:* You cannot share answers to problems, coding assignments, other course assignments, quizzes, or examinations on any web site. If we are made aware of gradable/graded material from departmental courses being posted on sites such as coursehero.com, we will work with the site to determine the identity of the submitter and will treat the offense with the same gravity as a second Academic Honesty Violation.
- ◆ *Acknowledgment:* In addition to the above brief discussion, each student must read and ensure you understand both the **Code of Academic Honesty** in the *The Illinois Institute of Technology Student Handbook* at [http://www.iit.edu/student\\_affairs/handbook/information\\_and\\_regulations/code\\_of\\_academic\\_honesty.shtml](http://www.iit.edu/student_affairs/handbook/information_and_regulations/code_of_academic_honesty.shtml) and the **Information Technology and Management Policy on Academic Honesty Violations** below. You must understand that if you commit academic dishonesty—if you cheat—there *will be consequences. You will be punished.* At a minimum you will be assigned a grade of zero for the assignment; if it is a second offense you will be given a failing grade for the class and lose our approval for participation in Curricular Practical Training (CPT) and/or Co-op/Internship programs. On a third offense, we will recommend that you be expelled from the university.

## INFORMATION TECHNOLOGY AND MANAGEMENT POLICY ON ACADEMIC HONESTY VIOLATIONS

### Sanctions for Information Technology and Management students

When an Information Technology and Management student is found to be in violation of the academic honesty standards of the university, the faculty member involved should take the following steps:

1. **Identical or Substantively Identical Work:** If duplicate work is encountered when grading an item, assign a grade of zero for the assignment, quiz or exam on which the violation has occurred until the situation has been discussed with the students involved.
  - a. Discuss the situation with all students involved.
  - b. If one student admits to having copied the work, or if there is clear evidence who is guilty, assign the guilty student a grade of zero and grant full credit to student who did the work.
  - c. If no one admits to the offense or a reasonable determination of guilt cannot be made, assign each student involved a grade of zero



2. **Plagiarism:** If a submitted item contains unattributed material that is not a student's own work, assign a grade of zero for the assignment, quiz or exam on which the violation has occurred.
3. **Sharing of Completed Work Online:** This will automatically be treated with the same sanctions as a second Academic Honesty Violation.
4. In any case, submit an Academic Honesty Violation Report to the ITM Program Manager, Angie Jarka, PH 223, [ajarka1@iit.edu](mailto:ajarka1@iit.edu), 312.567.5927.
5. If notified by the ITM Associate Chair that the violation is a second offense, expel the student from the course and assign a punitive failing grade.

When the ITM Program Manager is notified of a student violation of the academic honesty standards of the university, the Program Manager will take the following steps:

1. Determine if the violation is a first, second or third offense by consulting the student's ITM Department file and notify the ITM Associate Chair for undergraduate students.
2. If the violation is a first offense, the ITM Associate Chair will notify the Dean of the School of Applied Technology and the Vice Provost for Academic Affairs, and place a notation of the violation in the student's ITM Department file.
3. If the violation is a second offense or is sharing of completed course work online, the ITM Associate Chair will notify the Dean of the School of Applied Technology and the Vice Provost for Academic Affairs; notify the faculty member who should expel the student from the course and assign a punitive failing grade; notify the Career Management Center and the International Office that the Department of Information Technology and Management's approval for the student's participation in Curricular Practical Training (CPT) and/or Co-op/Internship programs has been withdrawn for the current and next semesters; and place a notation of the violation in the student's ITM Department file.
4. If the violation is a third offense, the ITM Associate Chair will perform the same steps as for a second offense and notify the Dean of the School of Applied Technology that this is a third offense. The Dean will then recommend to the Vice Provost for Academic Affairs that the student be expelled from the university.

## Program and Course Prerequisites

Prerequisites for courses and degree programs may be fulfilled through prior college course work, industry certifications or experience, or credit by examination.

- ♦ *Waiver of Prerequisites Based on Certification or Experience:* Program or course prerequisites may be waived based on industry certifications or significant experience. This waiver can be granted for courses by advisers, course instructors of the course the prerequisite is required for, or the ITM Associate Chair, Ray Trygstad. See below for credit by examination information.

## Credit by Examination

Credit by examination may be granted for any course as per current university policy as found in the *Undergraduate Bulletin* at <http://bulletin.iit.edu/undergraduate/academic-policies-procedures/credit-by-examination/>. Undergraduates—especially transfer students—should take note that any credit granted by examination must be completed prior to beginning the last 45 hours of coursework for your degree.

- ♦ *Credit by Examination and Industry Certifications:* Industry certifications may be used as the examination for credit by examination, but this credit will not normally be granted after the end of the first semester of studies in a degree. Many industry certifications may fulfill course requirements; while we recognize their value and applaud students who hold them, we cannot at this time grant graduate course credit for Cisco certifications. If you have industry certifications that you believe may fulfill course requirements, contact the ITM Associate Chair, Ray Trygstad ([trygstad@iit.edu](mailto:trygstad@iit.edu) or 630.447.9009), for evaluation of your certification.
- ♦ *Administration of Examinations for Credit by Examination:* A student desiring to complete a course through credit by examination will complete the Credit by Examination form by logging into MyIIT to access the form at [http://my.iit.edu/iit/registrar/tools\\_guide/pdf/credit\\_by\\_proficiency\\_exam\\_form.pdf](http://my.iit.edu/iit/registrar/tools_guide/pdf/credit_by_proficiency_exam_form.pdf), make their payment, and bring the form to the instructor for the applicable course. The instructor may administer the midterm (if applicable) and final examinations from the most recent offering of the class, or may administer an oral examination, to verify that the student possesses an adequate level of knowledge to complete the course. Upon completion of the examination, the instructor will assign a grade on the form; if the student does NOT possess the necessary level of knowledge *a failing grade will be assigned*. After assigning the grade and signing the form the instructor must return the form in person to Angela Jarka at the Mies Campus. Once a student hands the instructor the form, the student may not possess or handle the form again.
- ♦ *Credit for Proficiency for Continuing Education Unit (CEU) awarded coursework:* Credit by Proficiency may be granted for coursework in the IT or INT courses of the Information Technology and International Certificate Programs as outlined in *Grading of CEU Students* below, requiring a grade of "C" or better for undergraduate credit in undergraduate level courses and "B" or better for graduate credit in graduate level courses based on the final letter grade given for the CEU coursework. If a particular section of a course is offered at both undergraduate and graduate levels, students must complete the graduate level coursework to receive graduate credit. Meeting with your program manager of the Office of Professional Development (OPD) at the beginning of each semester will help ensure proper level selection in coursework. The Credit by Proficiency process also begins with the student meeting with the appropriate program manager of OPD.

Successful completion of courses in IT or INT may always be considered as credential for admission even if no academic credit may be awarded. There is no Credit by Proficiency awarded for English Language courses.

## English Proficiency

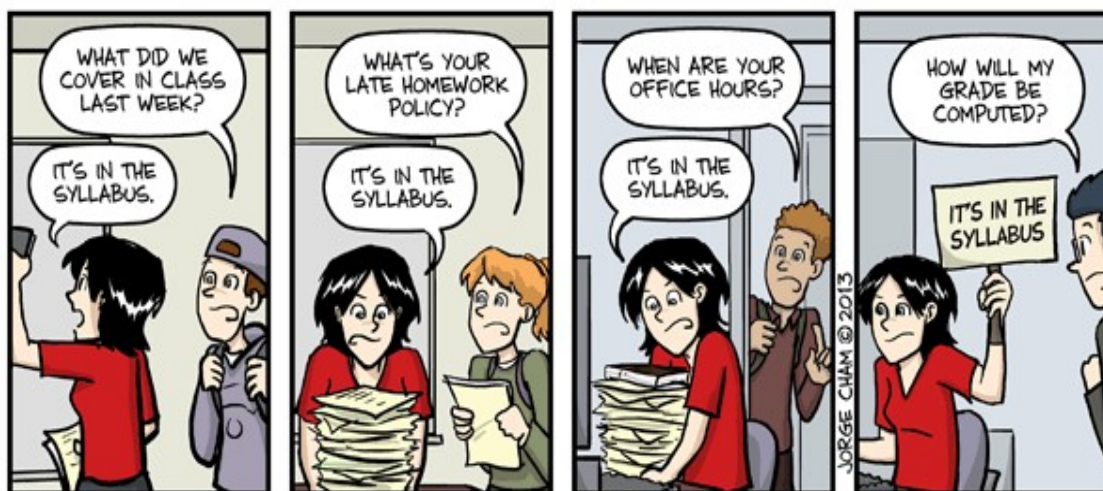
Good written and spoken English skills are essential for students completing our degrees. If you find you are seriously deficient in either area, please seek help, as we have a lot of resources available to assist you. If we allow you to complete our degree with unacceptable language skills, we are doing both the you and the department a disservice. We have a great infrastructure right in our own college to assist non-native speaking students with their English skills through Professional Development's ESL programs, but we have to know you are having difficulty to help you. Native English speakers with seriously deficient skills are much harder to assist and we need to identify your issues very early on if we are going to help you.

- ◆ Students who have low scores on the Test of English as a Foreign Language (TOEFL), those who are not required to complete the TOEFL but do not have English as their first language, or who have very weak scores on the GRE Verbal may be required to complete an English assessment examination. Based on the outcome of the assessment, students may be required to enroll in and successfully complete one or more Proficiency of English as a Second Language (PESL) courses.
- ◆ Assistance is available for written and oral assignments at the Illinois Tech Writing Center, located in Siegel Hall, Rooms 232–233. Tutors are available during the fall and spring semesters to assist all Illinois Tech students, free of charge. The Writing Center provides individual, 30-minute meetings for students. They can assist you with any stage in the writing process, from brainstorming and outlining to final touches and reference sheets, as well as issues such as grammar, punctuation, and spelling. Faculty members who see that you are having difficulty may refer you using their referral form at [https://humansciences.iit.edu/sites/humanscience/files/elements/humanities/pdfs/iit\\_writing\\_center.pdf](https://humansciences.iit.edu/sites/humanscience/files/elements/humanities/pdfs/iit_writing_center.pdf). For more information, please see <https://humansciences.iit.edu/humanities/writing-center>.

## Syllabus

Instructors must provide a detailed syllabus for students delineating the objectives of the course which should also detail specific learning objectives for each lesson. The content and objectives must substantially match those found in the official course outline or departmental syllabus if one has been provided by the ITM Department. A detailed syllabus with clearly stated learning objectives is a necessity for the ongoing success and academic validity of our program.

- ◆ **Syllabus Content:** You can expect a course syllabus will cover expected outcomes and learning objectives for the course; topics covered in the class; homework assignments; projects; exams; grading policies; and a clear policy on handling late assignments/projects and academic irregularities.
  - ✎ The syllabus is a *contract* between your instructor and you, and must be treated as such. If your instructor changes the topics in your course, or your assignments, or any other significant facet of the course, they should issue a revised syllabus reflecting these changes. ***You are expected to know and understand what is in the syllabus.***
  - ✎ The syllabus must include a grading discussion which must address two things: a breakdown of how letter grades relate to percentage grades or points, and how much weight is carried by each category of graded material. It is required that both of these be in writing and be included in the syllabus. This protects both you and your instructor from ambiguity.
  - ✎ All grading in the ITM Department, to the maximum extent possible, must be evidence-based grading. This means wherever possible, your instructor should provide you with a rubric clearly spelling out what aspects of an assignment will be graded and what standards will be applied to each graded area to determine if the work is excellent, good, adequate, poor or unsatisfactory.



# IT'S IN THE SYLLABUS

Cartoon used by permission from "Piled Higher and Deeper" by Jorge Cham, [www.phdcomics.com](http://www.phdcomics.com)

## Grading

Suggested (not required) grading standards for undergraduate and undergraduate-level CEU students:

|  |           |
|--|-----------|
| <b>A</b> Outstanding work reflecting substantial effort.....       | 90-100%   |
| <b>B</b> Excellent work reflecting good effort.....                | 80-89.99% |
| <b>C</b> Adequate work meeting minimum expected requirements.....  | 70-79.99% |
| <b>D</b> Substandard work not meeting reasonable expectations..... | 60-69.99% |
| <b>E</b> Unsatisfactory work (Fail).....                           | 0-59.99%  |

There is no grade of **D** for graduate level coursework for CEU students. This grading standard also applies to English Language courses.

- ◆ **Assignments:** Assignment in this context includes all work submitted by students to fulfill course requirements except for exams, and typically includes lab reports, research papers, projects, programs, homework and quizzes. Every course must include a minimum of one graded assignment with grades returned to students before the final day to withdraw from the course. Multiple assignments for a course must be reasonably spread over the course of a semester and each must have a due date and a final late acceptance date; these may be the same date. In-class reviews of assignments may not be held until after the final late acceptance date. No course may have all course assignments due at the end of the semester. In order to better facilitate the use of rubrics and other tools for assessment, all assignment submissions should be via Blackboard. Submissions may be a link to a code repository such as Github, or to a web location, but should still be submitted via Blackboard for record purposes.
- ◆ **Examinations:** Every course must have a final examination. Examinations may be in class or take-home; in-class examinations may be open- or closed-book. For courses where it is appropriate, the final examination may be a final project or research paper presentation. However, all instructors must give one closed-book, closed-note exam each term unless specifically waived by the department; this exam may be a mid-term rather than a final, and distance learning students must have this exam proctored by arrangement with the Illinois Tech Office of Digital Learning. Final examinations that are not “take-home” exams must be completed in a single, uninterrupted two hour increment, even if administered online. It is the policy of both the university (implicit) and the department (explicit) that in-class final examinations may not be administered before the scheduled time and date. If you are in an online section, you should schedule exam proctoring with the Office of Digital Learning, but do not expect the exam to be administered before the scheduled time and date.
- ◆ **Submission of Grades:** Your instructors will submit grades for all courses online; the exact day and time for grade submission will vary as per the Illinois Tech Academic Calendar. Your grade will normally appear on your unofficial transcript in MyIIT within a few minutes of posting, but should appear no later than 24 hours after posting. At that time, official transcripts including the P(ass)/F(ail) grades which award CEUs may be ordered.
- ◆ **Grading of Continuing Education Unit (CEU) students:** The actual grades submitted online for CEU students will be either a P for “passing” or an F for “failing” or NA for “non-attend.” Actual letter grades for all CEU students will be submitted to the Office of Professional Development (OPD) to keep on record to be used for credit by proficiency (see information on *Credit by Proficiency* above). CEU students must complete all class assignments and examinations to receive a letter grade. If a letter grade of “C” or better for undergraduates or “B” or better for graduate students is not received, the course may not be transferred into a degree program at Illinois Institute of Technology through Credit by Proficiency. CEU students who attend at least 80% of classes, participate actively in the classroom, and who submit a course evaluation, will be assigned a grade of “P” if all course requirements are completed and a minimum letter grade of “D” is earned.
- ◆ **Attendance:** Class attendance is expected of all students enrolled in live (i.e. not online) sections of a class. At the instructor’s discretion, students in live sections who do not attend class may be penalized in a class participation component of the course grade; this should be explained explicitly in the course syllabus. Faculty members are required to take attendance in all 100- and 200-level courses and may always elect to take attendance in any course. CEU students are required to attend course sessions unless specifically notified by the Office of Professional Development that online attendance is sufficient; at least 80% of classes must be attended live.
- ◆ **Extensions for Completion of Courses:** Students may be assigned a grade of “I” (incomplete) if the student requests it, all requirements for assignment of an “I” are met, in the instructor’s opinion there is a valid reason for an extension of time to complete their coursework, and the Department grants approval. A grade of “I” will be assigned only in case of illness or for unusual or unforeseeable circumstances that prevent the student from completing the course requirements by the end of the term. You must apply to the instructor in writing for a grade of incomplete, using the request form at <http://www.itm.iit.edu/incomplete/>. You may not seek an incomplete before the last day to withdraw from the course and must request a grade of incomplete prior to final examination week. If the instructor approves it, your request will be forwarded to the Registrar’s Office for final approval. You must meet the university Academic and Department Regulations requirement that students have “substantial equity” in the course and the written agreement between the you and the instructor must detail the remaining requirements to complete the course. Grades of “I” will automatically lapse to “E” on the published deadline of the subsequent term. Please bear in mind that the only acceptable reasons for an “I” are either illness or unusual/unforeseeable circumstances. The fact that you may have fallen behind in course work when neither of these situations exists is NOT adequate cause to award an incomplete. In these cases you can expect to be awarded the grade you have earned in the class. In the case of CEU students, no letter grade will be submitted until the course is completed. Instructors must grant CEU students extensions for course completion when directed by the Office of Professional Development, and may grant extensions for other reasons as well with permission of the Office of Professional Development. If CEU students have completed the requirements for a “P” grade they should be assigned that grade even if the letter grade is otherwise an “I”.



