

HLC Academy for Student Persistence and Completion Application

Illinois Institute of Technology

Recent Efforts

Student Overview

The Illinois Institute of Technology (IIT) enrolls just under 3000 (n=2926) degree-seeking undergraduate students, and just under 5000 (n=4924) graduate and professional (e.g. law) students. The vast majority of our undergraduate students (93%) are full-time, and slightly more than half (58%) live on campus. A large majority (70%) of the undergraduate students are male; about half are from Illinois; 23 percent are American from out of state, and 24 percent are international. Twenty-one percent of undergraduates are underrepresented minorities and about a quarter of all undergraduate students receive Pell grants. The most popular undergraduate majors are Architecture, Mechanical Engineering, Electrical Engineering, and Computer Science. Incoming students' SAT math scores average in the high 600's (around 660); ACT Composite scores average 27. First-to-second year retention rates have averaged 87 percent over the last five entering cohorts and six-year graduation rates, for the cohorts who entered from 2003 to 2007, have averaged 65 percent.

Recent Efforts to Improve Student Persistence and Completion

One of IIT's most successful efforts to improve student persistence and completion is the *Kedge Program*. The word, "kedge" refers to a small anchor that is used to straighten a ship that is listing to one side. IIT's Kedge program has been running for a total of 16 semesters. All first-year students who are on academic probation at the end of their first term are advised to register for Psychology 180, which teaches study, time-management and communication skills. Students who continue to experience academic difficulties are invited to take Psychology 227. The course instructor for Psychology 227 is a clinical psychologist who is also an adjunct faculty member of IIT's Psychology department. She works with students on an individual basis to identify and try to resolve the issues that are preventing these students from focusing on their academic work. Among students who entered in Fall 2008 or earlier, 37 percent of those who completed Psych180 have graduated compared with only 13 percent of those who registered for but did not complete Psych180. The results for Psych227 are even more dramatic, with 51 percent of those who completed the course graduating compared with none of the students who registered for but did not complete the course.

Another one of IIT's recent efforts is the *Student Success Committee*. This is an eight-member committee that has been meeting weekly for nearly four years to identify and help students who have issues that are preventing them from persisting at or graduating from IIT. This committee is made up of staff from Undergraduate Academic Affairs, the Registrar's Office, Student Accounting, the One Stop, the International Center, Student Housing, the Office of Student Access and Diversity and the Director of the Academic Resource Center (ARC). At-risk students come to the attention of the Student Success Committee in one of two ways: students either appear on a report generated from the student information system, Banner, that lists students who have failed either to register for the next term or

apply for graduation, or students self-identify by approaching a staff or faculty member for help. The report contains information about each student, such as the student's cohort and class level, any unpaid balances for tuition and fees or housing, and any holds that are preventing the student from registering. The committee collects additional information from these students through an online survey conducted two to three weeks before the start of classes. This survey consists of a checklist of reasons for not registering and an open-ended field in which students may list any other reasons for not registering. Additionally, the Director of the Academic Resource Center, Tayyab Arshad, sends an e-mail and sometimes a text message to those students who have no financial holds and an unpaid balance of less than one thousand dollars, asking them why they have not registered. If the student has other types (i.e. non-financial) of holds, Tayyab helps the student resolve these by working with the various offices that comprise the Student Success Committee.

At their weekly meetings, the Student Success Committee reviews the student information on a case-by-case basis, takes action to help the student whenever possible, and documents their decisions and actions in Banner. Financial issues are the most common reason that students have not registered or applied for graduation. Often the committee is able to increase the student's discount or scholarship to help the student afford to return to or graduate from IIT. Because students' financial worries often affect their academic performance, the committee has observed that helping students financially also allows those students with academic issues to be able to improve academically. Other times, a student may have a personal issue involving a family member, or may just be having difficulty scheduling a meeting with his or her adviser. The committee refers advising issues to the Director of Undergraduate Advising, Matt Bauer, who then follows up with the student's adviser to facilitate a meeting of the adviser with the student. To help a student deal with a personal issue, a member of the Committee may meet with the student to counsel the student regarding his or her options, such as taking a leave of absence.

