

---

## Criterion 3

### Student Learning and Effective Teaching

The organization provides evidence of student learning and teaching effectiveness that demonstrates it is fulfilling its educational mission.

#### Core Component 3a

*The organization's goals for student learning outcomes are clearly stated for each educational program and make effective assessment possible.*

***A copy of the 1995 IUB Campus Assessment Plan is available in the Resource Room.***

*Now more than at any other time in IU Bloomington campus history, faculty are challenged, encouraged, supported, and engaged in the process of determining the effectiveness of their teaching practices by assessing what and how much their students are learning. This effort is due in part to IUB's response to the Higher Learning Commission's (HLC) 1993 position statement regarding the fundamental role of assessment as "primary evidence of the quality of education" provided by an institution. It is also the result of subsequent initiatives developed at the campus, school, and departmental levels. The HLC challenges academic institutions to "create a culture of assessment." In 1995, the campus formally engaged in this process with the development and publication of a Campus Assessment Plan. Highly praised by North Central Association reviewers, the plan brought the practice of assessment into the foreground of the university's traditional missions of teaching, learning, and service.*

---

## An Overview of Assessment at Indiana University Bloomington

### A culture of assessment in the classroom

---

As knowledge experts and standard bearers of their disciplines, individual faculty and faculty communities are primarily responsible for developing curriculum, establishing learning outcomes, and creating appropriate assessment plans to evaluate student learning. In the burgeoning field of scholarship focusing on teaching and learning, the groundwork for creating effective learning communities begins with individual faculty who apply scholarly methods of inquiry to the teaching challenges that arise in their own disciplines and courses. Assessment is an indispensable tool in the practice of evidence based and theory framed teaching, and in recent years the campus has invested considerable resources in establishing inquiry into student learning as a key component of the research mission of the university. Through faculty centered resources and initiatives such as Instructional Support Services ISS , the Freshman Learning Project FLP , and the Scholarship of Teaching and Learning SOTL , the campus supports both individual inquiry into learning and an interdisciplinary community that supports such inquiry.

*(To read more about ISS, FLP, and SOTL see Core Component 3b.)*

## Academic units and student learning outcomes

---

As described in the Campus Assessment Plan, faculty in academic units are “responsible for defining objectives for the major and developing assessment plans and measures that evaluate whether the instructional program achieves the student learning outcomes.” The delineation in that plan of a set of Assessment Principles by the deans of IUB’s academic schools was a crucial first step in establishing assessment as a campuswide priority. The principles establish basic conceptual and procedural guidelines for assessment plans to be designed and implemented at the university, school, and departmental levels; they also emphasize that improvement in instruction and student academic performance is the goal of assessment, and that academic programs are the basic units of analysis in determining the success of that goal.

The process of assessment at IU Bloomington has been largely shaped by the campus management system known as Responsibility Center Management (RCM). Within RCM, each academic unit is a responsibility center with planning, decision making, and budgetary authority. Because academic units are primarily responsible for student learning outcomes, this configuration provides direct incentives to improve teaching and learning at the most basic level. Traditional responsibilities associated with creating an effective learning environment are closely aligned with financial incentives and budgetary control in RCM, because enrollment revenues generated by each unit remain in that unit. The fundamental decentralization of budgetary and administrative authority across disciplines and schools gives academic units the power and resources necessary to establish clear academic goals and objectives, encourage effective teaching, and assess student-learning outcomes.

## Reformulating general education

---

In 1995, with leadership from the Office for Academic Affairs, the campus endorsed a set of learning objectives representing the learning outcomes that all units seek to achieve. These objectives reflect a set of cognitive skills that students should acquire in a successful general education program, including the abilities to read and listen effectively, write clearly and persuasively, reason quantitatively, and think critically, among others. Within Responsibility Center Management, the fulfillment of general education objectives has been the curricular responsibility of separate academic units. Each of the schools on campus maintains a separate general education plan and is responsible for establishing the goals and monitoring the success of its general education curriculum.

In his 2004 inaugural address, however, President Adam Herbert called for a “general education curriculum that extends across the University,” one that determines what is “...fundamental to the earning of a degree from one of the world’s most distinguished liberal arts institutions...” Responding to President Herbert’s charge to reformulate undergraduate general education has been a major objective for faculty and administration since 2004. Developing a functional general education curriculum for a university with eight campuses is an extraordinary challenge, as is the coordination of general education requirements across IUB’s 13 degree granting schools.

One of the main complications of establishing general education at Indiana University is the question of curricular articulation and transferability across campuses and schools. Another is the challenge of establishing a pedagogical foundation for the proposal that includes multiple dimensions of general education, specifically, areas of knowledge and intellectual skills, both of which have been deemed essential to undergraduate education by the University Faculty Council UFC .