- ♦ **Withdrawal from a Course:** If you determine that you will be unable to complete a course with a passing grade, it is advisable to withdraw from the course rather than have the failing grade appear on your transcript, and your instructor may advise you to do so. The deadline for withdrawal is normally six weeks prior to the end of the term; consult the academic calendar (<https://web.iit.edu/registrar/academic-calendar>) for the current term for the exact date. A grade of “W” will appear for the course on your transcript. This grade does not apply toward your GPA and no credit is awarded for the course. If you are a part time student, **payment is still required for the course**. If you are a full-time student and you drop below twelve credit hours for the term by withdrawing, you will be on academic probation the following term due to failure to make adequate academic progress; generally this is still preferable to receiving a failing grade in a course. If you have been ill or have other mitigating circumstances that have prevented you from submitting your work in the final few weeks of the course, please discuss this with the instructor before you withdraw; if you present a good case, at the instructor's discretion you may be granted an extension to complete the course (see above).
- ♦ **Not Attending:** If you stop attending class, at the mid-term you may be assigned a grade of “NA” (not attending). If you receive a grade of “NA,” you should discuss the situation with your instructor to determine if you can successfully complete the course with a passing grade. If you cannot, you should withdraw from the course (see above). If you continue to fail to attend, at the end of the term you will be assigned a failing grade of “E”.
- ♦ **Extra Credit:** If a faculty member desires to allow you to earn extra credit in a course, the extra credit must be applied to your grade after the final grade calculations for the term have been made. This is to prevent extra credit points from “skewing the curve” or otherwise penalizing students who elected not to do the extra credit assignment(s). Policies for awarding of extra credit should be explicitly stated in the course syllabus. **If there is no policy for extra credit included in the course syllabus you cannot expect an instructor to grant extra credit.**
- ♦ **Retention of Graded Examinations:** Faculty members may elect to retain your examinations after they have been submitted and graded, or they may return them to you, but in all cases they must allow you an opportunity to review your graded examination upon request. If faculty members elect to retain graded examinations, they must then retain them for three years following the completion of the course. See the discussion on Student Intellectual Property below for a discussion of other retention of coursework.
- ♦ **Appeal of Final Grades:** Grades you have earned based on your work in a course are **final**. If the minimum score to earn a grade of **A** in a course is 90% and you have earned a score of 89.97%, **your grade is a B**. If you are unhappy with the grade you have earned at the end of the term, pleading with the instructor will be a waste of both your time and the instructor's time. **You cannot do additional work after a grade has been submitted to change your grade.**
  - ↳ If you want to appeal a letter grade assigned in a course, you should first confer directly with your course instructor. If you and the instructor cannot come to an agreement, you should contact the Associate Chair of the Department. If necessary, you can appeal to the Dean of the School of Applied Technology. Appeal of a final course grade should be initiated within two weeks of the end of the term.

## Classroom Conduct

You must conduct yourself in a professional manner showing courtesy to the instructor & your fellow students.

- ♦ Professional conduct includes participation in group activities and discussions. Making an active, positive contribution may help a class participation grade and will improve not only your experience, but also the experience of the entire group.
- ♦ Unless required to accommodate a student disability, please turn off cell phone ringers and other distracting electronic devices and leave them off while class is in session. If the instructor requests that you not use notebook PCs, tablets, or smartphones while in class, you need to respect that request and comply. Failure to comply may be reflected in your class participation grade.
- ♦ You may use voice or video recording devices in lectures as long as their use does not disrupt class proceedings.
- ♦ If you are late to class, please enter the classroom and take a seat as quietly as possible
- ♦ You should not engage in conversations while an instructor, lecturer, or fellow student is speaking.
- ♦ If a class exceeds seventy-five minutes, there will generally be a break in the middle of each meeting of the class; please return from the break promptly and be in your seat at the appointed time.
- ♦ Please use restraint and good judgment when bringing food and drink items into the classroom.

## Course Evaluations

Your evaluations of our courses are considered to be a critical component in the continuous improvement of our program offerings. Course evaluation results are reviewed by senior academic administration as well as the departmental staff as just one component of the normal administrative review of instructor performance. The evaluation data and comments will also be available for review by each instructor (after grades have been submitted) to help improve the course. Evaluations are completely anonymous and confidential; evaluation results and comments are available to the instructor only without identifying information.

- ♦ **Submission of ITM course evaluations:** Course evaluations are made available under your Academics tab in the MyIIT portal. Evaluations are conducted the last two weeks prior to the exam week of each academic semester, and you won't be able to access evaluations after Sunday night prior to exams. Constructive feedback from you is **very** important to us, both positive and negative, and your submission will be *completely anonymous and confidential*. **Please** complete your evaluations to help us improve our program; they really are important to us.
- ♦ **Submission of CEU student course evaluations:** CEU students will not be awarded Continuing Education Units (CEUs) without submitting a properly completed course evaluation. Evaluations will be completed during the



last two weeks of the course prior to any final examination. The Office of Professional Development will provide you with specific instructions as to how to complete and submit your evaluations. If you have questions about course evaluations for CEU students, please contact the Office of Professional Development at 312.567.5282.

## Course Assessments

In order to ensure that you, our students, are attaining the outcomes that we have established for our degrees and for each course that we offer towards your degree, we have established a formal assessment process. Assessments may be conducted by evaluating assignments in the course to measure attainment of outcomes using a rubric, by surveys of the students in the course, and by surveys of the faculty member teaching the course. Between three and seven courses are assessed each term. Assessments create a baseline that we can measure against for evidence of improvement, and allow us to identify flaws, shortcomings, and issues with courses to support a process of continuous improvement. Assessments and the process of continuous improvement they facilitate are an important facet of ITM program accreditation by the Computing Accreditation Commission of ABET and university accreditation by the Higher Learning Commission.

- ◆ *Course Assessment Surveys:* These surveys are conducted by ITM Department staff during the final weeks of each course being assessed. The surveys ask you to evaluate how well you have achieved each of the course and program outcomes covered in the course. Please take the surveys seriously as they are very important to the ongoing process of improving what we do to ensure we are delivering the best possible education to you our students. Please ensure that you are present in class for the surveys.

## Student Intellectual Property

As a general rule, intellectual property created and submitted in fulfillment of assignments in the Information Technology and Management degree remains the intellectual property of the student; if no license is included, the assignments are copyrighted under the Berne Copyright Convention and distribution is subject to international and national copyright law. This means that there may be no redistribution or re-use of the material submitted in fulfillment of assignments without the express consent of the copyright owner—the student. Additional policies for student intellectual property can be found in the university *Student Handbook*, Chapter III, Policies and Procedures, at <https://web.iit.edu/student-affairs/handbook/fine-print/policies-regulations-and-procedures>. Because it is necessary to maintain files of student work for normal administrative and pedagogical purposes, such as accreditation requirements, the Department of Information Technology and Management hereby gives notice of its desire to secure a non-exclusive, perpetual, royalty-free license solely to use, at its discretion, student-created work produced in all courses offered by the department, with appropriate attribution, for its own non-commercial and educational purposes, including to promote the programs of the academic unit. Unless the student submits a written notice to the Dean of the School of Applied Technology indicating that he or she does not agree to grant such a license by the last regularly scheduled day of the course, then the student shall be deemed to have granted the foregoing described license. The university owns both questions and answers on tests and examinations, unless otherwise indicated by the course instructor. There are too many possible variations on how intellectual property may be handled for full inclusion here, but in general the following policies will apply.

- ◆ *Requests for Assignments of Rights:* As many student projects are ongoing from term to term, faculty members may request an assignment of rights for re-use or redistribution of student work from students, but students are not expected or required to assign any rights, and the refusal to assign rights may not be prejudicial to the student in any way. To ensure any consent granted for re-use or redistribution of any student work is clearly unequivocal, such rights must be granted in writing by the copyright owner. Suggested formats for assignments of rights may be found at <http://www.itm.iit.edu/resources/licensing.php>.
- ◆ *Software Licensing:* While it is not required, students are strongly encouraged to license academic programming assignments under an applicable Open Source license. This is in line with the academic traditions of openness and sharing that have created Linux and the Internet. The preferred license for ITM student use is the MIT License. Alternative licenses could be the GNU General Public License (GPL) or any one of a variety of other Open Source licenses. Suggested formats for software licensing may be found at <http://www.itm.iit.edu/resources/licensing.php>.
- ◆ *Other Intellectual Property Licensing:* Again, while it is not required, students are strongly encouraged to license research papers and other academic coursework under licenses that allow some sharing of the material such as a Creative Commons license. With a Creative Commons license, you keep your copyright but allow people to copy and distribute your work provided they give you credit—and only under specific conditions that you specify. For detail on licensing under Creative Commons, see <http://creativecommons.org/license/>.
- ◆ *Public Domain:* Students may explicitly place any coursework in the public domain by placing a comment in their code or text that reads: **This <software/text/etc.> is placed in the Public Domain by the author, <student name>, <date>. This indicates intent only and may not be legally binding in any or all jurisdictions.** The use of Creative Commons CC0 licensing is normally the best option from a legal perspective.

## Degree Specializations

The Bachelor of Information Technology and Management offers seven specializations. These specializations are intended to prepare you for particular roles in the IT working world, but there is no requirement that you complete a specialization for graduation. Instead you can elect to tailor a course of study that meets your specific needs. If you do elect to complete a specialization, you must complete a sequence of courses within the specialization as outlined in the *Undergraduate Bulletin* at <http://bulletin.iit.edu/undergraduate/colleges/applied-technology/information-technology-management-school-applied-technology/bachelor-information-technology-management/#specializationtext>. Your adviser will determine if you have completed a specialization and will also authorize any substitution of courses toward the specialization. Completion of a specialization should be indicated by an annotation on your transcript and upon request will be recognized by a document issued by the School of Applied Technology.

## Minors

Undergraduate Bachelor of Information Technology and Management students are required to complete a minor, which at Illinois Tech consist of 15 hours or more of study in a single or multidisciplinary subject outside of your major. Students completing a minor may want to consider minors which complement their primary program of study; these include (but are not limited to) Industrial Technology and Management; Communication; Business; Information Architecture; Software Engineering; and Telecommunications. Alternatively, students may wish to minor in an area completely dissimilar—such as Philosophy, Music or Urban Affairs—to make them a more well-rounded and better educated individual. Any course you take to fulfill a minor requirement may not also be used as an elective in the ITM major although some limited overlap with general education requirements may be possible. Please refer to the *Undergraduate Bulletin* at <http://bulletin.iit.edu/undergraduate/undergraduate-education/minors/> for detailed information as well as for the list of available minors. There is no form required to declare a minor; you need only to notify Undergraduate Academic Affairs of your minor when you request an audit of academic programs and when you fill out an application for graduation form. If you want to declare a minor not already listed as approved, you must confer with your adviser to determine the necessary steps to gain permission.

- ↳ ROTC students may minor in Military Science, Naval Science, or Air Force Aerospace Studies as appropriate.
- ↳ Minor requirements are normally waived for students transferring in or changing majors with 30 or more hours of credit.

## Co-Terminal Degree Program

Undergraduates in Information Technology and Management degrees can complete a graduate degree simultaneously with their undergraduate degree, while maintaining their undergraduate status (and undergraduate financial aid!) In most normal circumstances, students can complete both degrees in five years of study, or in three years for transfer students. To be apply for the Co-Terminal Degree Program, students must:

- ◆ be a full-time Undergraduate student at Illinois Tech.
- ◆ have completed at least 3 semesters as a full-time Undergraduate student or have 60 or more credit hours of Undergraduate course-work.
- ◆ have a minimum Undergraduate GPA of 3.25. This means that transfer students may not apply until during their second term at Illinois Tech and cannot commence their graduate studies until their third term.

Degree combinations currently available under this program are:

- ◆ Bachelor of Information Technology and Management → Master of Information Technology and Management
- ◆ Bachelor of Information Technology and Management → Master of Cyber Forensics and Security

Additional Co-Terminal degree combinations which should be possible now include:

- ◆ Bachelor of Science in Applied Cybersecurity and Information Technology → Master of Information Technology and Management
- ◆ Bachelor of Science in Applied Cybersecurity and Information Technology → Master of Cyber Forensics and Security
- ◆ Bachelor of Science in Applied Cybersecurity and Information Technology → Master of Science in Applied Cybersecurity and Digital Forensics

A course matrix showing a sample program of study for each option is on pages 24 through 29 of this handbook. Note that three graduate courses are counted towards both the undergraduate and graduate degrees; these courses double-count as ITM undergraduate electives.

To apply for the program, log in to the [my.iit.edu](http://my.iit.edu) portal, select the **Academics** tab and navigate to the **Undergraduate Academic Affairs – Student channel**, then select the “IIT Co-Terminal Degree Program Application” hyperlink. For more details please see the Co-Terminal Degree information page at <http://web.iit.edu/gaa/co-terminal-degrees>. For questions specific to the ITM Department, contact the ITM Associate Chair, Ray Trygstad, [trygstad@iit.edu](mailto:trygstad@iit.edu) or 630.447.9009.

- ◆ *Co-Terminal Degree Students:* Students admitted as a co-terminal graduate students should carefully read the *ITM Graduate Student Handbook* <http://www.itm.iit.edu/data/ITMGraduateStudentHandbook.pdf>, and the ITM section of the *Graduate Bulletin* <http://bulletin.iit.edu/graduate/>. In addition to their Undergraduate Adviser, co-terminal students will be assigned a Graduate Adviser who will be responsible for oversight of their graduate studies including approval of their specialization and any course substitutions. Co-terminal students must still contact their Undergraduate Adviser each term to complete undergraduate advising and to receive their registration PIN and permits to register for their 500-level courses.

## Advising

Each student enrolled in our program is assigned an academic adviser. The role of your adviser is to assist you in monitoring progress toward graduation by fulfilling degree requirements; helping you select courses that meet your individual goals and career objectives; ensuring you take an appropriate, balanced load of technical and non-technical courses each semester while meeting all course prerequisites; and dealing with problems such as the need to drop a course, academic probation, and so on. Please see your adviser for academic problems you encounter that you don't know how to resolve. See the paragraph above for additional details for advising of students enrolled in the co-terminal graduate degree programs. Our Director of Undergraduate Advising and primary undergraduate adviser is Ray Trygstad, [trygstad@iit.edu](mailto:trygstad@iit.edu) or 630.447.9009. Undergraduate transfer students generally will be advised by Jeremy Hajek, [hajek@iit.edu](mailto:hajek@iit.edu) or 630.296.4012.

- ↳ *Transfer Course Evaluation:* Your undergraduate adviser will evaluate information technology and related courses for transfer as required or elective ITM courses. You may be requested to provide a course description or a syllabus to verify content of courses to be transferred.
- ↳ *Pre-Registration Advising:* In order to register for classes, you must complete pre-registration advising with your adviser. A face-to-face meeting during office hours or through an appointment at other times is preferred, but if absolutely necessary, advising can be done by phone or email. This is your adviser's

opportunity to monitor your academic progress, discuss with you how you are doing, and ensure you are registering for appropriate courses for the upcoming term. The adviser will then issue you your Alternate PIN number which will allow you to register for the term. Your adviser must also enter a permit to allow you to register for courses in any of the following categories:

- ✓ Online (Internet) course sections—you will see a “level restriction” error if you try to register for an online section of a course without a permit
- ✓ Graduate (500-level) courses
- ✓ Any course for which a prerequisite is waived