The Student Success Committee also analyzes retention data in the aggregate, by student cohort and class level, to identify more general factors that may be affecting a group of students. In a separate, but related effort, the Director of the Student One-Stop office, Melisa Lopez, contacts students whose leaves of absence are expiring to notify them of this fact and ask them about their plans for returning to IIT. Based on experience, the initial contact is made via email. Students who fail to respond to the email are mailed a flyer encouraging them to contact Melisa Lopez for help re-enrolling.

To further improve student persistence and completion, IIT joined the *Education Advisory Board's Student Success Collaborative* at the beginning of the 2013-14 academic year. The Education Advisory Board (EAB) provides best practice research and practical advice to academic leaders across North America. Their teams of consultants and analysts work to uncover the best ideas from across higher education, and share these with all member institutions. The EAB's Student Success Collaborative combines technology, research, and predictive analytics to help institutions improve degree completion outcomes for at-risk students. Their advising dashboard identifies at-risk students based on performance in certain courses that correlate highly with students' chances of graduating on time (called "success markers"). The dashboard also provides a concise picture of each student's credit accumulation and grade point average over time. Advisers can also drill down to the course level to see the grade the

student earned in each course taken. Finally, the dashboard shows how the student is doing compared to other students in the same major and provides predictive analytics showing how the student is likely to do in other majors offered at the university. IIT will be pilot testing the advising dashboard during the Spring 2014 academic term with plans to implement it university-wide starting in Fall 2014.

Data Sets Related to Persistence, Retention and Completion

The Illinois Institute of Technology maintains a stand-alone Retention Database that was created in 1996 and holds student retention and graduation data from 1996 to the present. The Retention Database was designed to support the generation of the university's Retention Report which tracks undergraduate persistence and completion by student cohort (i.e. first-time/first-year and transfer cohorts), and by race/ethnicity, gender, department and Federal financial aid status (i.e. Pell Grant recipients, subsidized Stafford Loan recipients, or neither). The database is incrementally updated with data from the Banner Operational Data Store (ODS) each Fall. The report is generated by the Office of Institutional Information. However, the office of Undergraduate Academic Affairs is responsible for entering student cohort and leave of absence information into Banner.

The Retention Database contains five data tables and a number of code tables. The data tables are the following:

- *Cohort Master*: as the name implies, this table is the master table for all cohorts. It contains one record per student, for each student ever designated as a member of a First-year or Transfer cohort, even if the student was subsequently removed from the cohort.
- *Cohort Initial Population*: this table is designed to establish the initial cohort that is designated by Undergraduate Affairs, and therefore, this table should be used to determine current cohort membership. The data values in this table represent the Fall term in which the student entered. In addition to Cohort ID and student ID, this table contains financial aid indicators (i.e., Pell Recipient, Stafford Loan Recipient, Neither), and an indicator for whether the student received an athletic scholarship his or her first semester at IIT. This table contains one record per student.
- *Cohort Periods Students*: this table contains the status (i.e. enrolled, graduated, on leave, or lost) of a student in subsequent years. The table contains one record per student per subsequent year.
- *Cohort Student Departments*: this table is designed to track the movement of students to different departments during their enrollment at IIT. It also contains student major. There is one record per student per academic year.
- *Person Sports*: This table contains sport participation data for the students in the First-year and Transfer cohorts, regardless of whether the student received athletically-related financial aid. It contains one record per student per year. If a student participates in more than one sport during the year, only the sport with the lowest activity number is captured.

The code tables include:

- `dbo_Codes_Ethnicity`
- `Sports_Codes`
- *Department Master*: this table is designed to provide a crosswalk between legacy department names and the current department name. The "Student Dept" field contains the legacy department code, and the "Real_Dept" field contains the current department code.

Because cohort identifiers are available in Banner from 2003 to the present, the Banner ODS may also be used to study undergraduate student retention, persistence, and graduation. The Student Cohort table in the Banner ODS contains one row per person per academic period per cohort. In addition to First-time/First-year and Transfer cohorts, IIT assigns students to a number of other cohorts, including tuition cohorts. Data in the Student Cohort table may be linked to personal, registration, course, GPA, and outcome (e.g. graduation) data contained in other ODS tables for analysis and reporting.