Responding to President Herbert’s call, the UFC Educational Policies Committee was charged with leadership in this initiative, and has developed a proposal that delineates principles as well as curricular norms for undergraduate general education at Indiana University. The proposed General Education Requirements <http://www.indiana.edu/~bfc/docs/AY07/circulars/B5-2007.amended.pdf> call for general education to be implemented through curricular degree requirements no later than 2010. The IUB General Education Program includes two basic components: the *Common Ground* Foundations, Breadth of Inquiry, World Languages and Cultures which is foundational to the development of intellectual capabilities and must be included in every undergraduate degree offered by Indiana University Bloomington; and, *Shared Goals*, which include components the faculty recommends for inclusion in every undergraduate degree program offered by Indiana University Bloomington.

The Higher Learning Commission has stated that faculty assessment of student learning with regard to general education is central to accreditation. Accordingly, the University Faculty Council proposed that

*Each course that is to be acceptable for a general education requirement should have a model framework that includes assessable learning goals, and the assignments and exams should provide a basis for assessing the extent to which students have achieved these goals. The faculty of a unit should regularly and periodically review the*

*course and students' work in the course to determine whether the course's learning goals are being achieved. The review process should, ideally, include reviewers from outside the academic unit that offers the course and, when possible, from outside the University. The use of external reviewers would be especially appropriate for reviews conducted in preparation for or as part of the re accreditation process.*

Basic system wide plans for assessing student achievement and institutional effectiveness of general education requirements are articulated in the proposal, but the Bloomington campus is still in the process of determining a comprehensive plan for the meaningful assessment of student learning outcomes in the currently proposed general education curriculum.

## **A national role in learning assessment**

---

In recent years IU Bloomington has demonstrated its strong institutional commitment to learning assessment through a variety of initiatives and contributions of state and national significance, including:

### ***The development of NSSE***

The National Survey of Student Engagement NSSE is often referred to as “the Indiana Study.” With support from the Pew Charitable Trusts, NSSE was created in 1998 and successfully pilot tested in 1999 by a national design team chaired by Peter Ewell of the National Center for Higher Education Management Systems. The team included IUB Chancellor’s Professor of Higher Education George Kuh; Kuh was director of NSSE until just recently, having served in that role since the inception of NSSE. The survey is administered through the Indiana University Center for Postsecondary Research <http://www.cpr.iub.edu/index.cfm> , which promotes student success and institutional effectiveness through research and service to postsecondary institutions and related agencies, and with the support and cooperation of the Indiana University Center for Survey Research <http://www.indiana.edu/-csr/> .

### ***NSSE and research on student engagement***

The NSSE played a key role in a 2006 study funded by the Lumina Foundation for Education. The study was designed to determine the relationships between student engagement and selected measures of success in college for students from different racial and ethnic backgrounds attending different types of four-year colleges and universities. The study, entitled *Connecting the Dots: Multi-Faceted Analyses of the Relationships between Student Engagement Results from the NSSE and the Institutional Practices and Conditions That Foster Student*

*Success* [http://nsse.iub.edu/pdf/Connecting\\_the\\_Dots\\_Report.pdf](http://nsse.iub.edu/pdf/Connecting_the_Dots_Report.pdf), was directed by the School of Education Center for Postsecondary Research and authored by its director, George Kuh, and several other IUB Education faculty members.



### **Globalization Highlight**

#### ***The Scholarship of Teaching and Learning (SOTL)***

The Bloomington campus is an international leader in this advancing movement to promote an evidence based approach to teaching. The program serves as a local, national, and now an international, research community for faculty who wish to apply research expertise to critical questions of teaching and learning in their own courses. The SOTL <http://www.indiana.edu/~sotl/whatis.html> program has developed a comprehensive model for improving undergraduate learning through faculty inquiry, and builds interdisciplinary communities that support and refine this inquiry. Supported by the Office of Academic Affairs and Dean of the Faculties, the Bloomington SOTL program is the founding organization of the International Society for the Scholarship of Teaching and Learning, which promotes the dissemination of SOTL research across national boundaries.

*(Read more about SOTL and ISSOTL in Core Component 3b.)*

## **Assessment in Academic Units**

### **Faculty-determined assessment practices**

---

In accordance with the Campus Assessment Plan, “faculty committees establish learning objectives for students, select and implement measures, and act on assessment data collected . . .” Within IUB’s 13 degree granting schools, undergraduate and graduate programs are designed and evaluated by their faculty, often with oversight from academic associations that challenge faculty to adopt their discipline’s best practices. Most degree programs have mission statements that directly reflect the value of assessment in determining student learning outcomes.

Individual faculty and faculty committees within departments and schools have the authority to determine which assessment practices are useful in the process of reviewing and improving student learning outcomes. Typical practices include course and program evaluations, student exit surveys, curriculum review, self studies, alumni surveys, and, where appropriate, results of licensing and certification examinations. The process of identifying and assessing student learning objectives at the undergraduate and graduate level is both valued and in most cases wholly integrated

into curriculum improvement and strategic academic planning. The examples below demonstrate a variety of ways in which academic units approach this process.