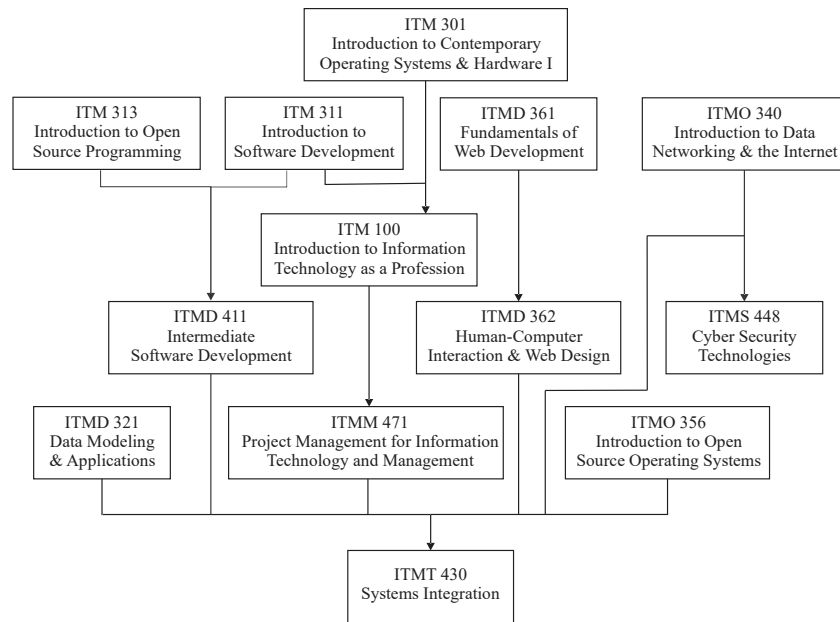
### Undergraduate Advising Notes

- ◆ *Term Planning:*
  - ✎ For planning purposes ITMO 444, ITMS 443, & ITMS 478 are normally offered only in the Fall term, and ITMM 485 & ITMO 454 are normally offered only in the Spring term. This is subject to change without notice.
- ◆ *Minors:* All students entering the Bachelor of Information Technology and Management degree as first-year students or with less than 30 hours of credit are required to complete a minor; see the paragraph above for more details.
- ◆ *Overloading:* Undergraduates may register for a maximum of 18 credit hours per semester. To register for more than 18 credit hours, undergraduates must request permission to overload from the Dean of the School of Applied Technology via their Undergraduate Adviser. **Note:** ROTC courses do not count toward the maximum of 18 hours.
- ◆ *Registration Holds:* Advisers cannot remove registration holds, but they can tell you who placed the hold and who to contact to have it lifted.
- ◆ *ITM Undergraduate General Education Notes:*
  - ✎ CS115 and CS 116 or CS 201 may be substituted for ITM 311 with permission of your adviser.
  - ✎ CS 331 may be substituted for ITM 313 with permission of your adviser.
  - ✎ All students entering Information Technology and Management degrees as Freshmen are strongly encouraged to take EG 225 Engineering Graphics and PSYCH 301 Industrial Psychology as part of their Illinois Tech Core Curriculum requirements. While not expected of students who do not enter the curriculum as freshmen, all ITM undergraduates are encouraged to take these courses.
  - ✎ **Illinois Tech’s Core Curriculum Requirements** summary with ITM notes indicated in **sans-serif** type:
    - ✓ **Writing and Communications:**
      - **English Proficiency:** Pass the IIT English Proficiency Examination or pass a composition course at Illinois Tech. **Note:** Or transfer in an acceptable composition course.
      - **Communication (C) Courses:** Complete a minimum of 36 credit hours of courses with a significant written and oral communication component, identified with a **(C)** in the bulletin, with minimums of 12 hours in major courses and 12 hours in non-major courses. Full-time students should enroll in two **(C)** courses, and part-time students should enroll in one **(C)** course each academic year. **Notes:** All ITM undergraduates are required to take 12 hours of ITM **(C)** courses: The required courses ITMD 361, ITMM 471, ITMS 448, and ITMT 430 will fulfill this requirement.
    - ✓ **Mathematics:** 5 to 20 credit hours
      - **Notes:** BITM Students are required to complete Discrete Mathematics, MATH 180 or MATH 230, and a statistics course. BUS 221, Statistics for Managerial Decision Making is recommended, but acceptable alternatives include PSYC 203, MATH 225, or MATH 425. For transfer students, mathematics courses equivalent to MATH 180 or MATH 230 Discrete Mathematics and a statistics course satisfy this requirement. Bachelor of Science students are required to complete MATH 151, Calculus I; MATH 152, Calculus II, MATH 230, Introduction to Discrete Math; MATH 251, Multivariate and Vector Calculus; and MATH 474, Probability and Statistics.
    - ✓ **Computer Science:** 2 credit hours.
      - CS 105, 115, 116, 201, ARCH 125, ITM 311 or a computer science course at the 200-level or above. **Note:** ITM undergraduates do NOT need to take a CS course to meet this requirement.
    - ✓ **Humanities and Social or Behavioral Sciences:** 21 credit hours
      - **Note:** Humanities or Social Science courses transferred from community colleges are normally at the 100- or 200-level unless they are intermediate or advanced foreign language courses.
      - **Humanities:** a minimum of nine credit hours of courses marked with an **(H)** in the bulletin. **Note:** Subjects include AAH, HIST, HUM, LIT, PHIL and some (but not all) COM.
        - At least one **(H)** 100- or 200-level course.
        - At least two **(H)** courses at the 300-level or above.
        - Foreign language classes can be taken to fulfill the Humanities requirements as long as they are at the 200-level or above.**Note:** One **(H)** course MUST be at the 100- or 200-level. HUM 200 is the prerequisite for all upper-level Humanities courses.
      - **Social or Behavioral Sciences:** a minimum of nine credit hours of courses marked with an **(S)** in the bulletin; subjects include ANTH, ECON, PS, PSYC, and SOC.
        - At least two **(S)** courses on the 300-level or above for students matriculating Fall 2015 or later; one 300-level **(S)** course for students who started their degree before fall 2015.
        - Courses from at least two different fields.
        - At least six credits (two courses) in a single field.**Note:** There is no requirement that any of the **(S)** courses be at the 100- or 200-level but two courses MUST be from the same field. PSYC 301, Industrial Psychology, is strongly recommended for ITM undergraduates. Upper-level PS, SOC or SSCI courses require HUM 200 as a prerequisite.

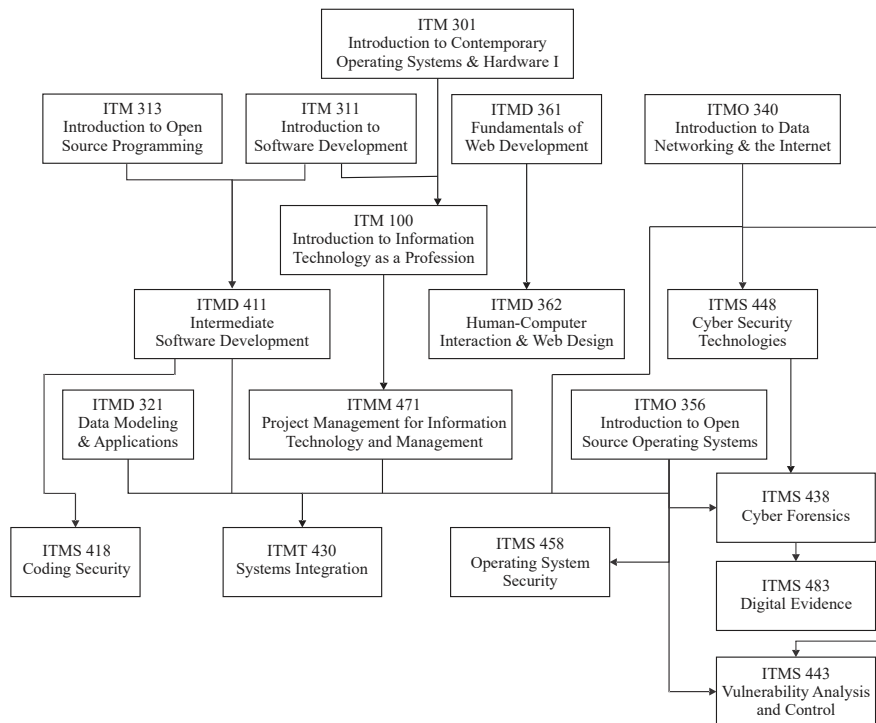
- ✓ **Natural Science or Engineering:** 10 credit hours  
Courses in engineering, biology, chemistry and physics, or by courses in architecture and psychology marked with an **(N)**. Students completing less than 6 hours of Math must complete 11 hours of **(N)** courses.
  - Two sequential natural science or engineering courses in a single field.  
**Note:** We recommend two sequential courses in Engineering Graphics (EG) for ITM students if possible. EG 225 is strongly recommended.
  - At least one natural science or engineering course in a second area.  
**Note:** We recommend PHYS 200 Introduction to Energy, Waves, Materials, and Forces and/or PHYS 120 Astronomy.
- ✓ **Introduction to the Profession (ITP):** 2 credit hours minimum; 3 credit hours in ITM
  - In most departments, students must complete this requirement in their first year. (Not in ITM.) Students entering with 30 credit hours or more of transfer credit may have this requirement waived with department approval. (ITM will not waive this requirement.)  
**Note:** The ITM ITP course is offered in the fall semester of students' second year and requires prior completion of ITM 301 & ITM 311. The ITP requirement will not be waived for students transferring into or changing majors to ITM as this course is a component of our ABET program accreditations.
- ✓ **Interprofessional Projects (IPRO):** 6 credit hours
  - Students will participate in at least two Interprofessional Project experiences  
**Note:** May be waived for part-time students who are employed full-time. See below for details.
- ◆ **Advisee Responsibilities:** Your responsibilities as an advisee include:
  - ✎ *Know and Interface with your Adviser:* Familiarize yourself with your primary and secondary adviser. Meet with your adviser on a regular basis, once a semester at a minimum, to discuss courses and career plans.
  - ✎ *Take Control:* As much as possible, take control of your education by learning about, understanding and complying with your program's and specialization's requirements. Be familiar with program resources such as the Undergraduate Bulletin and Degreeworks. Once the course schedule is published, investigate and know what courses will be offered in the next term. And remember, it is your responsibility to ensure that each course you take will apply to your degree
  - ✎ *Tell Us Who You Are:* Always include both your name and your *Student ID Number* when communicating with your adviser by email. This should help you get a quicker response and will certainly make their job easier. Many email addresses are pretty obscure and we have no idea of who [whangdoodle387@yahoo.com](mailto:whangdoodle387@yahoo.com) is. Also, please remember that you are required to use your iit.edu email to communicate with us officially. If you forward your IIT email to Gmail or Hotmail or Yahoo, set up a "send as" in your account to send email from your iit.edu address. You are studying to be an IT professional; you should be able to figure out how to do this.
  - ✎ *Give Us Some Time:* When you contact your adviser, they will try to respond to you within 24 hours if possible, but they have 48 hours (2 days) to respond. You are *very* important to us as a student, but please remember that your adviser may have as many as 200 other students they are advising, and normally have major administrative responsibilities over and above their advising duties. Please be patient!
  - ✎ *Keep It Together:* If you have multiple issues to discuss with your adviser, do it all at once! Ten emails or visits on ten different questions or topics is going to make your adviser's job much harder than it needs to be, and will probably annoy them after about the fourth or fifth contact. Please cover all of your current issues and/or questions in a single email or visit.
  - ✎ *Recognize That We Are Not Your Mother:* You are a college student, and this is not high school. You are responsible for making your own decisions about what you will study based on your own career aspirations and interests. Although we will recommend courses, it is NOT your adviser's job to tell you what elective courses to take. *Adviser* means we will give you *advice* based on what you tell us about what you would like to accomplish in your studies and we are happy to do this, but some decisions must be yours. And by the way, don't ask us sign any form that you have not filled out completely!
  - ✎ *Apply for Graduation:* You will not graduate from IIT until you apply for graduation. You should apply in the first two weeks of the final semester of graduate study; the actual deadline for each term is published in the academic calendar for the term. Instructions on how to apply for graduation are at <http://web.iit.edu/gaa/graduation-faqs>.
- ◆ **Adviser Responsibilities:** You can expect that your adviser will:
  - ✎ Meet or communicate in an appropriate fashion with you on a regular basis and keep records of advising communications.
  - ✎ Guide you in scheduling/planning your program of study, and in complying with other program requirements.
  - ✎ Inquire about career interests and guide you on career planning, with the aid of the ITM staff and university Career Services.
  - ✎ Ensure you take required courses in an expedient fashion, as is optimal to progress through your curriculum.
  - ✎ Refer you to Illinois Tech's English Language Services if in their judgment your speaking and/or listening abilities in English may not be adequate for college-level work in the U.S.
  - ✎ Direct you to other resources as necessary including but not limited to ROTC; Financial Aid; Student Health and Wellness; Center for Disability Resources; Public Safety; International Center; Academic Resource Center; the Writing Center; Undergraduate Academic Affairs; Office of Technology Services; Office of Student Access, Success, and Diversity Initiatives; and the Career Services Center.
  - ✎ Ensure secondary advisers are notified when they will not be available for advising.



## Bachelor of ITM Required Course Prerequisite Flow



## Bachelor of Science in Applied Cybersecurity & IT Required Course Prerequisite Flow



## Independent Study

Undergraduates may request independent study with a faculty member for subjects not covered in courses offerings, or research that expands their knowledge and abilities. The faculty member will issue a permit to register for ITM 497, Independent Study, or ITMT 491, Undergraduate Research, for between one and six hours of study as applicable. Full-time faculty may schedule students for ITM 497 or ITMT 491 as the faculty member's schedule allows. Faculty members receive no additional compensation for independent study or research, so adjunct faculty members are under no obligation to do so and their participation is entirely voluntary.

- ◆ **Proposals and Outcomes:** Students must have a permit to register for research or independent study issued by the faculty member. You must prepare and submit a written research prospectus, proposal, or abstract of material to be studied to the faculty member before they issue you a permit to register. The prospectus, proposal, or abstract must include clearly defined objectives and learning outcomes. The faculty member will work with the student as necessary to refine this document to their mutual satisfaction. Outcomes of ITMT 491 or ITM 497 may include a formal project or presentation of research results and should include a paper documenting the project or research.

## Interprofessional Projects (IPROs)

Our Interprofessional Projects are core to what makes an Illinois Tech undergraduate education unique. An IPRO course is a team-based learning environment in which students from various concentrations and disciplines work together to solve a real-world problem. Each IPRO project has a course number of IPRO 497 and they are differentiated by section number. These courses are an Illinois Tech general education requirement, and all undergraduates must complete at least two three-credit-hour IPRO project courses. Students completing an ROTC minor are exempt from one of the two IPRO requirements. See <http://ipro.iit.edu/> for full details on IPROs.

- ♦ **Waiver of the IPRO Requirement:** Waivers of the IPRO course requirement (not the semester hour requirement) will be considered on a case-by-case basis for part-time students who are employed full-time. The written request for a waiver must be submitted to **Undergraduate Academic Affairs**. The request must include a resume and documentation of work experience that developed communication and leadership skills, as well as an awareness of economic, marketing, ethical and social issues within the framework of a multidisciplinary team project. This documentation must be verified by the employer. If the request is reasonable, it will be forwarded for approval to the ITM Department and the Associate Provost for Academic Affairs. The department will also determine appropriate course substitutions.

## Recognition of Academic Achievement

**Dean's List:** The names of all undergraduate students who have completed at least 12 graded hours in a semester and who have a semester grade point average of 3.50 or better appear on the Dean's List. Dean's List certificates may be picked up from the ITM Assistant Department Manager in Perlstein Hall room 223.

**Graduation Honors:** To graduate with honors, eligible undergraduate students must complete a minimum of 60 graded semester hours in residency at Illinois Tech. Honors are awarded in three levels and are recognized with ropes to be worn with the cap and gown at commencement.

- ♦ *Summa cum laude (with highest praise):* GPA of 3.900 – 4.000; commencement recognition is a gold rope
- ♦ *Magna cum laude (with great praise):* GPA between 3.800 – 3.899; commencement recognition is a silver rope
- ♦ *Cum laude (with praise):* GPA between 3.500 – 3.799; commencement recognition is a white rope

**Annual Student Awards:** Since Spring 2017, annual awards are given to recognize achievement by graduating students and selected continuing students.

**GAMMA NU ETA (GNH):** ITM undergraduate students who have completed three semesters of study with a GPA of 3.65 or greater and who are in the top 15% of their class may be elected to the Beta Chapter of the National Information Technology Honor Society, GAMMA NU ETA (GNH). Two of the three semesters must have been completed at Illinois Institute of Technology. Membership is based on three primary criteria: academic excellence, community service activities, and leadership in the field of Information Technology. The executive board of the chapter are responsible for electing candidates for induction each semester. Candidates will be notified of their election with an invitation to pledge at the beginning of each term. Inducted members receive a pin and a certificate. Students who continue their membership and active participation in the chapter are recognized with honor ropes and/or stoles in the Society's colors to be worn with the cap and gown at commencement. For more information on GAMMA NU ETA, see the Beta Chapter website at <http://www.itm.iit.edu/gammanueta/> or contact Beta Chapter President Andreas Vassilakos, [avassilakos@hawk.iit.edu](mailto:avassilakos@hawk.iit.edu).

**Upsilon Pi Epsilon (UPE):** UPE is an honors society for the computing and information disciplines whose aim is to support high-performing students and academics in computing fields and encourage them to contribute to the advancement of computing science. Undergraduate students who have completed forty-five hours of study with fifteen of those hours in computing subjects at Illinois Tech, who have a cumulative GPA of 3.00 and a major GPA of 3.3 or greater are eligible for induction into Upsilon Pi Epsilon. In their Spring 2019 induction, 17 ITM students were inducted into the Illinois Tech chapter. UPE has received endorsements from the two largest computer organizations in the world, the Association for Computing Machinery and the IEEE Computer Society. See <https://www.facebook.com/upeiit/> or contact [upeiit@iit.edu](mailto:upeiit@iit.edu) or UPE President Travis Koehring, [tkoehring@hawk.iit.edu](mailto:tkoehring@hawk.iit.edu), for more information.

**Fifty for the Future:** The Annual Fifty For The Future Celebration, run by the Illinois Technology Foundation, recognizes exceptional students who pursue innovation through technology, providing access to business leaders to showcase their talent. Winners are chosen through a rigorous nomination and judging process, focused on high school through university and graduate level programs. They are awarding over 50 awards, so there is a good chance that you could be an awardee. You can nominate yourself, or faculty or staff members can nominate you at: <http://illinoistechfoundation.org/itf-programs/fifty-for-the-future-celebration/>. Awardees (and the faculty member who nominated them!) get formal recognition and a variety of benefits. Nominations normally open in the early fall and usually close sometime in early October. Students who have been nominated must complete an extensive questionnaire online to qualify for the award. See more details at <http://illinoistechfoundation.org/itf-programs/fifty-for-the-future-celebration/>.

**TruAccolades:** TruAccolades is a system created by an ITM faculty member that allows students to earn authentic badges and highlight their business & soft skills in ways that grades cannot. Students can collect feedback from their teachers, professors, and other supervisors on their coursework and the skills you've gained. This will help you identify their core strengths and choose career paths that complement them. You can embed your earned accolades to existing professional profiles and resumes and be on a road to success. You can request feedback from faculty members and learn more about your strengths by just simply filling out a form. See <https://www.truaccolades.com/> for full details.

### Student Research Paper/Project Publication Opportunities:

**ACM SIGITE:** The ITM Department has been a major contributor of papers the Association of Computing Machinery (ACM) Research in Information Technology Conference, and had papers named "Best Paper" in three of the last five years. If you complete research that represents new and original thought, please consider preparing a paper for submission to this conference. It is now a track of the ACM Special Interest Group in I.T. Education (SIGITE) Conference each fall, usually in October. The SIGITE Call for Publication will be forwarded to all faculty members each year when it is released. Watch the ITM weekly Newsletter for more information.

**ForenSecure:** Students have an opportunity to present research at our Cyber Security & Forensics Conference, presented

every spring by our Center for Cyber Security and Forensics Education (C<sup>2</sup>SAFE). This is an industry-focused conference with multiple tracks. It attracts 200+ professionals for an intensive one- and a half-day schedule that includes discussion and debate over forensics, security, data/information governance, cyber crime and security, cyber security legislation and legal issues, ethical hacking, eDiscovery, cloud forensics, steganography, policy and compliance, privacy, wireless security, cloud computing, identity theft, and more. Watch the weekly ITM Newsletter for more information.

