

## ***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 (i.e., 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 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 86% for the last 5 entering cohorts and 6 year graduation rates for the cohorts who entered from 2003 to 2007 have averaged 60%.

##### *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. It is a voluntary program to which students on academic probation are invited to apply. As part of the application process, students write an essay describing what efforts they will make to try to improve their grades. This essay, as well as the students' ACT or SAT scores, and academic record are reviewed by a committee comprised of the Vice Provost for Academic Affairs and staff from the Office of Undergraduate Academic Affairs. Candidates are then interviewed by the committee. Through this process, the committee tries to discern the best path for each student, and get the student onto that path. Students whose ACT or SAT scores demonstrate good aptitude, and whose only problems are academic are invited to take Psychology 180. This course teaches students good study and communication skills. Students with additional issues are invited to take Psychology 227. The course instructor is a clinical psychologist who is a member of IIT's Psychology faculty. She works with students on an individual basis to identify and try to resolve the issues that are preventing these students from focussing on their academic work. To date, almost 500 students have participated in the Kedge program, and about half of these students have graduated from IIT. This contrasts with a 10 percent graduation rate among students who are invited but decline to participate in the Kedge program. [I NEED TO VERIFY THESE STATISTICS

WITH ELLEN MITCHELL.]

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 comprised of staff from 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 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 advisor. The committee refers advising issues to the Director of Undergraduate Advising, Matt Bauer, who then follows up with the student's advisor to facilitate a meeting of the advisor 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 the Melisa Lopez for help re-enrolling.

Since beginning these efforts four years ago, first-to-second-year retention has improved from an average of 82 percent to an average of 92 percent, and second-to-third-year retention has improved from an average of 70 percent to an average of 83 percent.

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. Advisors 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 (i.e., 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 to the next level. We recognize that students' first-year experience at IIT is crucial to their decision about whether to persist at the university. 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 redesign its approach to teaching and learning in order to provide the 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-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 refocus the educational experiences of the first year on helping students make a more mature decision about which major to choose. Giving students more opportunity to explore their interests in their first year will make students' remaining semesters at the university more constructive and rewarding. We also want to improve the advising process by providing faculty advisors with the training and tools they need to provide timely and sound advice to individual students. Finally, we want to begin a pilot program of "classroom flipping" in selected first-year classes. This will involve changing the classroom focus from lecture-based teaching to project- and inquiry-based learning, and increasing the use of technology as a learning tool.

### *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 in the first year 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-year academic experience, while the advisor 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. **Redesign the first-year curriculum to provide more opportunity for students to explore their interests and make a more mature decision about which major to choose.** At present, we believe that the most promising approach would be to combine what we've learned from IIT's existing Inter-professional Projects (IPRO) and "Introduction to the Profession" courses into a new first year experience course.
2. **Implement two new technology tools for undergraduate advisors,** namely the DegreeWorks Planner and the Education Advisory Board's (EAB) Student Success Collaborative Advising Dashboard. The DegreeWorks Planner will allow students and their advisor 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 advisors 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 advisors** that will establish the university's expectations and standards for undergraduate advising, and teach advisors how to make the best use of technological tools for advising.
4. **Conduct a pilot program of classroom flipping** in selected first-year courses that involves a comparison of student learning outcomes in flipped versus traditional versions of these courses.

### *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-year experience 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-year academic and advising experiences will help us to achieve and maintain a first-to-second year student retention rate of 90 percent **{{NOTE: we state earlier that this is 92%}}** or higher and a six-year graduation rate of 75 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.
- **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.
- **Advisor Training:** the challenge will be motivating faculty advisors to participate in the training.
- **Redesigning the first-year curriculum:** the challenge will be determining the best way to combine elements from the current IPRO with those from the current Introduction to the Profession (ITP) courses. This may need to be an iterative process.
- **Flipped Classroom Pilot:** the challenge will be identifying course-instructor combinations that are conducive to “flipping,” by virtue of course content and instructor willingness to undertake the work of re-developing the course.