## Examples of assessment in academic units

---

### ***Evaluating teaching and learning in history***

This multi year project is taking place in the College of Arts and Sciences Department of History, a faculty community well respected for research but also deeply committed to teaching, in which all ranks teach introductory courses. The department is attempting to systematically explore some of the problems of introducing students to college history and planning to disseminate the results nationally, not only for the benefit of students at Indiana University, but in the interest of encouraging a scholarship of teaching and learning in the discipline of history.

#### ***What are the core skills that historians possess?***

This is one of the key questions under exploration in the Department of History as it engages in a multi year assessment of teaching and learning in the undergraduate major. Using an innovative self study process involving student feedback, course evaluations, faculty interviews, consultations with experts from Instructional Support Services and the IU Libraries, and creative collaborations with other campus instructional experts, the department has undertaken an ambitious plan to:

- Identify a set of core skills expected of upper level history students
- Create a series of initiatives that will lead to the development of strategies for integrating these skills into lower level classes
- Develop a Web site and an electronic newsletter that will coordinate nationally the efforts of historians involved in scholarly teaching

Once the inventory has been completed, faculty members will engage in a systematic process of teaching and assessing student learning for each identified skill. The results will be shared with the entire history faculty in a written report and through a departmental retreat. When the skills inventory process is complete, the department will submit the findings for an external critique. The participants plan to share this unprecedented inventory of faculty expectations of students in upper level history courses in a series of articles and papers, as well as presentation at professional meetings.

For this project the department recently received a 2006 Scholarship of Teaching and Learning Leadership Grant, awarded by the Office of Academic Affairs and Dean of the Faculties.

***An innovative capstone course in the Kelley School of Business Department of Management builds assessment into the curriculum***

Capstone courses are among the best methods for assessing learning outcomes, enabling students to demonstrate key skills and apply knowledge identified with their disciplines. In the Kelley School of Business, undergraduate management majors in Z402 are challenged to demonstrate, delegate, evaluate, and more. The co creator of this course, Professor Carolyn Wiethoff, is developing an alumni survey that will soon supply useful data for refining Z402 and other undergraduate management courses.

***Identifying, practicing, and assessing key skills***

While teaching undergraduates in the Department of Management several years ago, Professors Carolyn Wiethoff and Patricia McDougal decided to create a capstone course that could offer senior management majors more realistic opportunities to deal with a wide range of basic managerial challenges. The course is Z402, a capstone experience for senior management majors planning careers in a wide range of businesses and industries.

Course assignments in Z402 require a high level of innovation, preparation, and forethought. For example, in their capstone project, Z402 students are paired with students in C323, a speechwriting course, and given a complex task that requires them to combine many management skills. Z402 students give their C323 “speech writers” an assignment to write a speech on a business related topic. In preparation, the management students must research their topics and develop specifications for their speech assignments, including deadlines, length, content, and other expectations. Students must work directly with their speechwriters to prepare the speeches and deliver them on videotape for formal evaluation.

This project includes several levels and types of assessment that evaluate each student’s management performance beyond the scope of traditional classroom methods. For example, each student must develop a performance worksheet for the purpose of evaluating his or her speechwriter’s performance, and review the worksheet with the speechwriter. A memorandum in which each student critiques his or her own performance is required, and formal feedback from the speechwriter helps each student evaluate his or her role as an “employer.”

***The School of Education Unit Assessment System***

The Unit Assessment System UAS of the teacher education program operates at two levels; a school wide assessment system and individual program assessment systems. The school wide assessment system incorporates annual reviews of candidate performance relative to four School wide benchmarks, as well as reviews of candidate and program information from different phases of the teacher educa

***Assessment at the School of Education***

tion programs, such as candidates' student teaching performance assessment. These reports are shared with the School's Committee on Teacher Education.

Faculty within individual programs have integrated assessments or benchmarks specific to each program and provides ongoing feedback to candidates as they progress through the program. These are communicated to the candidates within the program and monitored by the program faculty. As a part of the UAS, each program presents a report of its respective assessment process along with the program faculty's analysis to the Committee on Teacher Education every three years. During the 2007-2008 academic year, each of the teacher education programs will submit a program review to either the Indiana Department of Education Division of Professional Standards or to a respective professional association, as a prerequisite to the School's continuing accreditation review in fall 2009 by the National Council for the Accreditation of Teacher Education (NCATE). These program reviews include descriptions of the program curriculum and assessments, and candidates' performance on five to seven selected assessments indicative of candidates' knowledge and skills associated with respective professional standards.