**CRC Press Information Security Management Handbook:** We also have more student-authored papers than any other institution published as chapters in the CRC Press *Information Security Management Handbook*. If you believe you have completed work suitable for publication in any of the areas of the CISSP Body of Knowledge, you can submit your paper to Bonnie A. Goins, Adjunct Industry Professor, at [bgoins@iit.edu](mailto:bgoins@iit.edu) or 630.387.9496.

**White Papers:** Papers of particular industry interest may also be published as a *School of Applied Technology White Paper*. SAT White Papers featured on the Web site of the Chicago-based Technology Executives Club have consistently been the most downloaded papers on the site, so this represents a significant opportunity for professional exposure for our students. To nominate your paper for publication, please submit it to ITM Associate Chair Ray Trygstad, [trygstad@iit.edu](mailto:trygstad@iit.edu) or 630.447.9009.

## ITM Student Organizations

**GAMMA NU ETA (TNH):** See "Recognition of Academic Achievement" above.

**Information Technology and Management Organization (ITMO):** The purpose of ITMO is to increase recognition for the ITM Major by making resources available for all ITM students. ITMO members organize, promote, and manage this organization to assist their peers in the ITM Department. ITMO also holds events, fundraisers, socials, and other functions; they also do community work and invite guest speakers. ITMO wants to serve as an umbrella for multiple partnerships, affiliations, and organizations that members will have options to join. Watch the weekly ITM Newsletter for meeting information. For more information email [itmo@iit.edu](mailto:itmo@iit.edu) or contact the Vice President, Sofia Martinez, [smartinez@hawk.iit.edu](mailto:smartinez@hawk.iit.edu).

**The High Technology Crime Investigation Association (HTCIA) Illinois Tech Student Chapter:** HTCIA was formed to provide education and collaboration to global members for the prevention and investigation of high tech crimes. The purpose of our student chapter is to foster, promote, and encourage the study of criminal investigations involving advanced technologies and security by the academic community. It is limited to undergraduate or graduate students in information technology and management, computer science, cybersecurity, law, accounting, auditing, or similar programs of study.

**CompTIA Association for Information Technology Professionals (AITP):** Illinois Tech students were launching a chapter of Association for Information Technology Professionals (AITP), but AITP recently merged with CompTIA, the computer industry trade association. We are actively engaged with AITP about plans for student chapters, and we will pass along any information as we learn more. A very positive outcome of the reorganization is that student membership in CompTIA AITP at the national level is now **free** and among other benefits includes a 50% discount on CompTIA certification exam vouchers. We strongly encourage every ITM student to join now at <https://www.aitp.org/join-now/register/student/>.

**ACM-W:** The Association for Computing Machinery (ACM) is the oldest and best established professional and academic association in the computing disciplines. ACM-W supports, celebrates, and advocates internationally for the full engagement of women in all aspects of the computing field, providing a wide range of programs and services to ACM members and working in the larger community to advance the contributions of technical women. Illinois Tech has a very active ACM-W chapter; to find out more go to <https://www.facebook.com/acmw.iit/>.

**Women in Cybersecurity (WiCyS):** The mission of the WiCyS Student Chapter is to build a community within Illinois Institute of Technology that promotes women's education, participation, and leadership in the field of cybersecurity. WiCyS also assists students who wish to attend the WiCyS Conference each spring (The ITM Department hosted the 2018 Conference). Membership is open to all Illinois Tech students. Watch the weekly ITM Newsletter for meeting information. For more information contact the Vice President, Natalie Freund [nfreund@hawk.iit.edu](mailto:nfreund@hawk.iit.edu).

## Student Athletics Academic Policy

**Responsibilities of Faculty and Student Athletes:** Faculty members work very well with the Illinois Tech athletics department to facilitate the ability of our student athletes to pursue their academic interests and to satisfy all academic requirements while still competing on a varsity team. Varsity athletics is important to the fabric of university life, important not just to the participating athletes but also to the entire student body. At IIT, participation in athletics is often a key element in preparing individuals for later life.

On occasion, a situation arises where an instructor requires a student athlete to choose between coursework and participation on a varsity team. Though rare, such situations can undermine student morale and blunt the development of a healthy classroom-extracurricular balance for students.

To avoid such situations the university, in a Memorandum from the President dated September 6, 2012, has defined the responsibilities of varsity student athletes and faculty members with respect to such matters:.

- ◆ The student athlete is responsible for providing the instructor with a schedule of all sanctioned contests during the first week of the semester or as soon thereafter as the dates are set.
- ◆ Except in extraordinary cases, a varsity student athlete is to be excused without penalty from a class when it directly conflicts with a formal sanctioned contest with another university/college.
- ◆ If an exam, quiz or other academic test/presentation is scheduled for the class period for which the student athlete is excused, the instructor is generally expected to work with the student to make reasonable arrangements to take the exam or quiz, or make the required presentation, either before or after the missed class. In cases where reasonable arrangements cannot be made, such as joint student presentations (e.g., IPRO presentations), then the student-athlete will be expected to attend the class.

- ◆ The instructor is responsible for informing the student athlete in a timely manner of any assignment that will be made during the missed class.
- ◆ The student athlete is responsible for obtaining class notes from the students who attend the class and for completing all assignments due at the missed class or assigned at the missed class.
- ◆ The athletic director is responsible for communicating this policy to the varsity coaches and student athletes, collecting first-hand information for claims of violation and transmitting those claims to the relevant deans with back-up information.
- ◆ The deans of the colleges are accountable for communicating this policy to their faculties, and for ensuring that their faculty members adhere to the policy.

## Funding: Scholarships, Internships, Coops, Job Placement, and Student Employment

**Scholarships:** Undergraduate students should discuss financial aid possibilities with admissions and the financial aid office at Illinois Tech's Mies Campus. There is currently no ITM departmental scholarship support available for undergraduate students, but there are externally funded scholarships that require application through the department.

- ◆ *Department of Defense Cybersecurity Scholarship:* The Secretary of Defense for Networks and Information Integration annually announces a Department of Defense (DoD) Cybersecurity Scholarship Program grant and scholarship competition. Recipients are required to serve a period of obligated service in DoD as a civilian employee or a member of one of the armed forces. Recipients receive full tuition, books, and stipends of \$22,500 for undergraduate students and \$34,000 for graduate students. Applicants must be U.S. citizens or permanent residents and must be enrolled in a program with a cybersecurity focus. Applications for this grant will be actively solicited by the department as soon as the announcement is received from the DoD, and will normally be due in mid-May. While awarded annually, the scholarships are renewable but will require a new application each year.
- ◆ *CyberCorps® Scholarship for Service:* This U.S. government program provides scholarships that fully fund the typical costs incurred by full-time students in or entering cybersecurity curricula, including tuition and education and related fees, for up to three years. Additionally, recipients receive stipends of \$22,500 for undergraduate students and \$34,000 for graduate students. The scholarships are funded through grants awarded by the National Science Foundation, and require one year of Federal service for each year of scholarship received. Applicants must be U.S. citizens or permanent residents. Our application to award these scholarships is pending, and we will make an announcement if we are awarded this grant.

**Internships, Coops, and Job Placement:** Illinois Tech Career Services (<http://web.iit.edu/career-services/>) is the organization within the university that supports and facilitates student internships, cooperative education (coops) and job placement efforts. They also conduct university-wide Job Fairs once each semester as well as regular seminars covering topics such as résumé preparation. Please see their Web site for full details and descriptions of how to use their services. In addition, the ITM Department has frequent opportunities to assist students seeking internships, co-ops, or employment.

- ◆ *Direct Offers to ITM Students:* Occasionally the ITM Department will receive direct solicitations for internships, coops and employment. In most cases, these will be listed in the weekly ITM Newsletter. In the case of internships and coops, even if a direct solicitation is received, all arrangements for the internship or coop must be made via Career Services. Occasionally, employers ask faculty members to select students to apply for jobs, and those requests are forwarded to faculty members exclusively who will contact students they are recommending individually.
- ◆ *Employer Showcase sessions:* Prospective employers in all areas of information technology will present opportunities offered by their companies in lunchtime sessions throughout the year. They usually buy lunch—not often pizza—and after their presentation will have an opportunity for questions. Past events have included a diverse set of employers including Google, Red Sky Technologies, and University of Chicago Medicine. Watch the weekly ITM Newsletter for announcements of these Employer Showcase sessions.
- ◆ *Other Opportunities for Employment:* The opportunity to present at workshops, conferences and student colloquiums sponsored by the School of Applied Technology has proven to be fertile ground for employment for many ITM students. At any of these events, there may be (and usually are!) prospective employers evaluating students as they present results of their research and projects. Students have received direct job offers as a result of the quality of their participation in these events; in some cases offers have been made immediately following the conclusion of the student's presentation. Direct job offers are also solicited from faculty and staff members of ITM and are either emailed to students directly, or are featured in the weekly ITM Newsletter.
- ◆ *LinkedIn:* linkedin.com is the leading professional networking social media site for the information technology profession. The ITM Department urges every student embarking on a search for internships or employment to complete and maintain a full profile on LinkedIn. Students in the department have been offered interview opportunities by firms where they had not applied based on the strength of their profile, and this is the first place IT professionals look for information on fellow professionals. Your profile should include a professional portrait photograph, and Career Services will do *free* student headshots at least once each semester so there's no reason not to have one. (One of the companies who has invited students to interview based on their LinkedIn profiles is Google!)

**ITM Department Student Employment:** The following student employment positions in the School of Applied Technology (SAT) and the ITM Department are available to ITM undergraduate students:

- ◆ *Technical Staff Member:* Students in these positions perform information technology tasks in the School of Applied Technology for Mies Campus technology support, Rice Campus technology support, and SAT infrastructure support, and are paid hourly up to 20 hours/week. Most student employment for ITM undergraduates is in these positions. Contact the SAT Director of Information Technology Louis McHugh, IIT Tower room 14C3-2, [lmchugh@iit.edu](mailto:lmchugh@iit.edu) for information on applying for these positions.
- ◆ *Administrative Staff Member:* Students in these positions perform administrative tasks in the ITM Department office in Perlstein Hall at the Mies Campus and are paid hourly up to 20 hours/week. Contact the ITM Program Manager, Angie Jarka, PH 223, [ajarka1@iit.edu](mailto:ajarka1@iit.edu), 312.567.5927 for information on applying for these positions.



- ♦ **ITM Course Laboratory Staff Member:** This is a quarter time (10 hours/week) or half time (20 hours/week) position, reporting to a faculty member to support curriculum-specific laboratories. As most of these duties are normally performed by Graduate Teaching Assistants, course laboratory staff members are normally hired only when specifically requested to fill a position by a faculty member. Consequently there is no formal application process for this position. Processing and hiring for these positions is managed by the ITM Program Manager, Angie Jarka, PH 223, [ajarka1@iit.edu](mailto:ajarka1@iit.edu), 312.567.5927.

## Campus-Wide Identification (CWID) and Unified-ID (UID)

Each student is assigned an 9-digit Campus-Wide Identification Number or CWID, frequently referred to as your Student ID Number or A#; each IIT Faculty and Staff member is assigned a CWID as well. Undergraduate students received this number in their acceptance letter from Admissions. You will also be assigned a Unified-ID (UID), which is used to log into MyIIT and is also your email username. It is generally the first letter of your first name followed by the first seven letters of your surname. If there are other students with the same letter combination, your UID may have a number appended to the end as well. If a student's entire name is less than eight letters, then their UID will be less than eight letters. **When emailing advisers or faculty always include your CWID (A#).**

## MyIIT

MyIIT (<http://my.iit.edu/>) gives you access to online services for Illinois Tech students, including email, class registration, online course access via Blackboard, University announcements, IIT Today, and student news and events. The initial password for MyIIT is your birth month and year in MMY format followed by the last four digits of your CWID number. For example, if you were born on July 4th, and your CWID is A2035678, your initial MyIIT password would be 07045678. You can look up both your Unified-ID and your email address by looking yourself up in the IIT People Search at <http://www.iit.edu/people/search/>. For more information on MyIIT, see the "Training and Support" tab at <http://my.iit.edu/>. (By the way, the software that runs MyIIT is called *Banner*.)

## Online Student Services

Almost every function of Illinois Tech student services is available online through MyIIT; most are found under the Academics tab, which accommodates these channels:

- ♦ **Academic Profile:** The place to view your basic academic profile, primary adviser and use quick links to view your unofficial transcript and holds.
- ♦ **Registration Tools:** Provides quick links to look up your class schedule and add or drop classes.
- ♦ **Banner Self-Service:** Allows you to navigate through all areas of Banner Self Service including student records, financial aid and personal information forms where you can update addresses and other info.
- ♦ **Student Grades:** Use this quick link to view your grades.
- ♦ **Enrollment Verification:** You can access and print official certificates of enrollment to provide to a health insurer, auto insurer, or other company that requests proof of your enrollment.

Undergraduates must receive an Alternate PIN number from their adviser to register (see the *Advising* section above). If you're having difficulty registering, please contact the Illinois Tech Registrar's office at [registrar@iit.edu](mailto:registrar@iit.edu) from your [hawk.iit.edu](mailto:hawk.iit.edu) email account.

## Electronic Mail

The primary method for university-to-student communication is through your IIT email. An email account is automatically set up for you when you are admitted. Your email username is the same as your UID, and this email username, when followed by "@hawk.iit.edu", makes up your email address at Illinois Tech. Email service is IIT Gmail provided through Google Apps for Education, available through Web access at MyIIT or by using a client program such as Outlook, Thunderbird, or Windows Mail. Your email password for client programs is the same as your MyIIT login. It is very important that you either check your IIT student email regularly or forward your student email account to your primary email address. To learn how to forward IIT email and change your IIT email contact address, please see the IIT Student Accounts FAQ at [http://my.iit.edu/iit/ots/how\\_to/faq1.shtml](http://my.iit.edu/iit/ots/how_to/faq1.shtml). (You must already be logged into MyIIT to use this link.) **When emailing advisers or faculty always include your CWID (A#).**

## Blackboard and Online Courses

All faculty and students are provided with accounts on IIT Blackboard, Illinois Tech's online learning support system. Online resources for all Illinois Tech courses are normally available through Blackboard, and online course lecture content is always on Blackboard. Faculty members will use Blackboard for delivery of their syllabus, assignment details and assignment submissions even if the course is *not* delivered online. Login by clicking the Blackboard icon at the top of the screen in MyIIT. Once you access the system, you should see a welcome page that lists your courses for the current semester. Click on the appropriate link to access course materials. To learn more about using Blackboard, please see the Blackboard Student Manual which is located under "My Courses" on the initial Blackboard screen. Please direct Blackboard problems to the OTS Support Desk at 312.567.DESK (3375); *ITM instructors, teaching assistants, and staff cannot help you with Blackboard problems.*

## ITM Online Course Policies

Most non-laboratory courses in our programs are offered on the Internet via IIT Online. Online course lectures can be accessed via Blackboard. Online course content is available to all students registered for the course, including those students in the live classroom sections of the course.

- ♦ **Online Course Policies for International Students on F1 Visas:**
  - ✎ Only one online course may be taken per semester. This is a government requirement & cannot be waived.
  - ✎ In their first semester in the program, F1 Visa students cannot enroll in online sections of any course. This is intended to engage the student in the learning process so that they are not distracted from their studies

- ◆ *Online Course Policies for Students Enrolled in Live Sections:*
  - ✍ For students in live sections, actual classroom attendance is expected and online content may not serve as a substitute for live classroom attendance. Students in live sections who do not attend class may be penalized in the class participation component of their course grade.
  - ✍ If a course has an online component, live students who miss a class session due to illness or other authorized absence are expected to view the lecture they have missed online.
- ◆ *Online Course Policies for All Students:*
  - ✍ Online students are responsible for all assignments announced in class. Failure to watch the lecture is never an acceptable excuse for failure to submit assignments on the due date.
  - ✍ Some students fail to keep up with the on-line lectures and only skim over the material. As a result they miss critical information and fail to hand in assignments on time because they are not prepared when the assignment is due. Often they try to review all the lectures at the last moment to prepare themselves for an assignment, with bad results. Live students sometime use the Blackboard facilities as a substitute for attending class regularly, thus depriving themselves of the best option available to them, which is the live class. As a result, instructors may require that no more than the last three lectures be available at any point in the semester, which will force students to stay on schedule with lectures and course assignments. If this is the class policy, instructors may have all lectures made available online two weeks prior to the final exam for review purposes.
  - ✍ Undergraduate students may take online courses only with permission of their adviser. This permission will be based on the adviser's judgment as to the capability of the student to succeed in an online course. The adviser must enter a permit in the system to enable undergraduate enrollment in an online course section. Permission to enroll in an online course will not normally be granted during a student's first semester in the program. It is not possible to complete the undergraduate degree through distance learning; live course attendance is required.