### **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. **DegreeWorks Planner:** this project has the support of the Provost, the Vice Provost for Academic Affairs, the academic deans, and those faculty advisors who are already using the degree-audit capabilities of DegreeWorks in their student advising sessions.
2. **EAB SSC Advising Dashboard:** this project has the support of the Provost, the Vice Provost for Academic Affairs, the project Value Leaders, and the advisors who have already agreed to participate in the Pilot Test.
3. **Advisor Training:** this project has the support of many faculty advisors.
4. **First-year Curriculum Redesign:** this project has the support of the Provost and academic deans.
5. **Flipped Classroom Pilot:** this project has the support of many of the faculty, some of whom have already started flipping some of their classrooms.

### *Staffing*

[THERE ARE LOTS OF WAYS WE COULD STAFF THIS. THE FOLLOWING TEXT DESCRIBES ONE WAY THAT I FEEL CONFIDENT WILL WORK. HOWEVER, IF ANY OF THE SUBCOMMITTEE MEMBERS WOULD LIKE ONGOING ROLES IN THIS INITIATIVE, THERE IS DEFINITELY ENOUGH WORK TO GO AROUND.]

The groups and individuals who will lead or be directly involved in this initiative are pictured in the Organization Chart on page 9. Vice Provost for Academic Affairs, Dr. Christopher White, will have overall responsibility for this endeavor. Day-to-day management will be provided by Carol Emmons, Carole Orze and Matt Bauer who all report directly to Dr. White. Carol Emmons has worked at IIT for eight years, initially as the Director of Institutional Research, and currently as the Director of Assessment. During her time at IIT, Dr. Emmons designed and implemented Cognos Business Intelligence Suite training for staff and Student Learning Assessment training for faculty. Prior to coming to IIT, Dr. Emmons worked for 20 years in survey research, managing large-scale, government-sponsored survey research studies. Carole Orze has worked at IIT for over 30 years, has been the head of Undergraduate Academic Affairs for n years, and currently chairs the Student Success Committee. Matt Bauer is currently the Associate Dean for the College of Science, Director of Undergraduate Advising, and a Senior Lecturer in the Department of Computer Science. Mr. Bauer has been deeply involved in IIT's recent efforts to improve undergraduate student retention and is the architect of IIT's current Advising Portal. His term as Associate Dean will be ending at the end of the 2013-14 academic year, freeing up a significant amount of time for him to devote to this initiative.

Dr. Emmons will focus on 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 Sproy, 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 Advisors" from the three largest of IIT's six undergraduate colleges. Dr. Emmons will also work with the same group of Pilot Advisors and the Manager of Instructional Design, Brad Katz, to design training for faculty advisors.

Carole Orze 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.

Matt Bauer will focus on redesigning the first-year undergraduate curriculum and conducting a pilot of classroom flipping. With respect to redesigning the first-year curriculum, Mr. Bauer will work closely with IIT's Undergraduate Studies Committee and with IIT's IPRO Director, Jeremy Alexis. [what about classroom flipping...who needs to be involved in this?]

### *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
Carol Emmons	Dataset development and data analysis, EAB SSC Advising Dashboard, Advisor Training	50% for 4 years
Matt Bauer	Re-design first-year curriculum, Flipped Classroom pilot	25% for 4 years
Carole Orze	DegreeWorks Planner	10% for 4 years
John Leever	DegreeWorks Planner	15% for 4 years
Brad Katz	Advisor Training	5% for 4 years
Jeremy Alexis	Re-design first-year curriculum	5% for 4 years
Undergraduate Studies Committee	Re-design first-year curriculum	
EAB Project Value Leaders	EAB SSC Advising Dashboard	
EAB Project Pilot Advisors	EAB SSC Advising Dashboard, Advisor Training	

## Organization Chart