***The Jacobs School  
of Music***

***Other assessment examples of note***

The world renowned Jacobs School of Music employs a highly structured and rigorous assessment process that is fully integrated into all levels and aspects of instruction. Student progress toward the degree is evaluated every semester through a series of proficiency exams, performance assessments, and recital hearings. Student evaluations of faculty teaching for all ranks of teachers, regardless of tenure or pre-tenure status are posted online.

The school reports that graduate placement data availability varies by department. Some departments have detailed online listings of graduates and their current positions; others are less rigorous.

***The School of Optometry***

The assessment of student performance, which occurs at every phase of interaction with the students, is a long-standing feature of the Indiana University School of Optometry. Student assessment in the areas of optometric/medical knowledge, patient care, professionalism, communication skills, and evidence-based learning has been the characteristic emphasis of the school's professional training program. There are numerous subjective and objective, time-honored methods of examining students' knowledge and entry-level competence.

One method of assessment using external norms is the comparison of student performance on National Board Examinations. For example, students are required to pass Part I of the National Board of Examiners in Optometry NBEO Exam in order to graduate from the school's professional O.D. program.

***The School of Public and Environmental Affairs***

SPEA students are preparing for employment in such diverse fields as arts administration, environmental science, public affairs, public policy, and public health. Assessing these wide ranging programs requires a broad array of internally and externally focused tools, including

- Student ratings of courses and teaching
- Course grade distributions
- Student internship evaluation reports
- Certification exam pass rates
- Exit interviews
- Alumni employment surveys
- Opinion surveys focusing on the relevancy of curricula
- Placement statistics

Faculty curriculum committees use these data, along with data from employers and long-term trends in specific fields, to assess and revise courses and program curricula on a regular basis. In addition, the school recently completed a core course consistency review across instructors at the master's level.



***Globalization Highlight***

A recent self study prompted the elimination of a separate international programs office in favor of a more decentralized approach intended to engage the entire school with international concerns. The result is a new faculty coordinated project known as Global Initiatives <http://www.iu.edu/~spearweb/sgi/>. The mission of Global Initiatives is to “promote positive change through applied research, teaching, and public service for governmental, intergovernmental, for-profit, non-profit, and academic institutions.”

***Further examples***

To read more about assessment in academic units, see the following documents.

- IUB School of Journalism Assessment Plan
- Kelley School of Business Learning Outcomes Plan
- Project descriptions in the School of Informatics capstone sequence I450/I451: *Designing and Developing an Information System* <http://informatics.indiana.edu/capstone/>.

## Graduate program assessment and the University Graduate School

---

As defined in the Campus Assessment Plan, the goal of assessment at the graduate level has been “to augment an already rich assortment of procedures for determining student mastery of post baccalaureate skills and knowledge to focus on the acquisition of group level data that can inform and enhance individual learning.” In the IU system, the University Graduate School is charged with the role of supporting excellence in graduate education and performs an active role in the development of new concepts and best practices for graduate education. It assists departments in recruiting, supporting, retaining, and graduating outstanding students.

To facilitate the development of reliable data on graduate programs, the University Graduate School is in the process of developing a Graduate Program Data Bank. When complete, the data bank will contain a separate file for each of the 88 graduate programs from the statewide IU system offering degrees through the University Graduate School. Each of the files will have annual data, beginning with the 1991-92 year, for over 100 variables of relevance for the review of graduate programs. Those variables will include GPAs and GRE scores for graduate students; time to degree for students receiving the Ph.D.; percentages of female, minority, and international students; schools where recipients of Ph.D.s are placed; and national rankings.

## Campus-Level Assessment

### The General Problem Solving Assessment (GPSA)

---

From 1997 to 2003, under the aegis of the Office of Academic Affairs and Dean of the Faculties, IU Bloomington undertook a major initiative designed to assess general education outcomes. The 1997 self study reported on the development of the Indiana University Student Performance Measure, a performance assessment designed to measure general education outcomes. Now called the IU General Problem Solving Assessment (GPSA), the locally developed instruments were designed to provide information about general education outcomes such as critical reading, synthesis, designing well reasoned written arguments, and using mathematics to solve unstructured problems.

According to the plan agreed to in 1997 by the associate deans of the College of Arts and Sciences and the three largest schools, the GPSA was administered in a pretest/posttest design. In August 1999 the assessment was administered to more than 1,600 freshmen during

Welcome Week. During the 2002–03 academic year, the second and final planned phase of the study was implemented. With funding from the campus and assistance from IU Bloomington Evaluation Services and Testing BEST, the College of Arts and Sciences and the three largest professional schools administered the GPSA to large samples of fourth year students.