## Computers and Computer Labs

Computer accounts and laboratories are essential to our academic programs. Computer labs for use by ITM/IT students are provided by the Rice Campus, the School of Applied Technology and by Illinois Tech's Office of Technology Services (OTS). Portal and email accounts are provided for students and faculty by OTS located on our Mies Campus. **The ITM Department does not issue any computers to students.**

- ◆ *Rice Campus Computer Labs:* The labs are managed by the Johannesen Computer Center, Rice Campus room 208, and include Rice Campus rooms 207, 208, 210, 240, 244, 247, 249, 250, 255 and 256. Room 240 is a multi-use laboratory, room 250 is a network, security & forensics lab which is normally physically isolated from the rest of the campus network, room 255 is a specialized digital real-time communications lab, and room 256 is a wireless data communications lab. Rice Campus also provides an 802.11g/n wireless network for student and faculty use. Problems or issues with Rice Campus computing facilities should be reported via an email trouble ticket to [appliedtech@iit.edu](mailto:appliedtech@iit.edu).
- ◆ *Mies Campus Computer Labs:* The School of Applied Technology provides computer labs at 3424 South State Street on the second floor of the South Tower, and on the ninth and fourteenth floors of the IIT Tower. Problems or issues with ITM-managed computing facilities at Mies Campus should be reported via an email trouble ticket to [appliedtech@iit.edu](mailto:appliedtech@iit.edu). The Mies Campus Office of Technology Services also provides an 802.11g/n wireless network for student and faculty use.
- ◆ *Information Technology (IT) / Information Technology & Management (ITM) Servers and Server Accounts:* Additional server accounts may be provided for ITM/IT students and faculty and dedicated servers may be provided to support specific courses; details of these accounts and servers are available from Louis McHugh (IIT Tower room 14C3-2 or [lmchugh@iit.edu](mailto:lmchugh@iit.edu)). Problems or issues with ITM servers should be reported via an email trouble ticket to [appliedtech@iit.edu](mailto:appliedtech@iit.edu).
  - ✍ *Project Support:* Computers may be requested by faculty members to support student projects; such requests should be made as soon as the need is recognized. Servers will be virtual servers unless there is a compelling reason why that will not work. Virtual servers in standard configurations may be provided on a next-day basis; custom configurations are normally provided in two days but may take up to a week to provision. It may take up to a week to provide physical computers and providing these computers is completely dependent on the availability of resources.
- ◆ *Student Computer Ownership and Use:* Students entering any ITM degree after Fall 2016 are required to possess a notebook computer with both wired and wireless network access for use in our programs; details of the minimum and desired configurations may be found in the latest **Information Technology & Management Student Notebook Computer Specification** on page 23 of this handbook.
- ◆ *IIT Office of Technology Services Accounts:* OTS (<http://www.iit.edu/ots/>) provides common computer accounts for Illinois Tech faculty, staff and students; these accounts include MyIIT, Blackboard, Email/Google Apps, and Web accounts. Illinois Tech does not provide remote dial-up network access. OTS also provides general-purpose computer classrooms on the Illinois Tech Mies Campus, which may be used for teaching ITM 311 and ITM 312. Problems or issues with OTS-managed computing facilities at Mies Campus should be reported via a trouble ticket via email to [supportdesk@iit.edu](mailto:supportdesk@iit.edu) or online at <http://support.iit.edu>.

## Software & Supplemental Educational Material Available for ITM/IT Students

- ◆ *Microsoft Software:* The School of Applied Technology is a subscriber to Azure Dev Tools for Teaching software under terms of the licensing agreement which permits academic use of this site by faculty and students. The files include most current Microsoft operating systems, servers, and application development tools, and include

applications such as Windows 8.1, Windows 10, Windows Server, Access, Project, Visio, and Visual Studio. Our subscription does not include any Microsoft Office tools except Access (for Office, see below). You can download this Microsoft software from your Azure Dev Tools for Teaching account. Product keys for the software are provided at the time of download so we suggest that you save a copy of the page. To access our Microsoft webstore see <https://azureforeducation.microsoft.com/devtools>. You will need to register a Microsoft account using your hawk.iit.edu email account to make use of this site. Microsoft Azure Dev Tools for Teaching membership benefits information is at <https://azure.microsoft.com/en-us/education/institutions/dev-tools-for-teaching-faq/>. This subscription also includes training tools from Pluralsight and WintellectNow (90 days free), learning tools for Azure, and a Microsoft Store account that will allow you to publish your apps on the Microsoft Store for free with a special student registration code.

Current courses on the Pluralsight site that might serve as a good supplement for your classroom instruction include:

- Python: The Big Picture
- Python Fundamentals
- HTML, CSS, and JavaScript: The Big Picture
- JavaScript: Getting Started
- Python: Getting Started
- HTML Fundamentals
- Introduction to CSS
- JavaScript Fundamentals

There are other courses that would help with Cloud Computing, Data Analytics, and C# as well.

- ◆ **Microsoft Office:** You can subscribe to Office 365 for Education at <https://www.microsoft.com/en-us/education/products/office>. For Illinois Tech students in the past, features in the Office 365 A3 level have been provided at no cost but also with no support. This level includes 5 desktop installations of Office. Office 365 and Microsoft Office are **not available** through our Microsoft Azure Dev Tools for Teaching account. An alternative is to use free and open-source LibreOffice; we recommend you download it with an installer at [ninite.com](http://ninite.com).
- ◆ **VMware:** Software available to students and faculty through the VMWare Academic Program can be downloaded through your ITM Software account managed by Kivuto Solutions. This account will give you access to VMware products—for free—as well as a token allowing you to enroll in VMware eLearning Courses online. You are entitled to one free copy of each product, with licenses good for 1 year. Unlike the Microsoft Imagine account, we CANNOT authorize *additional* downloads (i.e. more than one license) of these products, but according to the site you can redownload the software as necessary. More importantly, license keys are issued to you on the Web page at the time of download, and we cannot get you additional or replacement keys, so we suggest that you save a copy of any keys issued to you on the site.
- ◆ **IBM Academic Initiative:** As an IBM Academic Affiliate, IBM developer and analytics software is available to students and faculty. Go to <https://ibm.biz/academic> to register and access software and educational materials.
- ◆ **Oracle:** The ITM Department is an Oracle Academy which makes Oracle software available to faculty and students. Contact the Oracle Academy manager for access to software: SAT Director of I.T. Louis McHugh, IIT Tower room 14C3-2 or [lmchughi@iit.edu](mailto:lmchughi@iit.edu).
- ◆ **Autodesk:** Free software for students from Autodesk including *Autocad* and *Maya* is available at <http://www.autodesk.com/education/free-software/featured>
- ◆ **Other Free Windows Software:** We used to maintain a download page with links to recommended software, but this year instead we recommend that you use <https://ninite.com/>. Ninite will create an installer for all the software you have selected, which when run will install the correct version for your OS with no toolbars or other crapware. To update the software, just run the installer again. The School of Applied Technology uses Ninite Pro to configure our computer lab systems.
- ◆ **IIT Licensed Software:** Commercial software licensed for Illinois Tech use is available under the Training and Support tab in MyIIT and includes applications such as Mathematica and Virus Scan anti-virus products from McAfee.

## Writing Research Papers

The ability to write cogently, concisely and clearly in an acceptable academic format and to present the results of your research orally are skills you must develop to be a success in our program. At the same time, you will be learning skills essential to success in your working life after graduation, as the ability to communicate clearly in written and spoken English is one of the most important elements to success in business. You will regularly be expected to submit research papers and project reports as you progress through our program. Here's some key advice to help you succeed.

- ◆ **Format of Research Papers:** Unless your professor gives you different instructions, you should prepare ITM research papers in the formats prescribed by the *Publication Manual of the American Psychological Association*, (commonly referred to as *APA*), which are very common styles in use for scholarly publications and academic papers. Among other things, this means that you should submit your paper typed in 10, 11, or 12-point type (no larger than 12-point), double-spaced, with 1 inch margins on one side of 8½ inch by 11 inch paper. Quotations, figure captions and the list of references should all be double-spaced. Devote separate pages to each figure, each table and the list of references, and number all pages after the first. Attach a cover sheet listing the paper title and the name and email address of the author. If submitting electronically, please submit as a PDF file or in Rich Text Format. Most word processors can save as RTF. Your professor may prescribe specific required or acceptable electronic formats.
- ↳ **Title:** Make your title short and specific. Ideally, titles should be 5 or 6 words long, never more than 10.
- ↳ **Length:** Make papers as concise as possible; 10 to 15 pages should be reasonable for an undergraduate ITM research paper. Note that your professor may prescribe a different length expectation and in some cases they may be quite a bit shorter. Please count only pages containing body text; figures, tables, the abstract, references and bibliography do not toward the page total.

- ☞ **Headings:** Please use only one level of heading.
- ☞ **Headers:** Despite what it appears to say in the APA guidelines, it is NOT necessary to place the words "Running Head:" in every page header; just put the abbreviated title of your paper in all uppercase letters ("all caps"). The phrase "Running Head" only appears on the first or title page of the paper.
- ☞ **Figures and Tables:** Please submit copies of any figures and tables on separate sheets of paper. They should have captions that are interesting, that are written in complete sentences, and that fully explain and interpret the exhibit without forcing the reader to refer to the text. Conversely, the reader should not have to refer back and forth from the text to the figures to understand the paper. You should refer to figures where appropriate with "(Figure 1)," but you should explain the meaning and implications of your data fully in the text. Do not require the reader to interpret the figure to understand what you have done, as in "Figure 1 shows the outcome of this survey." Tables should list information in some obvious logical order.
- ☞ **References:** Cite references in the body of the text: "Shrump (1998) quibbled that ..." or if 1998 was a prolific year for Shrump, "(1998)." If the author is not cited in the body of the text, then use the form (Shrump 1998) for your citations. Include all references cited in a bibliography. Alphabetize your bibliography by the name of the first author.

For articles use the form

Smith, James Q. (1978) Title of article. *Title of Journal or Periodical*, 10(5) 45-50.

and for books,

Toklas, Alice B. (1947) *Book title*. Publisher's name, City, State (or Country).

and for collections of papers,

Beedle, Albert A. (1979) Title of chapter. J.J. Fox, ed. *Book title*. Publisher's name, City, State (or Country), 556-572.

and for material online,

Bly, Laura (2000) Upstart airfare site beats the big boys. *USA Today.com*, April 21, retrieved on October 23, 2000 from ([www.usatoday.com/life/travel/leisure/2000/10/23/227.htm](http://www.usatoday.com/life/travel/leisure/2000/10/23/227.htm)).

The one exception to standard APA style is that we would prefer you to italicize the titles of books, journals, periodicals and web sites rather than underlining as the APA style would require. Note also that the APA style requires indentation of the second lines of citations, and that only the first word of a book title should be capitalized unless subsequent words would otherwise be capitalized (i.e. proper nouns, etc.). Also, if there is no author given for online resources, cite the title.

- ☞ **Footnotes:** Avoid footnotes. If what they contain is important, it deserves a place in the text. If not, don't distract the reader from what is important.

- ◆ **Writing Papers:** The following outline suggests an effective way of organizing a paper (it's just a suggestion):

1. Describe the problem;
2. Discuss previous work in the field and any necessary background information
3. Explain what you did, how you did it, and what obstacles you encountered;  
or provide specific findings of fact that support your proposed solution or thesis;
4. State your solution or conclusion;
5. List the resulting benefits, both quantitative and qualitative; and
6. If applicable, provide an appendix giving the particulars of any models used or data collected during the research.

In writing your paper, explain your work so readers outside the field can understand it. If you must use a specialized term, abbreviation, or acronym, make sure you define it; write out an acronym or abbreviation the first time it appears and enclose it in parentheses immediately afterwards.

- ☞ Here is a possible step-by-step breakdown:

- Choose an area of interest to you to start your topic selection
- Search for publications—both in print and online—related to your topic
- Narrow your topic to refine your search results
- Formulate a thesis statement to guide your research
  - ✓ A good thesis statement is critical; it's the answer to the question that your paper explores and clearly delineates the argument that will be presented in your paper (see the humorous but accurate explanation to the right →→→ )
- Scan books to see if they they are relevant
  - ✓ Use the Table of Contents & index to quickly locate useful information
  - ✓ The table of contents for many books is now available online at the publisher or on amazon.com
  - ✓ If you find a book you need at Barnes & Nobles or on amazon.com, go to our library and odds are that if they don't have it that they can get it on interlibrary loan.
- Make notes on, or photocopy, interesting passages as you encounter them
- Make notes as you read to capture thoughts, questions, and ideas
- Refine your research question and do further information gathering
- Compose and write down your working thesis
- Review and reflect on work done in the field already; discuss any necessary background information
- Construct your argument, with the main points organized in an outline

Hulk trying to craft cogent thesis statement.

It tricky to condense entire argument into focused declarative phrase and still assert Hulk's conclusions.





- Write a rough draft, expanding the outline to fulfill paper length requirements
- Include quotes that support your points
- Revise your rough draft to ensure a strong, logical argument
- Document *all* works referenced in the preparation of your paper with particular attention on works cited by creating a bibliography
  - ✓ Ensure all quotes and paraphrases are properly cited in the body of your paper
  - ✓ Ensure all sources cited are included in your bibliography
- Revise your paper for spelling, punctuation and grammar errors
- Print out the final revision of your paper and bibliography or save as PDF or RTF file as necessary
- ◆ **Use of Wikipedia:** While *Wikipedia* is a good starting point for research to get an overview and point you to available resources, you cannot cite or quote *Wikipedia* in an assignment in Illinois Tech's Information Technology & Management curriculum. *Wikipedia* is a wonderful resource, but due to its community-edited nature it is not acceptable as a source of material for use in academic writing.
- ◆ **Live, In-Person Help:**
  - ☞ **The IIT Writing Center** (<http://humansciences.iit.edu/humanities/writing-center>) exists only to HELP YOU WRITE YOUR PAPER. Typically, you will take a project or paper assignment to the center, where a tutor will work one-on-one with you to assist with the writing process. There are tutors there who are especially trained to work with students for whom English is a second language but they certainly will work with anyone. The Writing Center is in Siegel Hall rooms 232 and 233. Students may use sign-up sheets on the doors of SH 232 and 233 to reserve a specific time with a tutor. When possible, the Writing Center also accepts students on a walk-in basis without an appointment.
  - ☞ **IIT's Galvin Library** has Reference Librarians who are there specifically to assist you in your research and preparation of citations. If you have questions about preparation of citations, they are the experts and they are there to help. They also offer classes to help you learn how to best use library resources. New student library resources are at <http://library.iit.edu/students/services/new-student-guide/>. *Fundamentals for International Students* is a library workshop/tour to help you get familiar with the library building and services, and is usually scheduled during the orientation week or the first two weeks of classes. Tour dates are announced on the library websites and IIT Today. Special library resources for international students can be accessed at <http://library.iit.edu/students/services/international-students/> and the International Student Library guide is at <http://guides.library.iit.edu/internationalstudents>.
- ◆ **Additional Information:**
  - ☞ For a fine discussion of writing, read William Strunk Jr. and E.B. White's *The Elements of Style*, Allyn and Bacon, Needham Heights, MA.
  - ☞ For definitive guidance for preparation of a research paper in APA style, see the American Psychological Association's *Publication Manual of the American Psychological Association*, American Psychological Association, Washington D.C.
  - ☞ For a more complete, formal treatment of the process of preparing a paper for publication, see The University of Chicago Press *The Chicago Manual of Style*, University of Chicago Press, Chicago, IL.
  - ☞ For sound advice on figures, refer to the series of books by Edward R. Tufte: *The Visual Display of Quantitative Information*, *Envisioning Information*, and *Visual Explanations*, all from Graphics Press, Cheshire, CT. (Professor Trygstad took a seminar from Tufte and was very impressed.)
- ◆ **Other very useful resources for preparing papers:**
  - ☞ The IIT Writing Center: <http://humansciences.iit.edu/humanities/writing-center>
  - ☞ *57 Tips for Writing Your Term Paper* (archived but still valuable): <https://web.archive.org/web/20070226210837/http://www.degreetutor.com:80/library/online-assignments/termpaper-writing>
  - ☞ *50 Ways to Increase Your Chances for an "A" Research Paper*: <http://www.rasmussen.edu/student-life/blogs/main/research-paper-strategies/>
  - ☞ *Writing Guides*, Indiana University: <https://wts.indiana.edu/writing-guides/index.html>
  - ☞ *OWL at Purdue: The Online Writing Lab at Purdue University*: <http://owl.english.purdue.edu/owl/>
  - ☞ *LEO: Literacy Education Online*, St. Cloud State University: <http://leo.stcloudstate.edu/>
  - ☞ *APA Style* (includes tutorials on APA citation styles and bibliography entries): <http://www.apastyle.org/>
  - ☞ *Zotero* bibliographic software as a standalone program for Windows, Mac or Linux with connecting extensions available for Chrome, Firefox, and Safari: <http://www.zotero.org/>

## Accessing IIT Rice Campus

Courses in our programs are offered at two physical locations:

The Illinois Tech Mies Campus along State Street between 31st and 35th Streets in Chicago, Illinois

The Daniel F. and Ada L. Rice Campus at 201 East Loop Road in Wheaton, Illinois

**Mies Campus to Rice Campus Public Transportation:** Mies Campus students can take a train from the Ogilvie Transportation Center (commonly known as Northwestern Station) on the Metra Union Pacific West Line to Wheaton or College Avenue, and from Wheaton or College Avenue back to Chicago. To get to the Ogilvie Transportation Center, take the CTA Green Line train to Clinton and walk two blocks south. Metra round-trip train fare to Wheaton/College Avenue is \$13.50. The Pace Bus system, which provides bus transportation for suburban Chicago, operates Pace Bus Route #714 from the Metra Stations at Wheaton and College Avenue to the Rice Campus. Your Student Ventra Card is accepted on Pace Buses, and Pace Bus #714 to the Rice Campus runs

Monday through Friday, 6:30am to 6pm. Pace Bus fare in cash is \$2.25. A shared Lyft or Uber ride from the Rice Campus to either Wheaton Metra station after evening classes should be \$8-10 per person. We *strongly* suggest you use the public transportation option in Google Maps to map out any travel by public transportation in the Chicago metropolitan area. Please note that bus and train schedules are subject to change without notice, and that IIT has no control and very little influence over Chicago Transit Authority, Metra or Pace transportation services.