IIT uses the information in the Retention Database to monitor retention, persistence, and graduation rates by race, gender, department, athletic participation and Federal financial aid status. Additionally, the Student Success Committee uses Banner data to compare retention, persistence, and graduation rates for student cohorts and classes with past rates for these groups of students. When a current rate is found to be lagging behind past rates, the committee digs deeper into the data to try to identify a reason for the change.

Scope and Significance

Significance and Relevance of Issues to be Addressed

Analyzing student data related to persistence and graduation, as part of our participation in the HLC Academy for Student Persistence and Completion (henceforth referred to as the Academy), will no doubt reveal additional issues that IIT can begin to address. At the present time, we believe that an issue for IIT is providing a natural progression in the learning experience of incoming undergraduate students in order to engage students in advancing their education. We recognize that students' first- and second-year experiences at IIT are crucial to their decision about whether to persist at the IIT. Additionally, the expectations of incoming undergraduate students are shaped by the learning experiences these students had in elementary and high school. Finally, we recognize that students' primary and secondary school learning experiences increasingly involve project- and inquiry-based learning and the use of technology for learning both within and outside the classroom. Therefore, IIT needs to examine its approach to teaching and learning in order to ensure a natural progression in the learning experiences that today's students have had in order to attract top students and engage them in advancing their education to the next level.

Goals of Academy Participation

Our overarching goal is to enhance the first- and second-year undergraduate student experience, both in the classroom and in the student advising process, to better engage students in the learning process and help them build paths to a career. Specifically, we want to move toward a more inquiry-based experiential learning environment in the classroom, enhancing faculty development in both teaching and advising, and leveraging technology to support improved teaching, learning, and advising.

How Our Goals Align with IIT's Strategic Priorities

Through an inclusive process, led by the University Steering Committee, and involving the academic deans, faculty, staff, students, Trustees, and alumni, IIT has identified six university-wide priorities as areas of focus over the next five years:

1. Growth and development of the student body
2. Promotion of innovative thinking and excellence throughout the university
3. Elevation of IIT's visibility and reputation
4. Enhancement of IIT's facilities, infrastructure, and environments
5. Development of resources to enable progress
6. Strengthening of all IIT's schools and colleges

Our goals for Academy participation align with IIT's strategic priorities as follows. First, giving students more opportunity to explore their interests will expose them to a broader range of disciplines which in turn will help fuel innovative thinking. Likewise, the focus on project- and inquiry-based learning will encourage students to engage in creative problem-solving. The combination of these experiences will enhance students' first- and second-year academic experience, while the adviser training and advising tools will improve their advising experience. Together, these are expected to increase students' attachment to the university, which will result in increased student persistence, and growth of the student body. We also hope that IIT's re-invention of the first-year experience will elevate the university's visibility and reputation.

Purposes and Outcome

The strategies we undertake to improve student persistence and completion at IIT will depend in large part on the results of our data analyses. Currently, there are a number of strategies we are considering to improve the academic and advising experiences of our first-year students:

1. **Leverage best practices in teaching.** Examine how best practices and current trends in first- and second-year undergraduate education can best be applied at IIT. Some possible scenarios are listed below--others will develop during of our participation in the Academy:
 - a. developing new experiential learning classes designed to help students transition from high school to college and bond with both the university and the city of Chicago.
 - b. experiment with innovative teaching techniques in selected first-year classes, such as "classroom flipping" and inquiry-based learning, as well as increasing the use of technology as a learning tool.
 - c. create a teaching and learning center, to promote, enhance, and assess effective pedagogy, and provide professional development for faculty and teaching assistants.
2. **Implement two new technology tools for undergraduate advisers,** namely the DegreeWorks Planner and the Education Advisory Board's (EAB) Student Success Collaborative Advising Dashboard. The DegreeWorks Planner will allow students and their adviser to work together to create a four-year plan for the student, and provide timely feedback on the implications of changes to the plan. The EAB Student Success Collaborative Advising Dashboard will alert advisers in a timely way to adverse academic events that are likely to have a deleterious effect on the student's probability of graduating.