### ***Description of the assessments***

The GPSA consists of several different instruments, all of which fall into two categories: those designed to measure reading and writing skills, and those designed to measure analytical reasoning mathematical skills. During pilot testing in the mid 1990s, several forms of each type of assessment were developed. In 1999 and again in 2002–03, one prompt of each type was selected based primarily on stability of scoring as evidenced by pilot testing. The topic of the reading/writing assessment is gender in the workplace. It consists of a scenario, a set of source readings, and a writing task. The resulting memo is scored on three factors: writing, reading as evidenced by the content of the written product, and accomplishment of task. The analytical reasoning assessment consists of a loosely related series of real world story problems on the theme of blood and blood testing. Emphasis is placed on demonstrating sound reasoning, framing problems appropriately, and using plausible procedures, rather than getting the correct answer. The student work is scored on four factors: reasoning, understanding of concepts, procedures, and communication. Students were given about three hours to complete either form of the assessment.

#### ***1999 sample***

The goal in 1999 was to administer each of the assessments to a large, but manageable, quasi random sample of incoming freshmen. Plans were developed to administer the assessments to randomly chosen floors from each residence hall during Welcome Week, the period after freshmen had arrived on campus but before classes had started. The goal was to administer the reading/writing and analytical reasoning assessments to roughly 1,000 students each. The actual numbers administered were 886, reading/writing, and 726, analytical reasoning.

#### ***2002-03 sample***

While administering the assessments to freshmen had been a campus level responsibility, administering them to fourth year students was the responsibility of the four largest academic units. It was agreed that the desired total number of examinees was about 500 for each type of assessment. This represents roughly the number of the 1999 cohort who could be expected to have remained enrolled at IU Bloomington as fourth year students. Target numbers were established for each unit based on the desired total and the approximate number of fourth year students in the unit. Various schemes for

selecting students and administering the assessments were discussed, but, ultimately, it was left to each of the four units to determine how the sample would be selected. These various methods resulted in 614 completed reading/writing assessments and 607 completed analytical reasoning assessments. These numbers exceeded the targets for each form of assessment. However, due to the various plans under which students were recruited, this cannot be described as a random sample.

### ***Scoring***

Detailed scoring rubrics for each type of assessment were developed and tested over a period of several years in the 1990s. In the case of the reading/writing assessment, the rubric included sample papers that served as benchmarks for each of the score points for each component. A description of components and score points for each of the assessments is available in the Resource Room.

For the analytical reasoning assessment, a more objective scoring rubric was developed that assigned varying numbers of points to the four score components for each problem in the assessment. These raw points were totaled and then converted to the standard four point scale.

### ***Results***

Fourth-year scores from 2002–03 were compared to the first-year scores from 1999. The original 1999 sample was reduced to include only those students who were still enrolled at IU in the fall of 2002 and who were majors in one of the four academic units involved in the posttest. This reduced sample controlled for the possible effects of attrition of lower achieving students. Possible scores on each component of each GPSA instrument range from a high of 4 to a low of 1. T tests were calculated on the matched component scores from 1999 and 2002–03. All differences were found to be statistically significant at  $p < .001$ .

As the table below indicates, the fourth year results show increases in student scores on all components of both assessment types. The gains are moderate, ranging from one quarter to one half point on a four point scale (one third to two thirds in standard deviation units). All mean scores for 2002–03 fall within the “proficient” range for their respective scales. Bearing in mind the limitations of this one time study, these data suggest that undergraduate students improve their proficiency at a set of important skills during their time at IU Bloomington.

**Comparison of Mean GPSA Component Scores for First- and Fourth-Year Students**

Score Component	1st year mean scores (4-point scale)	1st year standard deviation	4th year mean scores (4-point scale)	Mean score changes, 1st to 4th year	Change in standard deviation units, 1st to 4th year
<b><i>Reading &amp; Writing Assessment</i></b>					
Writing	2.54	0.67	2.79	+0.25	+0.37
Reading	1.98	0.74	2.50	+0.52	+0.70
Accomplishment of Task	1.95	0.76	2.32	+0.37	+0.49
<b><i>Analytical Reasoning Assessment</i></b>					
Reasoning	1.91	0.72	2.16	+0.25	+0.35
Understanding	2.40	0.73	2.89	+0.49	+0.67
Procedures	2.37	0.75	2.67	+0.30	+0.40
Communication	2.08	0.66	2.49	+0.41	+0.62

***The future of the GPSA***

The evidence suggests that the GPSA is a valid and reliable measure of important skills. However, the merits of general, as opposed to discipline-specific, assessments are a matter of debate on campus, and the challenges associated with developing and administering assessments of this type on a large campus are daunting. These challenges include high development cost; the difficulty of finding a time and place to administer a proctored, three hour assessment; the difficulty of obtaining a random sample of students; concerns about student motivation to perform well in the absence of consequences; and doubts on the part of some faculty and administrators about the credibility of a locally developed, holistically scored assessment. For these reasons, the campus does not plan to continue administering the GPSA. As the faculty and administration develop a new vision for general education at IU, other options for directly measuring general education outcomes will need to be considered.