## Other Important Student Resources

- ◆ *ITM Loopback (ITM Department blog):* [http://blogs.iit.edu/itm\\_loopback/](http://blogs.iit.edu/itm_loopback/)
- ◆ *ITM Student Resource Page:*  
<http://appliedtech.iit.edu/information-technology-and-management/current-students/resources/information-technology-and-management/>  
(Includes links to the ITM Undergraduate and Graduate Student Handbooks)
- ◆ *ITM Resource Page:* <https://appliedtech.iit.edu/information-technology-and-management/current-students/resources/>
- ◆ *IIT Student Handbook:* [http://www.iit.edu/student\\_affairs/handbook/](http://www.iit.edu/student_affairs/handbook/)
- ◆ *IIT Graduate Bulletin:* <http://bulletin.iit.edu/graduate/>
- ◆ *IIT Undergraduate Bulletin:* <http://bulletin.iit.edu/undergraduate/>
- ◆ *Link to software provided under Microsoft Azure Dev Tools for Teaching and the VMware Academic Program:*  
<http://www.itm.iit.edu/software/webstore.html>

## Information Technology & Management Notebook PC Specifications

While we do not currently require students who enrolled in the Information Technology & Management (ITM) degree program prior to Fall 2016 to own a notebook computer, it will certainly enhance your student experience to have one. Students entering the department after Spring 2016 are required to own a notebook computer.

Standards below reflect specifications for notebook computers for use by ITM students; each category is broken down into recommended, minimum and, where applicable, optional specifications. Your system may run **any** operating system but must be able to run Microsoft Windows 8.1 Professional as the primary operating system or as a secondary (dual-boot) operating system or as a virtual machine using virtualization software. These are specifications you must meet if you are purchasing a notebook computer for use in our program. If you have questions about these specifications, please contact Ray Trygstad, [trygstad@iit.edu](mailto:trygstad@iit.edu) or 630.447.9009.

| ITEM  | RECOMMENDED  | MINIMUM                                     | OPTIONAL/OPTIMAL   |
|---|--|---|--|
| Processor (CPU)   | Intel Core i7<br>AMD Ryzen 5 / A8  | 7 <sup>th</sup> Gen Intel Core i5<br>AMD A4 | Intel Core i9<br>AMD Ryzen 7 / A10                       |
| ◆ You may not be able to run virtualization software adequately without VT or AMD-V technology, not found in older CPUs.  |  |   |  |
| RAM Memory  | 8GB or greater   | 8GB   | 16GB RAM optimal to run Windows 7/10 & virtualization    |
| ◆ 16GB or more of RAM is highly desirable.  |  |   |  |
| Operating System  | Microsoft Windows 10 Education   | Microsoft Windows 8.1 Professional          | Linux or BSD Unix version<br>Macintosh OS/X / MacOS      |
| ◆ MacBooks must have BootCamp, Oracle VirtualBox, Parallels Desktop or Vmware Fusion installed allowing running of Microsoft operating systems.   |  |   |  |
| ◆ Linux or Solaris notebooks must have Oracle VirtualBox, Xen, KVM, or VMware Workstation installed allowing running of Microsoft operating systems.  |  |   |  |
| ◆ Oracle VirtualBox, our <b>recommended</b> desktop virtualization solution, is available for free at <a href="http://www.virtualbox.org/">http://www.virtualbox.org/</a> .   |  |   |  |
| ◆ Microsoft and Linux software is available at no cost to all ITM students but you should purchase a system that will support Windows 8.1 Professional as a minimum standard. Windows 10 Education is available free to all ITM students and is the most complete version of Windows. Windows <b>Home</b> versions will not support all software or OS functions you will need in our curriculum. |  |   |  |
| ◆ Ubuntu and Ubuntu variants Kubuntu, Linux Mint, and Pinguy, as well as OpenSUSE are recommended Linux distributions.  |  |   |  |
| Hard Drive  | 1TB  | 500GB                                       | SSD – 512GB or 1TB<br>7200 RPM hard drive(s)             |
| Optical drive<br>(May be external)  | 24-48x CD-RW/DVD-RW  | 24x CD-RW/DVD-R                             | Blu-Ray / Blu-Ray-R<br>External drive for Surface or Air |
| Floppy drive  | Neither required or expected   |   | 3.5 inch 1.44MB  |
| Graphics card<br>Display resolution   | 1GB or greater, 24-bit color<br>1600x1200 UXGA or greater  | 256MB 24-bit color<br>1280x1024 XGA         | 1440x900 WXGA+   |
| Wireless Network  | IEEE 802.11ac w/WPA2   | IEEE 802.11g/n                              | 4G Wireless  |
| Network Port  | 1000Base-T ethernet  | 100Base-T ethernet                          | (USB Adapter is OK)                                      |
| ◆ Virtually all notebook PCs sold today include a gigabit (1000Base-T) ethernet port as standard items.   |  |   |  |
| Peripheral Ports  | 2 USB-3 / 1 USB-2 or USB-C;<br>HDMI video connector or<br>Display Port video connector or<br>USB-C video connector | 1 USB-2;<br>RGB video<br>connector          | IEEE 1394 (FireWire)<br>3 USB-3 / USB-3.1<br>eSATA       |
| Office Software   | LibreOffice  | LibreOffice                                 | Microsoft Office 2007<br>or newer                        |
| ◆ LibreOffice is available for free at <a href="http://www.libreoffice.org/">http://www.libreoffice.org/</a> or (preferred) <a href="http://www.ninite.com">http://www.ninite.com</a> .   |  |   |  |
| ◆ A trial subscription to Microsoft Office 365 which includes five full installations of Microsoft Office for Windows or OSX may be available to Illinois Tech students with an iit.edu email address at <a href="https://products.office.com/en-us/student/office-in-education">https://products.office.com/en-us/student/office-in-education</a>  |  |   |  |
| Anti-Virus Software   | including all current updates  |   | Optional on Mac/Linux                                    |
| ◆ Illinois Tech provides a licensed version of McAfee VirusScan for use by for all students, faculty & staff;<br>Microsoft Security Essentials—which is free from Microsoft—is also recommended.<br>You may not operate any version of Microsoft Windows on Illinois Tech networks without installed anti-virus software.   |  |   |  |

Convertible or “2-in-1” systems such as the Microsoft Surface, Dell Inspiron or Dell Latitude, Lenovo Thinkpad Yoga or Lenova Yoga, Acer Aspire, or Toshiba Satellite Radius that comply with these specifications are acceptable. Students should have a flash/thumb drive for lab use; 64GB minimum is recommended. See page 18 above for software available at no cost to ITM students.

Links to special pricing on Dell and Apple computer hardware is available to Illinois Tech students at <https://ots.iit.edu/pc-mac/student-pcs-macs>.

## Department of Information Technology and Management

### Bachelor of Information Technology & Management Curriculum (Co-Terminal with Master of Information Technology & Management)

| Semester 1         |   | Undergrad<br>Credits | Grad<br>Credits | Semester 2         |   | Undergrad<br>Credits | Grad<br>Credits |
|--------------------|---|----------------------|-----------------|--------------------|---|----------------------|-----------------|
| ITM 301            | Contemporary Op Sys / Hardware I        | 3                    | 0               | ITM 313            | Intro to Open Source Programming        | 3                    | 0               |
| ITM 311            | Introduction to Software Development    | 3                    | 0               | ITMO 340           | Intro to Data Networks & the Internet   | 3                    | 0               |
|                    | Natural Science or Engineering Elective | 4                    | 0               | MATH 180           | Fundamentals of Discrete Math           | 3                    | 0               |
|                    | Humanities 200-level Elective           | 3                    | 0               |                    | Social Sciences Elective                | 3                    | 0               |
| <b>Total Hours</b> |   | <b>13*</b>           | <b>0</b>        |                    | Natural Science or Engineering Elective | 3                    | 0               |
|                    |   |                      |                 | <b>Total Hours</b> |   | <b>15</b>            | <b>0</b>        |

| Semester 3         |   | Undergrad<br>Credits | Grad<br>Credits | Semester 4         |   | Undergrad<br>Credits | Grad<br>Credits |
|--------------------|---|----------------------|-----------------|--------------------|---|----------------------|-----------------|
| ITM 100            | Introduction to IT as a Profession      | 3                    | 0               | ITMD 411           | Intermediate Software Development                 | 3                    | 0               |
| ITMD 321           | Data Modeling and Applications          | 3                    | 0               | ITMO 356           | Intro to Open Source Operat Systems               | 3                    | 0               |
| ITMD 361           | Fundamentals of Web Development         | 3                    | 0               | ITMD 362           | Human/Comp Interact & Web Design                  | 3                    | 0               |
|                    | Natural Science or Engineering Elective | 3                    | 0               |                    | Statistics Elective (MATH 425, BUS 221, PSYC 203) | 3                    | 0               |
|                    | Social Sciences Elective (300+)         | 3                    | 0               |                    | Free Elective                                     | 3                    | 0               |
| <b>Total Hours</b> |   | <b>15</b>            | <b>0</b>        | <b>Total Hours</b> |   | <b>15</b>            | <b>0</b>        |

| Semester 5         |                                  | Undergrad<br>Credits | Grad<br>Credits | Semester 6         |                                 | Undergrad<br>Credits | Grad<br>Credits |
|--------------------|----------------------------------|----------------------|-----------------|--------------------|---------------------------------|----------------------|-----------------|
| ITMM 471           | Project Management for Info Tech | 3                    | 0               | ITM 5XX Elective   |                                 | 3                    | 3               |
|                    | ITM Elective                     | 3                    | 0               | IPro Elective I    |                                 | 3                    | 0               |
|                    | Minor Elective                   | 3                    | 0               |                    | Social Sciences Elective (300+) | 3                    | 0               |
|                    | Humanities Elective (300+)       | 3                    | 0               |                    | Minor Elective                  | 3                    | 0               |
|                    | Free Elective                    | 3                    | 0               |                    | Minor Elective                  | 3                    | 0               |
|                    | Free Elective                    | 3                    | 0               |                    | Free Elective                   | 3                    | 0               |
| <b>Total Hours</b> |                                  | <b>18</b>            | <b>0</b>        | <b>Total Hours</b> |                                 | <b>18</b>            | <b>3</b>        |

| Semester 7         |                               | Undergrad<br>Credits | Grad<br>Credits | Semester 8         |   | Undergrad<br>Credits | Grad<br>Credits |
|--------------------|-------------------------------|----------------------|-----------------|--------------------|---|----------------------|-----------------|
| ITMS 448           | Cyber Security Technologies** | 3                    | 0               | ITMT 430           | System Integration                      | 3                    | 0               |
|                    | ITM 5XX Elective              | 3                    | 3               | IPro Elective II   |   | 3                    | 0               |
|                    | ITM 5XX Elective              | 0                    | 3               |                    | ITM 5XX Elective                        | 3                    | 3               |
|                    | Humanities Elective (300+)    | 3                    | 0               |                    | Minor Elective                          | 3                    | 0               |
|                    | Minor Elective                | 3                    | 0               |                    | Humanities or Social Sciences Electives | 3                    | 0               |
| <b>Total Hours</b> |                               | <b>12</b>            | <b>6</b>        | <b>Total Hours</b> |   | <b>15</b>            | <b>3</b>        |

| Semester 9         |                            | Undergrad<br>Credits | Grad<br>Credits | Semester 10        |                            | Undergrad<br>Credits | Grad<br>Credits |
|--------------------|----------------------------|----------------------|-----------------|--------------------|----------------------------|----------------------|-----------------|
|                    | ITM Undergraduate Elective | 3                    | 0               |                    | ITM Undergraduate Elective | 3                    | 0               |
|                    | ITM 5XX Elective           | 0                    | 3               |                    | ITM 5XX Elective           | 0                    | 3               |
|                    | ITM 5XX Elective           | 0                    | 3               |                    | ITM 5XX Elective           | 0                    | 3               |
|                    | ITM 5XX Elective           | 0                    | 3               |                    | ITM 5XX Elective           | 0                    | 3               |
| <b>Total Hours</b> |                            | <b>3</b>             | <b>9</b>        | <b>Total Hours</b> |                            | <b>3</b>             | <b>9</b>        |

**Total Undergraduate Credit Hours**                      **127**  
**Total Graduate Credit Hours**                              **30**

\* Students should be aware that students not completing 30 hours of study in their first year will still be classified as a first year student in the first semester of their second year of study, which may adversely impact some financial aid. Students with issues or questions about this should discuss it with a Financial Aid Counselor.

\*\* Co-terminal students completing the Computer and Information Security graduate specialization will substitute ITMS 548 for ITMS 448.



## Department of Information Technology and Management

### Bachelor of Information Technology & Management Curriculum (Co-Terminal with Master of Cyber Forensics and Security)

| Semester 1         |   |  | Undergrad  | Grad     | Semester 2         |   |  | Undergrad | Grad     |
|--------------------|---|--|------------|----------|--------------------|---|--|-----------|----------|
|                    |   |  | Credits    | Credits  |                    |   |  | Credits   | Credits  |
| ITM 301            | Contemporary Op Sys / Hardware I        |  | 3          | 0        | ITM 312            | Intro to Open Source Programming        |  | 3         | 0        |
| ITM 311            | Introduction to Software Development    |  | 3          | 0        | ITMO 340           | Intro to Data Networks & the Internet   |  | 3         | 0        |
|                    | Natural Science or Engineering Elective |  | 4          | 0        | MATH 180           | Fundamentals of Discrete Math           |  | 3         | 0        |
|                    | Humanities 200-level Elective           |  | 3          | 0        |                    | Social Sciences Elective                |  | 3         | 0        |
| <b>Total Hours</b> |   |  | <b>13*</b> | <b>0</b> |                    | Natural Science or Engineering Elective |  | 3         | 0        |
|                    |   |  |            |          | <b>Total Hours</b> |   |  | <b>15</b> | <b>0</b> |

| Semester 3         |   |  | Undergrad | Grad     | Semester 4         |   |  | Undergrad | Grad     |
|--------------------|---|--|-----------|----------|--------------------|---|--|-----------|----------|
|                    |   |  | Credits   | Credits  |                    |   |  | Credits   | Credits  |
| ITM 100            | Introduction to the Profession          |  | 3         | 0        | ITMD 362           | Human/Comp Interact & Web Design                  |  | 3         | 0        |
| ITMD 321           | Data Modeling and Applications          |  | 3         | 0        | ITMD 411           | Intermediate Software Development                 |  | 3         | 0        |
| ITMD 361           | Fundamentals of Web Development         |  | 3         | 0        | ITMO 356           | Intro to Open Source Operat Systems               |  | 3         | 0        |
|                    | Natural Science or Engineering Elective |  | 3         | 0        |                    | Statistics Elective (MATH 425, BUS 221, PSYC 203) |  | 3         | 0        |
|                    | Social Sciences Elective (300+)         |  | 3         | 0        |                    | Free Elective                                     |  | 3         | 0        |
| <b>Total Hours</b> |   |  | <b>15</b> | <b>0</b> | <b>Total Hours</b> |   |  | <b>15</b> | <b>0</b> |

| Semester 5                 |                                  |  | Undergrad | Grad     | Semester 6                          |  |  | Undergrad | Grad     |
|----------------------------|----------------------------------|--|-----------|----------|-------------------------------------|--|--|-----------|----------|
|                            |                                  |  | Credits   | Credits  |                                     |  |  | Credits   | Credits  |
| ITMM 471                   | Project Management for Info Tech |  | 3         | 0        | ITM 5XX Course (Typically ITMS 543) |  |  | 3         | 3        |
| ITM Elective               |                                  |  | 3         | 0        | IPRO Elective I                     |  |  | 3         | 0        |
| Minor Elective             |                                  |  | 3         | 0        | Social Sciences Elective (300+)     |  |  | 3         | 0 (300+) |
| Humanities Elective (300+) |                                  |  | 3         | 0        | Minor Elective                      |  |  | 3         | 0        |
| Free Elective              |                                  |  | 3         | 0        | Minor Elective                      |  |  | 3         | 0        |
| Free Elective              |                                  |  | 3         | 0        | Free Elective                       |  |  | 3         | 0        |
| <b>Total Hours</b>         |                                  |  | <b>18</b> | <b>0</b> | <b>Total Hours</b>                  |  |  | <b>18</b> | <b>3</b> |

| Semester 7                           |                               |  | Undergrad | Grad     | Semester 8       |  |  | Undergrad | Grad     |
|--------------------------------------|-------------------------------|--|-----------|----------|------------------|--|--|-----------|----------|
|                                      |                               |  | Credits   | Credits  |                  |  |  | Credits   | Credits  |
| ITMS 548                             | Cyber Security Technologies** |  | 3         | 3        | ITMT 430         | System Integration                     |  | 3         | 0        |
| ITMS 5XX Course (Typically ITMS 578) |                               |  | 3         | 3        | ITMS 586         | Digital Forensics                      |  | 3         | 0        |
| ITM Elective                         |                               |  | 3         | 0        | IPRO Elective II |  |  | 0         | 3        |
| Humanities Elective (300+)           |                               |  | 3         | 0        |                  | Humanities or Social Sciences Elective |  | 3         | 0        |
| Minor Elective                       |                               |  | 3         | 0        |                  | Minor Elective                         |  | 3         | 0        |
| <b>Total Hours</b>                   |                               |  | <b>15</b> | <b>6</b> |                  |  |  | <b>12</b> | <b>3</b> |

| Semester 9                 |                  |  | Undergrad | Grad     | Semester 10                |                                  |  | Undergrad | Grad     |
|----------------------------|------------------|--|-----------|----------|----------------------------|----------------------------------|--|-----------|----------|
|                            |                  |  | Credits   | Credits  |                            |                                  |  | Credits   | Credits  |
| ITM Undergraduate Elective |                  |  | 3         | 0        | ITM Undergraduate Elective |                                  |  | 3         | 0        |
| ITMS 5XX Elective          |                  |  | 0         | 3        | ITMM 585                   | Legal and Ethical Issues in I.T. |  | 0         | 3        |
| ITMS 5XX Elective          |                  |  | 0         | 3        | ITMS 5XX Elective          |                                  |  | 0         | 3        |
| ITMS 583                   | Digital Evidence |  | 0         | 3        | ITMS 5XX Elective          |                                  |  | 0         | 3        |
| <b>Total Hours</b>         |                  |  | <b>3</b>  | <b>9</b> |                            |                                  |  | <b>3</b>  | <b>9</b> |

|   |            |
|---|------------|
| <b>Total Undergraduate Credit Hours</b> | <b>127</b> |
| <b>Total Graduate Credit Hours</b>      | <b>30</b>  |

\* Students should be aware that students not completing 30 hours of study in their first year will still be classified as a first year student in the first semester of their second year of study, which may adversely impact some financial aid. Students with issues or questions about this should discuss it with a Financial Aid Counselor.

