

Two Quality Improvement Initiative (QII) Proposals A and B

(forwarded for review by Deans from the NCA Accreditation Advisory Committee)

Proposal A: Redefining the First Year Experience

The proposed quality initiative is to redefine the first-year experience. This proposal addresses several themes from *My Perfect IIT*, a survey of the entire IIT community that was conducted by the NCA Accreditation Advisory Committee in Spring 2012. The themes are: creating a teaching and learning center, inviting guest speakers, and utilizing available technologies to leverage students' learning experience.

There are two completely new drivers of change that must be leveraged for IIT to excel in the 21st Century. The first impact is the demographic of the new student body. Their entire childhood through the high school level has been a world of the Internet including the recent capability of video, gifted minds accessing computers, cell phones and now within the last five years, iPhones and iPads. They have become digital savvy and are constantly connected to their friends and peers through social media. Almost all who come from top high schools have already experienced project- and inquiry-based learning and they expect the integration of course content. They find traditional materials and lecture-based classes boring and uninspiring. Where will these graduates find a university that will provide a continuity of their learning experiences and take education to the next advanced level? IIT is small and should be nimble enough to meet this demand.

The other new reason for change is the NCA accreditation process mandated by the Department of Education that is imposing a monitoring process to assure quality teaching, a concern for graduation rates, and an expected value of cost constraints in education. Of these, the strongest driver for quality learning is that, "each course has to identify its teaching objectives and then provide evidence that the teaching objectives have been achieved."

The resources of this new student body identified with digital learning and the NCA mandates should be considered a gift of change for the future of IIT.

Outcomes

The expected outcomes of this initiative are:

- Increased first-year to second-year retention
- Improved 4-year and 6-year graduation rates
- Enhanced student learning
- Increased student satisfaction
- Enhanced school spirit

Proposed Method

- Do not require students to select a major until the second or third semester. This allows students to be exposed to a comprehensive overview of the professions during first year regardless of the area in which they choose to study.

- Move the initial IPRO course to the freshman year and incorporate the content of a general ITP (similar to the content of TECH 100, syllabus attached). This combination would provide a collaborative cross-disciplinary framework for students to learn the skills necessary for inquiry, investigation, and discovery and build a foundation for the student to analyze a problem and identify, develop, and communicate a solution. Perhaps a case study model would be appropriate because it would be a connection to the real world. More advanced IPRO's concentrating on new ideas and research could be sequenced throughout the curriculum. Subject major specific ITPs could be offered during the second or third semester after the student has selected a major.
- Enable the development of formal or informal student learning communities in freshman year. Such communities are important because they often continue to thrive beyond the freshman year in University. Students who work together in the freshman IPRO may still continue to interact even after they move into their disciplines, and once they graduate, these communities often provide the necessary networks that students use to build their career and progress in life.
- Guest speakers from industry, government, and academia could be invited to speak with the IPRO cohorts about their fields, current trends, etc.
- The balance of the freshman year could involve project-based learning wherever possible, with a broad coverage of material focused on potential career paths. Available options could reflect student consensus. "Course flipping" making use of classroom technologies and widely available academic Internet resources should be implemented in those courses that lend themselves to discussion. The IIT course would then be a class meeting of 15-20 students to discuss the material and perhaps apply it in project formats. This becomes iPad 101 and IIT has a long legacy now of iPad distribution which are now the medium for IIT education.
- To assure a structured sequence of courses dedicated to a four-year graduation, each student should be assigned an "academic coach" to both advise and track their academic progress. It would then be possible for the university to develop a matrix that could anticipate all course requirements for each academic year.
- To reinforce the vitality of the project learning format, it may be appropriate to have academic content modules that would be one-half semester. This would permit a math module to be used on one project team during the first half of the semester and the second module to be used on another project for the last half of the semester.
- The effectiveness of this program will be gauged by:
 - Degree of implementation of the program, first to second year retention rates, overall four- and five-year graduation rates
 - Student achievement, such as team/peer evaluations, short papers, "publishability" of student results and projects, and exams.

Proposal B: Improving IIT's 6-year graduation rate

Quality Initiative Proposal

Increase 6-year graduation rate

The proposed quality initiative is to improve IIT's 6-year graduation rate. IIT's 6-year graduation rate has historically been significantly lower than our peer AITU schools and lower than expected based on the quality of the incoming IIT first-year student. The goal of this quality initiative is to increase IIT's 6-year graduation rate to 85% within 5 years.

Historical graduation rates have been hovering around 65% for quite some time. The latest data point for IIT for Fall 2012 is based on what happened to the class that came to IIT in Fall 2005 (fall 2005 cohort). Our first-to-second year retention rate that year was 85%. 6-year graduation rates are strongly correlated to the first-to-second year retention rate.

Since Fall 2005, the university has made steady improvements in our first-to-second year retention rate that has reached a high of 95% in fall 2011.

The most recent data point for 6-year graduation rate will come out soon and is expected to be 68%, a four percent increase over the previous cohort. This increase is partly due to the efforts of the retention task force that was formed that year by the university, and also due to a more forgiving policy was initiated on the annual renewal of student merit-based scholarships.

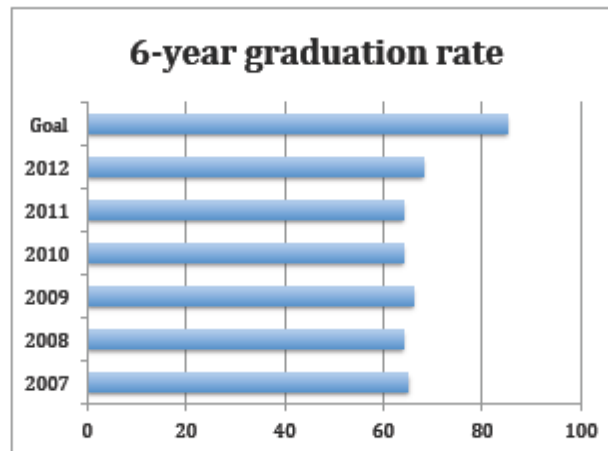


Figure 1. Historical 6-year graduation rates at IIT (%).

Based on recent trends in first-to-second year retention, it is reasonable to expect that we can and should reach a goal of 85% within five years. Due do this, however will require hard work and a concerted effort by the entire university community. Resources will also be necessary to accomplish this goal.

The expected outcomes of this initiative are:

- Increase student satisfaction
- Improve learning outcomes
- Improve University National Ranking
- Lower cost of attendance
- Lower student debt levels upon graduation
- Increase alumni engagement
- Better classroom utilization
- Class schedules and sizes are determined by educational pedagogy and not driven by unforeseen demand
- Increase summer session enrollment
- Reduce variability in semester student credit-hour load

Proposed Method:

The task of increasing our 6-year graduation rate will require a concerted effort by the entire IIT community (faculty, staff, students, administration, alumni).

An essential step toward achieving this goal is to simply require incoming students to create a plan in the student degree-audit system, "DegreeWorks." DegreeWorks will ensure that the student plan leads to a degree within a specified time frame at IIT. Faculty advisors can assist students with creating a plan, and central support by Academic Undergraduate Affairs will ensure that DegreeWorks results are accurate and up to date. The student plan data will reside in the central University database (Operational Data Store).

The data will be used to:

- Project demand for courses that are offered in the future terms
- Taylor class sizes based on pedagogy and not unforeseen demand
- Assist course schedulers in all academic units
- Make sure that the right mix of courses are offered in the right place at the right time

The basic premise of the proposed method is that students with a plan will do better and graduate faster than students without a plan.