The following GPSA documents are available in the Resource Room

- The Indiana University General Problem Solving Assessment, 1999–2003: Preliminary Report. Office of Academic Affairs and Dean of the Faculties, Indiana University Bloomington, 2003.
- College Assessment Project: Final Report. Center for Reading and Language Studies, Indiana University Bloomington, 1994.
- “Gender Issues in the Workplace.” IUB General Problem Solving Assessment reading/writing prompt Center for Reading and Language Studies, Indiana University Bloomington, 1996.
- “Blood and Blood Testing.” IUB General Problem Solving Assessment analytical reasoning prompt Center for Reading and Language Studies, 1999.

## Revisions to Multi-Op

---

Multi Op <http://www.indiana.edu/~best/multiop/manual.shtml> is the course evaluation system most widely used on campus, as well as at some other institutions. The system is currently undergoing revision to offer more flexibility to faculty users. The main goal of this revision is to facilitate the inclusion of more items that address specific student learning outcomes. In the new system, departments or instructors will be able to choose from a greater range of items that ask students to rate their achievement of intended outcomes in skill areas such as writing, reading, speaking, mathematics, research, and collaboration. In addition, instructors will be able to include items they have written specifically for their courses. This will allow for assessment not only of learning outcomes, but also of specific instructional strategies designed to facilitate those outcomes. While student self ratings do not offer the most compelling evidence that objectives have been achieved, the inclusion of such items on course evaluation forms can contribute to a body of evidence about learning achievement.

## A survey of undergraduate study habits

---

There is considerable lore about what students do outside of class to prepare for their coursework, but relatively little factual data. In 2003 the Office of Academic Affairs, through its Instructional Support Services division, conducted a study designed to make visible and to quantify what students do when they are academically engaged outside the classroom. The goal was to provide useful data to instructors, learning support staff, and students themselves about typical student behaviors and, perhaps, factors that differentiate more

academically successful students. The study focused on five specific questions regarding students' academic activities outside of class:

- What learning activities do students engage in and how do these contribute to their learning?
- How many hours do students spend on coursework in a typical week?
- What activities do students engage in to prepare for an examination, and how do these contribute to their learning?
- How do students manage the time they spend on academic tasks?
- What factors may interfere with academic engagement?

To examine these questions, an online survey was constructed and administered to 550 randomly selected undergraduates. The following are among the more interesting patterns that emerged, as presented in Learning Activities of IU Bloomington Students: Report of an Online Survey [http://www.indiana.edu/-deanfac/learning\\_study/learning\\_study.pdf](http://www.indiana.edu/-deanfac/learning_study/learning_study.pdf) :

- Despite changes in teaching styles and technology over the past decades, the most common student learning activities were reading, studying for exams, doing homework, and writing papers.
- The students in the sample spent an average of 19 hours per week on academic activities outside of class. Women, freshmen, students living on campus, students from outside of Indiana, and students in the top GPA quartile all spent more time on coursework than men, seniors, students living off campus, Indiana residents, and students in the bottom GPA quartile.
- While high GPA students did invest a little more time about 3.5 hours per week than low GPA students in coursework, the difference was smaller than might be expected.
- Students preparing for examinations did so by reading or rereading assigned texts and lecture notes, reviewing sample exams or old exams, and memorizing.
- Studying is an evening activity: students were most likely to study between 6:00 p.m. and 2:00 a.m.
- The myth that students do not study on weekends was challenged, to a degree, by the study. Although the average number of study hours for Friday and Saturday was markedly lower than for other days of the week, at least 60% of respondents spent some time on coursework on each day of the week.
- The impediment to academic engagement selected most often by students was “spontaneous social activities with friends,” followed by “lack of motivation.”

The results of the study were presented to the campus community through a Scholarship of Teaching and Learning session and by distributing the report directly to administrators and staff of teaching and learning support agencies. In addition, follow up meetings were held with instructors and departments interested in replicating the study for their students or applying the findings in their courses or services, and in advising students concerning course preparation activities and adapting support services to better fit actual student behaviors. Because they provide a realistic picture of how students respond to the academic challenges presented to them in the form of coursework, the results also should prove to be useful in the aforementioned efforts to reframe general education requirements.

## Core Component 3b

The organization values and supports effective teaching.

*Over the last decade, IU Bloomington has developed a distinguished and progressive community of teachers with support from faculty leaders who have recognized the ways in which the traditional university mission is strengthened when effective teaching is a campuswide priority. From the increasing number of faculty seeking pedagogical consultation, to the development of groundbreaking interdisciplinary curricula, to the eight members of the prestigious Carnegie Academy numbered among the faculty, many kinds of evidence suggest that effective and scholarly teaching is recognized, supported, and rewarded on the campus.*

## **The “Flagship Institution” for the Scholarship of Teaching and Learning**

### **National and international leadership in teaching and learning**

---

In recent years the campus has allocated considerable resources to the advancement of teaching at all levels, but particular attention has been focused on the instruction of freshmen and undergraduates. The creative yet strategic approach of the faculty to the charge of helping undergraduates learn more effectively has earned the campus a leadership position among research universities, prompting Lee Shulman, President of the Carnegie Foundation for the Advancement of Teaching, to acknowledge IU Bloomington as “the flagship institution” for the scholarship of teaching and learning.