\*\* Co-terminal students enrolled in the Master of Cyber Forensics and Security will substitute ITMS 548 for ITMS 448.

## Department of Information Technology and Management

### Bachelor of Science in Applied Cybersecurity and Information Technology Curriculum

(Co-Terminal with Master of Cyber Forensics and Security)

|   |                                      | Undergrad | Grad    |   |                                       | Undergrad | Grad    |
|---|--------------------------------------|-----------|---------|---|---------------------------------------|-----------|---------|
| Semester 1                                |                                      | Credits   | Credits | Semester 2                                |                                       | Credits   | Credits |
| ITM 301                                   | Contemporary Op Sys / Hardware I     | 3         | 0       | ITM 312                                   | Intro to Open Source Programming      | 3         | 0       |
| ITM 311                                   | Introduction to Software Development | 3         | 0       | ITMO 340                                  | Intro to Data Networks & the Internet | 3         | 0       |
| MATH 151                                  | Calculus I                           | 5         | 0       | MATH 152                                  | Calculus II                           | 5         | 0       |
| Humanities 200-level Elective             |                                      | 3         | 0       | Social Sciences Elective                  |                                       | 3         | 0       |
| Total Hours                               |                                      | 14        | 0       | Natural Science or Engineering Elective   |                                       | 3         | 0       |
|   |                                      |           |         | Total Hours                               |                                       | 17        | 0       |
|   |                                      |           |         |   |                                       |           |         |
|   |                                      | Undergrad | Grad    |   |                                       | Undergrad | Grad    |
| Semester 3                                |                                      | Credits   | Credits | Semester 4                                |                                       | Credits   | Credits |
| ITM 100                                   | Introduction to the Profession       | 3         | 0       | ITMD 362                                  | Human/Comp Interact & Web Design      | 3         | 0       |
| ITMD 321                                  | Data Modeling and Applications       | 3         | 0       | ITMD 411                                  | Intermediate Software Development     | 3         | 0       |
| ITMD 361                                  | Fundamentals of Web Development      | 3         | 0       | ITMO 356                                  | Intro to Open Source Operat Systems   | 3         | 0       |
| MATH 251                                  | Multivariate and Vector Calculus     | 4         | 0       | ITMM 471                                  | Project Management for ITM            | 3         | 0       |
| Natural Science or Engineering Elective   |                                      | 4         | 0       | MATH 230                                  | Discrete Mathematics                  | 3         | 0       |
| Total Hours                               |                                      | 17        | 0       | Natural Science or Engineering Elective   |                                       | 3         | 0       |
|   |                                      |           |         | Total Hours                               |                                       | 18        | 0       |
|   |                                      |           |         |   |                                       |           |         |
|   |                                      | Undergrad | Grad    |   |                                       | Undergrad | Grad    |
| Semester 5                                |                                      | Credits   | Credits | Semester 6                                |                                       | Credits   | Credits |
| ITMS 418                                  | Coding Security                      | 3         | 0       | ITMS 438                                  | Cyber Forensics                       | 3         | 0       |
| ITMS 548                                  | Cyber Security Technologies*         | 3         | 3       | ITMS 458                                  | Operating System Security             | 3         | 0       |
| ITMS 578                                  | Cyber Security Management*           | 3         | 3       | ITMS 543                                  | Vulnerability Analysis and Control*   | 3         | 3       |
| Humanities Elective (300+)                |                                      | 3         | 0       | MATH 474                                  | Probability and Statistics            | 3         | 0       |
| Social Sciences Elective (300+)           |                                      | 3         | 0       | IPRO Elective I                           |                                       | 3         | 0       |
| Free Elective                             |                                      | 3         | 0       | Total Hours                               |                                       | 15        | 3       |
| Total Hours                               |                                      | 18        | 6       |   |                                       |           |         |
|   |                                      |           |         |   |                                       |           |         |
|   |                                      | Undergrad | Grad    |   |                                       | Undergrad | Grad    |
| Semester 7                                |                                      | Credits   | Credits | Semester 8                                |                                       | Credits   | Credits |
| ITMS 483                                  | Digital Evidence                     | 3         | 0       | ITMT 430                                  | System Integration                    | 3         | 0       |
| ITMS 5XX Course                           |                                      | 0         | 3       | ITMM 485                                  | Legal and Ethical Issues in IT        | 3         | 0       |
| Cybersecurity Elective                    |                                      | 3         | 0       | ITMS 5XX Course (substitute for ITMS 538) |                                       | 0         | 3       |
| Humanities Elective (300+)                |                                      | 3         | 0       | Social Sciences Elective (300+)           |                                       | 3         | 0       |
| IPRO Elective II                          |                                      | 3         | 0       |   |                                       | 19        | 3       |
| Total Hours                               |                                      | 12        | 3       |   |                                       |           |         |
|   |                                      |           |         |   |                                       |           |         |
|   |                                      | Undergrad | Grad    |   |                                       | Undergrad | Grad    |
| Semester 9                                |                                      | Credits   | Credits | Semester 10                               |                                       | Credits   | Credits |
| Cybersecurity Elective                    |                                      | 3         | 0       | ITMS 5XX Course                           |                                       | 0         | 3       |
| ITMS 5XX Course (substitute for ITMS 583) |                                      | 0         | 3       | ITMS 5XX Course                           |                                       | 0         | 3       |
| ITMS 5XX Course (substitute for ITMM 585) |                                      | 0         | 3       | ITMS 5XX Course                           |                                       | 0         | 3       |
| Free Elective                             |                                      | 3         | 0       | Humanities or Social Sciences Elective    |                                       | 3         | 0       |
| Total Hours                               |                                      | 6         | 6       |   |                                       | 3         | 9       |
|   |                                      |           |         |   |                                       |           |         |
| Total Undergraduate Credit Hours          |                                      |           | 129     |   |                                       |           |         |
| Total Graduate Credit Hours               |                                      |           | 30      |   |                                       |           |         |
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## Department of Information Technology and Management

### Bachelor of Science in Applied Cybersecurity and Information Technology Curriculum

(Co-Terminal with Master of Information Technology & Management)

| Semester 1                    |                                      | Undergrad Credits | Grad Credits | Semester 2                              |                                       | Undergrad Credits | Grad Credits |
|-------------------------------|--------------------------------------|-------------------|--------------|---|---------------------------------------|-------------------|--------------|
| ITM 301                       | Contemporary Op Sys / Hardware I     | 3                 | 0            | ITM 312                                 | Intro to Open Source Programming      | 3                 | 0            |
| ITM 311                       | Introduction to Software Development | 3                 | 0            | ITMO 340                                | Intro to Data Networks & the Internet | 3                 | 0            |
| MATH 151                      | Calculus I                           | 5                 | 0            | MATH 152                                | Calculus II                           | 5                 | 0            |
| Humanities 200-level Elective |                                      | 3                 | 0            | Social Sciences Elective                |                                       | 3                 | 0            |
| Total Hours                   |                                      | 14                | 0            | Natural Science or Engineering Elective |                                       | 3                 | 0            |
|                               |                                      |                   |              | Total Hours                             |                                       | 17                | 0            |

| Semester 3                              |                                  | Undergrad Credits | Grad Credits | Semester 4                              |                                     | Undergrad Credits | Grad Credits |
|---|----------------------------------|-------------------|--------------|---|-------------------------------------|-------------------|--------------|
| ITM 100                                 | Introduction to the Profession   | 3                 | 0            | ITMD 362                                | Human/Comp Interact & Web Design    | 3                 | 0            |
| ITMD 321                                | Data Modeling and Applications   | 3                 | 0            | ITMD 411                                | Intermediate Software Development   | 3                 | 0            |
| ITMD 361                                | Fundamentals of Web Development  | 3                 | 0            | ITMO 356                                | Intro to Open Source Operat Systems | 3                 | 0            |
| MATH 251                                | Multivariate and Vector Calculus | 4                 | 0            | ITMM 471                                | Project Management for ITM          | 3                 | 0            |
| Natural Science or Engineering Elective |                                  | 4                 | 0            | MATH 230                                | Discrete Mathematics                | 3                 | 0            |
| Total Hours                             |                                  | 17                | 0            | Natural Science or Engineering Elective |                                     | 3                 | 0            |
|   |                                  |                   |              | Total Hours                             |                                     | 18                | 0            |

| Semester 5                      |                             | Undergrad Credits | Grad Credits | Semester 6      |                                    | Undergrad Credits | Grad Credits |
|---------------------------------|-----------------------------|-------------------|--------------|-----------------|------------------------------------|-------------------|--------------|
| ITMS 418                        | Coding Security             | 3                 | 0            | ITMS 438        | Cyber Forensics                    | 3                 | 0            |
| ITMS 448                        | Cyber Security Technologies | 3                 | 0            | ITMS 458        | Operating System Security          | 3                 | 0            |
| ITMS 578                        | Cyber Security Management*  | 3                 | 3            | ITMS 443        | Vulnerability Analysis and Control | 3                 | 0            |
| Humanities Elective (300+)      |                             | 3                 | 0            | MATH 474        | Probability and Statistics         | 3                 | 0            |
| Social Sciences Elective (300+) |                             | 3                 | 0            | IPRO Elective I |                                    | 3                 | 0            |
| Free Elective                   |                             | 3                 | 0            | Total Hours     |                                    | 15                | 0            |
| Total Hours                     |                             | 18                | 3            |                 |                                    |                   |              |

| Semester 7                                     |                  | Undergrad Credits | Grad Credits | Semester 8                      |                                | Undergrad Credits | Grad Credits |
|--|------------------|-------------------|--------------|---------------------------------|--------------------------------|-------------------|--------------|
| ITMS 483                                       | Digital Evidence | 3                 | 0            | ITMT 430                        | System Integration             | 3                 | 0            |
| ITMD 514 or ITMD 515 (515 as sub for ITMD 510) |                  | 0                 | 3            | ITMM 485                        | Legal and Ethical Issues in IT | 3                 | 0            |
| ITM 5XX Course                                 |                  | 3                 | 3            | ITM 5XX Course                  |                                | 0                 | 3            |
| Humanities Elective (300+)                     |                  | 3                 | 0            | Social Sciences Elective (300+) |                                | 3                 | 0            |
| IPRO Elective II                               |                  | 3                 | 0            |                                 |                                | 9                 | 3            |
| Total Hours                                    |                  | 12                | 6            |                                 |                                |                   |              |

| Semester 9     |  | Undergrad Credits | Grad Credits | Semester 10                            |  | Undergrad Credits | Grad Credits |
|----------------|--|-------------------|--------------|--|--|-------------------|--------------|
| ITM 5XX Course |  | 3                 | 3            | ITM 5XX Course                         |  | 0                 | 3            |
| ITM 5XX Course |  | 0                 | 3            | ITM 5XX Course                         |  | 0                 | 3            |
| ITM 5XX Course |  | 0                 | 3            | ITM 5XX Course                         |  | 0                 | 3            |
| Free Elective  |  | 3                 | 0            | Humanities or Social Sciences Elective |  | 3                 | 0            |
| Total Hours    |  | 6                 | 9            |  |  | 3                 | 9            |

|   |  |            |  |
|---|--|------------|--|
| <b>Total Undergraduate Credit Hours</b> |  | <b>129</b> |  |
| <b>Total Graduate Credit Hours</b>      |  | <b>30</b>  |  |

\* Co-terminal students enrolled in the Master of Information Technology & Management will substitute ITMS 578 for ITMS 478.

## Department of Information Technology and Management

### Bachelor of Science in Applied Cybersecurity and Information Technology Curriculum

(Co-Terminal with Master of Science in Applied Cybersecurity and Digital Forensics)

| Semester 1                              |                                      | Undergrad Credits | Grad Credits | Semester 2                              |                                       | Undergrad Credits | Grad Credits |
|---|--------------------------------------|-------------------|--------------|---|---------------------------------------|-------------------|--------------|
| ITM 301                                 | Contemporary Op Sys / Hardware I     | 3                 | 0            | ITM 312                                 | Intro to Open Source Programming      | 3                 | 0            |
| ITM 311                                 | Introduction to Software Development | 3                 | 0            | ITMO 340                                | Intro to Data Networks & the Internet | 3                 | 0            |
| MATH 151                                | Calculus I                           | 5                 | 0            | MATH 152                                | Calculus II                           | 5                 | 0            |
| Humanities 200-level Elective           |                                      | 3                 | 0            | Social Sciences Elective                |                                       | 3                 | 0            |
| <b>Total Hours</b>                      |                                      | <b>14</b>         | <b>0</b>     | Natural Science or Engineering Elective |                                       | 3                 | 0            |
|   |                                      |                   |              | <b>Total Hours</b>                      |                                       | <b>17</b>         | <b>0</b>     |
| Semester 3                              |                                      | Undergrad Credits | Grad Credits | Semester 4                              |                                       | Undergrad Credits | Grad Credits |
| ITM 100                                 | Introduction to the Profession       | 3                 | 0            | ITMD 362                                | Human/Comp Interact & Web Design      | 3                 | 0            |
| ITMD 321                                | Data Modeling and Applications       | 3                 | 0            | ITMD 411                                | Intermediate Software Development     | 3                 | 0            |
| ITMD 361                                | Fundamentals of Web Development      | 3                 | 0            | ITMO 356                                | Intro to Open Source Operat Systems   | 3                 | 0            |
| MATH 251                                | Multivariate and Vector Calculus     | 4                 | 0            | ITMM 471                                | Project Management for ITM            | 3                 | 0            |
| Natural Science or Engineering Elective |                                      | 4                 | 0            | MATH 230                                | Discrete Mathematics                  | 3                 | 0            |
| <b>Total Hours</b>                      |                                      | <b>17</b>         | <b>0</b>     | Natural Science or Engineering Elective |                                       | 3                 | 0            |
|   |                                      |                   |              | <b>Total Hours</b>                      |                                       | <b>18</b>         | <b>0</b>     |
| Semester 5                              |                                      | Undergrad Credits | Grad Credits | Semester 6                              |                                       | Undergrad Credits | Grad Credits |
| ITMS 418                                | Coding Security                      | 3                 | 0            | ITMS 438                                | Cyber Forensics                       | 3                 | 0            |
| ITMS 5XX                                | Cyber Security Management*           | 3                 | 3            | ITMS 458                                | Operating System Security             | 3                 | 0            |
| ITMS 5XX Course                         |                                      | 0                 | 3            | ITMS 543                                | Vulnerability Analysis and Control*   | 3                 | 3            |
| Humanities Elective (300+)              |                                      | 3                 | 0            | MATH 474                                | Probability and Statistics            | 3                 | 0            |
| Social Sciences Elective (300+)         |                                      | 3                 | 0            | IPro Elective I                         |                                       | 3                 | 0            |
| Free Elective                           |                                      | 3                 | 0            | <b>Total Hours</b>                      |                                       | <b>15</b>         | <b>3</b>     |
| <b>Total Hours</b>                      |                                      | <b>15</b>         | <b>6</b>     |   |                                       |                   |              |
| Semester 7                              |                                      | Undergrad Credits | Grad Credits | Semester 8                              |                                       | Undergrad Credits | Grad Credits |
| ITMS 483                                | Digital Evidence                     | 3                 | 0            | ITMT 430                                | System Integration                    | 3                 | 0            |
| ITMS 548                                | Cyber Security Technologies*         | 3                 | 3            | ITMM 485                                | Legal and Ethical Issues in IT        | 3                 | 0            |
| Cybersecurity Elective                  |                                      | 3                 | 0            | ITMS 5XX                                | Elective (substitute for ITMS 538)    | 0                 | 3            |
| Humanities Elective (300+)              |                                      | 3                 | 0            | ITMT 591 or ITMS 539 or ITMS 549        |                                       | 0                 | 3            |
| IPro Elective II                        |                                      | 3                 | 0            | Social Sciences Elective (300+)         |                                       | 3                 | 0            |
| <b>Total Hours</b>                      |                                      | <b>12</b>         | <b>3</b>     | <b>Total Hours</b>                      |                                       | <b>9</b>          | <b>6</b>     |
| Semester 9                              |                                      | Undergrad Credits | Grad Credits | Semester 10                             |                                       | Undergrad Credits | Grad Credits |
| Cybersecurity Elective                  |                                      | 3                 | 0            | ITMS 5XX Course                         |                                       | 0                 | 3            |
| LAW 273                                 | Evidence                             | 3                 | 3            | ITMT 591 or ITMT 594 or ITMT 597        |                                       | 0                 | 3            |
| ITMS 5XX Course                         |                                      | 0                 | 3            | Law Elective                            |                                       | 0                 | 2            |
| Free Elective                           |                                      | 3                 | 0            | Humanities or Social Sciences Elective  |                                       | 3                 | 0            |
| <b>Total Hours</b>                      |                                      | <b>9</b>          | <b>6</b>     | <b>Total Hours</b>                      |                                       | <b>3</b>          | <b>8</b>     |
| <b>Total Undergraduate Credit Hours</b> |                                      | <b>129</b>        |              |   |                                       |                   |              |
| <b>Total Graduate Credit Hours</b>      |                                      | <b>32</b>         |              |   |                                       |                   |              |

\* Co-terminal students enrolled in the Master of Science in Applied Cybersecurity and Digital Forensics will substitute ITMS 543 for ITMS 443, ITMS 548 for ITMS 448, and ITMS 578 for ITMS 478.