3. **Develop and implement a training course for faculty advisers** that will establish the university's expectations and standards for undergraduate advising, and teach advisers how to make the best use of technological tools for advising.

Specific

Outcomes

By executing the above strategies we hope to achieve the following outcomes:

1. Increased student engagement in the learning process.
2. Increased student satisfaction with their first- and second-year academic experience.
3. Increased student satisfaction with their advising experience in their first and subsequent years at IIT.

Ultimately, we hope that increasing student engagement in the learning process and student satisfaction with their first- and second-year academic and advising experiences will help us to achieve and maintain a first-to-second year student retention rate of 90 percent or higher and a six-year graduation rate of 70 percent or higher.

Potential Challenges

Although we are confident that we can ultimately accomplish the strategies described in the previous section, we recognize the following challenges:

- **Dataset development and analysis:** the challenge will be combining historical data related to student persistence and completion that is stored in a separate, legacy database, with data from the Banner Operational Data Store (ODS), which is not configured for historical analysis.
- **Best Practices in Teaching:** the challenges will include engaging faculty in testing different techniques, and doing so in a way that allows us to draw meaningful conclusions about the efficacy of each. Another challenge will be creating an effective teaching and learning center with very limited resources.
- **EAB SSC Advising Dashboard:** the challenge will be user acceptance of this new technology.
- **DegreeWorks Planner:** this is a new product for the vendor, so the challenge we anticipate is working with the vendor to identify and fix any remaining "bugs" in the system.
- **Adviser Training:** the challenge will be motivating faculty advisers to participate in the training.

Commitment and Capacity

Internal Support for Planned Work

Each of the five projects that comprise this initiative has the support of one or more groups of stakeholders:

1. **Best Practices in Teaching:** IIT's Provost, Alan Cramb, is a strong advocate for improving undergraduate teaching at IIT and has already tasked the Vice Provost for Academic Affairs, Christopher White, with creating a Teaching and Learning Center at IIT.
2. **DegreeWorks Planner:** this project has the support of the Provost, the Vice Provost for Academic Affairs, the academic deans, and those faculty advisers who are already using the degree-audit capabilities of DegreeWorks in their student advising sessions.
3. **EAB SSC Advising Dashboard:** this project has the support of the Provost, the Vice Provost for Academic Affairs, the project Value Leaders, and the advisers who have already agreed to participate in the Pilot Test.
4. **Adviser Training:** this project has the support of many faculty advisers.

Staffing

IIT Vice Provost for Academic Affairs, Dr. Christopher White, will have overall responsibility for this endeavor. Dr. White and the Undergraduate Studies Committee will focus on pedagogical aspects of the proposal. They will be assisted by the faculty generally. Members of Dr. White's staff will have responsibility for other aspects of this initiative. Dr. Carol Emmons, Director of Assessment and former Director of Institutional Research will have responsibility for developing the data sets and analyzing the data used to understand and improve student persistence and completion. She will also continue to lead the deployment of the EAB Student Success Collaborative Advising Dashboard. On this project, she is supported by Scott Spyrison, Manager of Emerging Technologies in IIT's Office of Technology Services, a group of "Value Leaders" comprised of Associate Deans and other champions for undergraduate advising, and a group of "Pilot Advisers" from the three largest of IIT's six undergraduate colleges. Dr. Emmons will also work with the same group of Pilot Advisers to design training for faculty advisers. Carole Orze, Associate Vice Provost for Undergraduate Academic Affairs, will manage the deployment of the DegreeWorks Planner. Applications Developer, John Leever, will provide technical assistance to Ms Orze. Both of these individuals were instrumental in the original deployment of the DegreeWorks system at IIT.

Resource Commitment

The table below lists the human, technological and financial resources that IIT is committing to this endeavor.

Resource	Project(s)	Level of Commitment
Christopher White	Teaching Best Practices	10% for 4 years
Carol Emmons	Dataset development and data analysis, EAB SSC Advising Dashboard, Adviser Training	30% for 4 years
Carole Orze	DegreeWorks Planner	15% for 4 years
John Leever	DegreeWorks Planner	20% for 4 years