Barbara L. Cambridge, former director of the Carnegie Academy and current president of the International Society for the Scholarship of Teaching and Learning, observes that IUB’s Scholarship of Teaching and Learning program “has attracted a remarkable number of faculty members,” that our work is “influencing teaching and learning in multiple institutions across the United States and in the UK,” and that IUB “ranks among the top schools in the country in its deep commitment to learning more about how students learn in order to help them learn even more and better.”

*(The IUB SOTL program is discussed in detail later in this section.)*

### ***IUB receives the 2003 Hesburgh Award***

In 2003 the Bloomington campus earned national recognition for teaching with the presentation of the TIAA CREF Hesburgh Award, given annually to the college or university judged to have the most effective faculty development program in support of undergraduate teaching and learning. The Hesburgh was awarded in recognition of the Scholarship of Teaching and Learning initia

tive SOTL , a program that builds and supports interdisciplinary communities of faculty who apply research methods and scholarship to the practice of teaching.



### **Globalization Highlight**

#### ***IUB founds international society for scholarly teaching***

In recent years IUB has taken a leadership role in the international advancement of scholarly teaching. In 2002, faculty members involved in SOTL recruited a diverse international founding committee for a new society to “foster cross disciplinary and intercultural inquiry into the character, conditions, and possibilities for powerful learning and teaching at the post secondary level, and to disseminate application of these educational practices.” The International Society for the Scholarship of Teaching and Learning ISSOTL [http://www.indiana.edu/~sotl/is\\_sotl.html](http://www.indiana.edu/~sotl/is_sotl.html) was founded in March of 2003, with scholars representing six countries, 43 institutions, and three IU campuses. ISSOTL seeks to expedite the flow of new findings and applications across national boundaries, and to foster collaboration among scholars in different countries. In 2004, IUB hosted the inaugural meeting of ISSOTL, attended by over 400 scholars from eight countries. The second annual meeting drew 646 scholars from nine countries and 191 institutions of higher learning to Vancouver, British Columbia. IU Bloomington will host the conference again in 2009.

#### ***IUB leads Carnegie Research University Consortium***

Another example of SOTL's scope of influence is the program's leadership role in the Research University Consortium for the Advancement of the Scholarship of Teaching and Learning RUCASTL <http://www.cfkeep.org/html/snapsbot.php?id=72191394> . Since 2003, IU Bloomington has led a Carnegie Academy Campus Program Cluster of nine campuses and two disciplinary societies in conversations about the scholarship of teaching and learning. As a cluster leader, IUB is helping to foster the creation of transferable models for facilitating the scholarship of teaching and learning, and cultivating scholarly activity in partnership with other campuses. In 2006 the campus was selected again to lead a program cluster in the second Carnegie Foundation Research University Consortium.

#### ***IUB participates in Course Portfolio Consortium***

The campus is also a participant in a Pew Charitable Trust research university consortium piloting a system for peer review of course portfolios. Participating institutions are testing the idea and practice of assembling and peer evaluating the documentation of teaching in a systematic effort to improve the process of examining and providing meaningful evaluative comments about teaching performance. The Course Portfolio Consortium <http://www.courseportfolio.org/peer/pages/>) offers a national repository for course

portfolios with the goal of creating a national community of scholars who can assess teaching with respect to improved student learning by commenting on or formally reviewing a course portfolio in the repository. Other consortium participants include the University of Nebraska, Lincoln; Kansas State University; Texas A&M University; and the University of Michigan.

## Expanding the knowledge base for teaching and learning

---

External honors and national partnerships with prestigious advocates for teaching suggest that the campus has moved beyond a traditional teaching environment in which teaching too often remains a private act, to an interdisciplinary community actively engaged in improving and expanding the knowledge base for teaching and learning. Through participation in national dialog, societies, and consortia, IUB faculty members have become valued contributors in the process of building a national culture of scholarly teaching. Pat Hutchings, Vice President of the Carnegie Foundation for the Advancement of Teaching, characterizes IU's role:

*Indiana is now one of a small number of campuses prepared to take a leadership role.... While these plans are still under discussion, what is clear is IU's capacity to continue their work on the scholarship of teaching and learning in ways that will make a real difference in the quality of teaching and learning across the country.*

## Developing a Culture of Effective Teaching

### A shift of emphasis in faculty development

---

For decades, new faculty members arrived on campus with little if any pedagogical training. Data from a questionnaire distributed to new faculty by the Office of Academic Affairs and Dean of the Faculties suggests that they are better prepared now and more concerned with teaching than ever before. In 2004, 71 percent of new faculty reported that they had received "adequate preparation" for teaching before coming to IUB, and 55 percent said that the "amount and quality of guidance in teaching" they had received before coming to IUB was good, very good, or excellent. In 2004, 59 percent of incoming faculty reported that their career interests were "equal between research and teaching," compared to 38 percent in 2001.