## Department of Information Technology and Management

### Bachelor of Science in Applied Cybersecurity and Information Technology Curriculum

(Co-Terminal with Master of Science in Information Technology and Management)

| Semester 1                              |                                      | Undergrad<br>Credits | Grad<br>Credits | Semester 2                              |                                       | Undergrad<br>Credits | Grad<br>Credits |
|---|--------------------------------------|----------------------|-----------------|---|---------------------------------------|----------------------|-----------------|
| ITM 301                                 | Contemporary Op Sys / Hardware I     | 3                    | 0               | ITM 312                                 | Intro to Open Source Programming      | 3                    | 0               |
| ITM 311                                 | Introduction to Software Development | 3                    | 0               | ITMO 340                                | Intro to Data Networks & the Internet | 3                    | 0               |
| MATH 151                                | Calculus I                           | 5                    | 0               | MATH 152                                | Calculus II                           | 5                    | 0               |
| Humanities 200-level Elective           |                                      | 3                    | 0               | Social Sciences Elective                |                                       | 3                    | 0               |
| <b>Total Hours</b>                      |                                      | <b>14</b>            | <b>0</b>        | Natural Science or Engineering Elective |                                       | 3                    | 0               |
|   |                                      |                      |                 | <b>Total Hours</b>                      |                                       | <b>17</b>            | <b>0</b>        |
| Semester 3                              |                                      | Undergrad<br>Credits | Grad<br>Credits | Semester 4                              |                                       | Undergrad<br>Credits | Grad<br>Credits |
| ITM 100                                 | Introduction to the Profession       | 3                    | 0               | ITMD 362                                | Human/Comp Interact & Web Design      | 3                    | 0               |
| ITMD 321                                | Data Modeling and Applications       | 3                    | 0               | ITMD 411                                | Intermediate Software Development     | 3                    | 0               |
| ITMD 361                                | Fundamentals of Web Development      | 3                    | 0               | ITMO 356                                | Intro to Open Source Operat Systems   | 3                    | 0               |
| MATH 251                                | Multivariate and Vector Calculus     | 4                    | 0               | ITMM 471                                | Project Management for ITM            | 3                    | 0               |
| Natural Science or Engineering Elective |                                      | 4                    | 0               | MATH 230                                | Discrete Mathematics                  | 3                    | 0               |
| <b>Total Hours</b>                      |                                      | <b>17</b>            | <b>0</b>        | Natural Science or Engineering Elective |                                       | 3                    | 0               |
|   |                                      |                      |                 | <b>Total Hours</b>                      |                                       | <b>18</b>            | <b>0</b>        |
| Semester 5                              |                                      | Undergrad<br>Credits | Grad<br>Credits | Semester 6                              |                                       | Undergrad<br>Credits | Grad<br>Credits |
| ITMS 418                                | Coding Security                      | 3                    | 0               | ITMS 438                                | Cyber Forensics                       | 3                    | 0               |
| ITMS 5XX                                | Cyber Security Management*           | 3                    | 3               | ITMS 458                                | Operating System Security             | 3                    | 0               |
| ITM 5XX Course                          |                                      | 3                    | 3               | ITMS 443                                | Vulnerability Analysis and Control*   | 3                    | 0               |
| Humanities Elective (300+)              |                                      | 3                    | 0               | MATH 474                                | Probability and Statistics            | 3                    | 0               |
| Social Sciences Elective (300+)         |                                      | 3                    | 0               | IPro Elective I                         |                                       | 3                    | 0               |
| Free Elective                           |                                      | 3                    | 0               | <b>Total Hours</b>                      |                                       | <b>15</b>            | <b>0</b>        |
| <b>Total Hours</b>                      |                                      | <b>18</b>            | <b>6</b>        |   |                                       |                      |                 |
| Semester 7                              |                                      | Undergrad<br>Credits | Grad<br>Credits | Semester 8                              |                                       | Undergrad<br>Credits | Grad<br>Credits |
| ITMS 483                                | Digital Evidence                     | 3                    | 0               | ITMT 430                                | System Integration                    | 3                    | 0               |
| ITMS 448                                | Cyber Security Technologies          | 3                    | 0               | ITMM 485                                | Legal and Ethical Issues in IT        | 3                    | 0               |
| ITM 5XX Course                          |                                      | 3                    | 3               | ITMT 591 ITMT 594 or ITMT 597           |                                       | 0                    | 3               |
| Humanities Elective (300+)              |                                      | 3                    | 0               | ITM 5XX Course                          |                                       | 3                    | 3               |
| IPro Elective II                        |                                      | 3                    | 0               | Social Sciences Elective (300+)         |                                       | 3                    | 0               |
| <b>Total Hours</b>                      |                                      | <b>12</b>            | <b>3</b>        | <b>Total Hours</b>                      |                                       | <b>12</b>            | <b>6</b>        |
| Semester 9                              |                                      | Undergrad<br>Credits | Grad<br>Credits | Semester 10                             |                                       | Undergrad<br>Credits | Grad<br>Credits |
| ITMT 591 or ITMT 594 or ITMT 597        |                                      | 0                    | 3               | ITMT 591 or ITMT 594 or ITMT 597        |                                       | 0                    | 2               |
| ITM 5XX Course                          |                                      | 0                    | 3               | ITMS 5XX Course                         |                                       | 0                    | 3               |
| ITM 5XX Course                          |                                      | 0                    | 3               | ITMS 5XX Course                         |                                       | 0                    | 3               |
| Free Elective                           |                                      | 3                    | 0               | Humanities or Social Sciences Elective  |                                       | 3                    | 0               |
| <b>Total Hours</b>                      |                                      | <b>3</b>             | <b>9</b>        | <b>Total Hours</b>                      |                                       | <b>3</b>             | <b>8</b>        |
| <b>Total Undergraduate Credit Hours</b> |                                      | <b>129</b>           |                 |   |                                       |                      |                 |
| <b>Total Graduate Credit Hours</b>      |                                      | <b>32</b>            |                 |   |                                       |                      |                 |

\* Co-terminal students enrolled in the Master of Science in Information Technology and Management will substitute ITMS 578 for ITMS 478.










**Information Technology & Management (ITM) Faculty & Staff Directory**

The first location given is the primary office location. The number given is the office room number. Location addresses are:

















*Rice:* Daniel F. and Ada L. Rice Campus, 201 East Loop Road, Wheaton, Illinois 60189 Phone Prefix: 630.682

*Perlstein:* Illinois Tech Mies Campus, Perlstein Hall, 10 West 33<sup>rd</sup> Street, Chicago, Illinois 60616 Phone Prefix: 312.567

Phone numbers not starting with the prefixes above are mobile, personal or multi-location numbers. Adjunct faculty may provide additional information to their students & their phone numbers may be available upon request from the ITM Program Manager, Angie Jarka.

|   |   |   |   |
|---|---|---|---|
|    | <b>Adarsh Arora, Ph.D.</b> Industry Professor<br>IIT Tower 18E4-2 <a href="mailto:aarora12@iit.edu">aarora12@iit.edu</a>  |    | <b>Dan Kahn</b> Adjunct Industry Professor<br><a href="mailto:dkahn2@iit.edu">dkahn2@iit.edu</a>  |
|    | <b>Brian Bailey</b> Adjunct Industry Associate Professor and Director, Web Development & Services, IIT Communications and Marketing<br>312.567.6937 / IIT Tower 4D7-1 <a href="mailto:bbailey4@iit.edu">bbailey4@iit.edu</a>          |    | <b>Seth Kinnet</b> Adjunct Industry Associate Professor<br><a href="mailto:skinnett@iit.edu">skinnett@iit.edu</a>   |
|    | <b>Bob Carlson, Ph.D.</b> Professor and Graduate Adviser; Dean, School of Applied Technology<br>630.682.6002 / Rice 132 Chair, ITM Department<br>312.567.5291 / IIT Tower 14F3-2 <a href="mailto:carlson@iit.edu">carlson@iit.edu</a> |    | <b>Daniel Kriegelstein, Ph.D.</b> Adjunct Assistant Professor<br><a href="mailto:kriedan@iit.edu">kriedan@iit.edu</a>   |
|    | <b>Chuck Beck</b> Adjunct Industry Professor<br><a href="mailto:cbeck3@iit.edu">cbeck3@iit.edu</a>  |    | <b>Raj Krishnan</b> Adjunct Industry Professor<br><a href="mailto:rkrish20@iit.edu">rkrish20@iit.edu</a>  |
|    | <b>Carol Davids</b> Adjunct Industry Professor; Director, IIT Real-Time Communications Laboratory<br>630.682.6024 / Rice 223 <a href="mailto:davids@iit.edu">davids@iit.edu</a>   |    | <b>Jason Lambert</b> Adjunct Industry Professor<br><a href="mailto:jlambert@iit.edu">jlambert@iit.edu</a>   |
|    | <b>Shawn Davis</b> Adjunct Industry Associate Professor<br><a href="mailto:sdavis17@iit.edu">sdavis17@iit.edu</a>   |    | <b>Daniel Lee</b> Adjunct Industry Associate Professor<br><a href="mailto:dlee52@iit.edu">dlee52@iit.edu</a>  |
|   | <b>Maurice E. Dawson, Ph.D., D.Sc.</b> Assistant Professor<br>Director, Center for Cyber Security and Forensics Education<br>Rice 224<br>312.567.5242 / Perlstein 221E <a href="mailto:mdawson2@iit.edu">mdawson2@iit.edu</a>         |   | <b>Hosea (Hee Gyu) Lee</b> Adjunct Industry Associate Professor<br><a href="mailto:hlee110@iit.edu">hlee110@iit.edu</a>   |
|  | <b>Peter Fales</b> Adjunct Industry Professor<br><a href="mailto:pfales@iit.edu">pfales@iit.edu</a>   |  | <b>Bill Lidinsky</b> Adjunct Industry Professor<br>Director, IIT Computer Security and Forensics Laboratory<br>630.682.6028 / Rice 225 <a href="mailto:lidinsky@iit.edu">lidinsky@iit.edu</a> |
|  | <b>Subhashish Ghosh</b> Adjunct Industry Professor<br><a href="mailto:sghosh3@iit.edu">sghosh3@iit.edu</a>  |  | <b>Steve Lisitza</b> Adjunct Industry Associate Professor<br><a href="mailto:slisitza@hawk.iit.edu">slisitza@hawk.iit.edu</a>   |
|  | <b>Bonnie A. Goins</b> Adjunct Industry Professor<br>630.387.9496 <a href="mailto:bgoins@iit.edu">bgoins@iit.edu</a>  |  | <b>Phil Matuszak</b> Adjunct Industry Associate Professor<br><a href="mailto:matuphi@iit.edu">matuphi@iit.edu</a>   |
|  | <b>Jeremy Hajek</b> Industry Associate Professor and Undergraduate Adviser<br>630.296.4012 / Perlstein 223A / Rice 228 <a href="mailto:hajek@iit.edu">hajek@iit.edu</a>   |  | <b>Sean McBride</b> Adjunct Industry Associate Professor<br><a href="mailto:smcbride@iit.edu">smcbride@iit.edu</a>  |
|  | <b>Nazneen Hashmi</b> Adjunct Industry Professor<br><a href="mailto:nhashmi@iit.edu">nhashmi@iit.edu</a>  |  | <b>Louis McHugh</b> Adjunct Associate Professor and SAT Director of Information Technology<br>312.567.5925 / IIT Tower 14C3-2 <a href="mailto:lmchughi@iit.edu">lmchughi@iit.edu</a>          |
|  | <b>Bob Henkins</b> Adjunct Industry Associate Professor<br><a href="mailto:rhenkins@iit.edu">rhenkins@iit.edu</a>   |  | <b>Bruce Mueller</b> Adjunct Industry Professor<br><a href="mailto:muellerb@iit.edu">muellerb@iit.edu</a>   |
|  | <b>Peisong Huang</b> Adjunct Industry Professor<br><a href="mailto:phuang9@iit.edu">phuang9@iit.edu</a>   |  | <b>Donald Nelson</b> Adjunct Industry Professor<br><a href="mailto:dnelson@iit.edu">dnelson@iit.edu</a>   |
|  | <b>Sean Hughes-Durkin</b> Adjunct Industry Associate Professor<br><a href="mailto:durksea@iit.edu">durksea@iit.edu</a>  |  | <b>Ryan Nelson</b> ITM Admissions & Recruitment Specialist and Graduate Adviser<br>312.567.5192 / Perlstein 223C <a href="mailto:nelsonr@iit.edu">nelsonr@iit.edu</a>                         |
|  | <b>Angela Jarka</b> ITM Department Manager<br>312.567.5927 / Perlstein 223D <a href="mailto:ajarka1@iit.edu">ajarka1@iit.edu</a>  |  | <b>James Papademas</b> Industry Professor<br><a href="mailto:jpapadem@iit.edu">jpapadem@iit.edu</a>   |
|  | <b>Thomas "T.J." Johnson</b> Adjunct Industry Professor<br><a href="mailto:tjohns15@iit.edu">tjohns15@iit.edu</a>   |  | <b>Katherine Papdemas</b> Adjunct Instructor<br><a href="mailto:kpapadem@iit.edu">kpapadem@iit.edu</a>  |

### Information Technology & Management (ITM) Faculty & Staff Directory (continued)

|   |   |   |  |
|---|---|---|--|
|  | <b>Luke Papademas</b><br>Adjunct Industry Professor<br><br>lpapadem@iit.edu   |  | <b>Steven Szmurlo</b><br>International Professional Student Adviser and Manager<br><br>312.567.5281 / PH 221B      sszmurlo@iit.edu  |
|  | <b>Vasilios “Billy” Pappademetriou</b><br>Adjunct Industry Associate Professor<br><br>vpappade@iit.edu  |  | <b>Scott Spyrisson</b><br>Adjunct Industry Associate Professor<br><br>spyrisson@iit.edu  |
|  | <b>Rahul Patel, Ph.D.</b><br>Adjunct Assistant Professor<br><br>rpatel37@iit.edu  |  | <b>Karl Stolley, Ph.D.</b><br>Associate Professor and Associate Professor of Digital Writing & Rhetoric; Director of Graduate Studies, Humanities Department<br>312.567.3465 / Siegel Hall 208      kstolley@iit.edu |
|  | <b>Ramesh Rao</b><br>Adjunct Industry Professor<br><br>rrao12@iit.edu   |  | <b>Ray Trygstad</b><br>Industry Professor, Associate Chair, ITM Department<br>Director of Undergraduate Advising<br>630.447.9009 / Perlstein 223E / Rice 227 trygstad@iit.edu  |
|  | <b>Martin Schray</b><br>Adjunct Industry Professor<br><br>mschray@iit.edu   |  | <b>Kevin Vaccaro</b><br>Adjunct Industry Professor, Assistant Professor of Computer Integrated Technology, Moraine Valley Community College<br>vacckev@iit.edu   |
|  | <b>Sam Shamsuddin, Ed.D.</b><br>Adjunct Assistant Professor, Associate Professor of Computer Information Systems and CIS Coordinator, College of DuPage<br>798.334.2047      shamsuddin@iit.edu |  | <b>Yong Zheng, Ph.D.</b><br>Assistant Professor<br><br>312.567.3575 / Perlstein 221D      yzheng66@iit.edu   |
|  | <b>Sumee Shin</b><br>Adjunct Industry Associate Professor<br><br>sshin17@iit.edu  |  | <b>Brian Vanderjack</b><br>Adjunct Industry Associate Professor<br><br>bvanderjack@iit.edu   |
|  | <b>William Shipley</b><br>Adjunct Industry Professor<br><br>wshipley1@iit.edu   |  | <b>Ben Zumhagen</b><br>Adjunct Industry Associate Professor<br><br>bzumhagen@iit.edu   |

**Key to awards:** ★ = Educational Excellence Award (School of Applied Technology Dean's Award)  
★ = Jeffrey Kimont Memorial Teaching Award (ITM Department Adjunct Faculty)  
🎓 = Excellence in Teaching Award (School of Applied Technology University Award)

### Office of Professional Development Staff Directory

|              |  |              |          |                  |
|--------------|--|--------------|----------|------------------|
| Mary LaFleur | Program Manager, Professional Development Courses, Short Programs, and Professional Engineering Review | 630.682.6030 | Rice 219 | mlafleur@iit.edu |
|--------------|--|--------------|----------|------------------|