A common observation among senior faculty is that in past decades only those who had troubled teaching reputations sought help. This

model stands in stark contrast to the current reality: many faculty now regularly utilize a variety of teaching related services and programs offered by the campuswide office of Instructional Support Services. In the past 10 years, the number of faculty consultations pertinent to teaching has quadrupled.

Various campus histories suggest that conversations about faculty development began in the 1970s, and primarily focused on providing professional development resources for faculty seeking tenure and promotion, sabbaticals, and research leaves. While those services are fully developed on the campus today, a gradual shift of emphasis from professional services to teaching support began in the 1980s and grew rapidly throughout the 1990s. The seeds of transformation from a culture of effective teaching to scholarly teaching are evident in President Myles Brand's 1994 Strategic Directions Charter. The charter called upon the university to develop and nurture a "Community of Learning," and provided 7 million in funds for the campus to support innovative projects related to the goals of the charter, including "student learning, the improvement of teaching, the refinement of traditional teaching methods, the use of new technologies of learning ... as areas of challenge and innovation in the community of learning."

In response to this goal, funding from a variety of sources (the Indiana Strategic Directions Initiative, the Office of Academic Affairs and Dean of the Faculties, the Lilly Foundation Retention Grants, the Office of the Provost, and others) helped faculty and staff launch a series of new teaching initiatives through the 1990s, including:

- Faculty Colloquium for Excellence in Teaching, 1989
- Teaching and Learning Technology Laboratory now known as the Teaching and Learning Technology Centers, 1994
- The Freshman Learning Project, 1998
- The Scholarship of Teaching and Learning program, 1999

Today these initiatives form the core of the campus teaching support infrastructure, disseminating knowledge and expertise and providing forums of exchange for teaching faculty across many disciplines. Their continuing growth and significance suggests a strong commitment at the campus level and a faculty genuinely interested in improving student learning.

## **Major Campuswide Teaching Initiatives**

### **Formal approaches to the improvement of teaching**

---

#### ***The Scholarship of Teaching and Learning***

The IUB Scholarship of Teaching and Learning SOTL program has become the most inclusive, broad based, and cross disciplinary program on campus for learning about ways to foster improvements in undergraduate learning. SOTL encourages, supports, and publicizes course-focused research projects that are faculty defined and implemented. It also carefully fosters an interdisciplinary community of conversation and engagement centered on teaching and learning. This community supports both the inquiry of individual faculty and a more evidence based approach to teaching generally.

Rather than focusing on specific issues or learning methods, the SOTL approach encourages faculty to explore a variety of approaches, and to reflect on questions about student learning derived from their own experiences in the classroom. The reactions of national leaders and the response of other campuses to IUB SOTL materials and publications strongly suggest that the program serves as a model for other institutions of a new kind of faculty development, namely, one that aims to improve undergraduate learning by engaging the research talents of the faculty.

A key aspect of the program is the publicizing and presenting of individual scholarly projects that focus on student learning. SOTL sponsors monthly presentations by local and invited speakers on their scholarship of teaching and learning. The colloquia have featured 62 scholars from 26 departments between 1999 and 2006, covering a wide range of topics. Attendance of SOTL main events and campuswide participation in associate conversations suggest a wide dissemination of key SOTL ideas. The program has substantially increased the attendance of faculty and graduate students at teaching related public presentations on the campus.

SOTL also fosters new projects and supports ongoing ones through many smaller gatherings; for example, small faculty working groups meet on a regular basis to consider particular topics such as studying students' naïve theories, implementing critical writing, and authoring course portfolios.

Clear evidence exists that SOTL has increased the attention given to undergraduate learning within individual departments. Sessions on the scholarship of teaching and learning have been added to traditionally research centered faculty colloquia in many departments

and programs, including biology; communication and culture; east Asian languages and cultures; physics; medical sciences; and the School of Health, Physical Education, and Recreation.

(See a list of selected SOTL publications at <http://www.indiana.edu/-sotl/bib.html#pub>).

### ***Additional SOTL initiatives***

- **Seed grants and leadership grants:** The program offers annual competitive awards of \$2,500 to individual faculty and occasional Leadership Grants of \$35,000 for significant collaborative projects.
- **Links to the Literature:** In collaboration with the IU Libraries, SOTL's Links to the Literature <http://www.libraries.iub.edu/index.php?pageId=3208> maintains an online resource for national and international SOTL publications.
- **Newsletter:** The SOTL Digest <http://www.indiana.edu/-sotl/digest.html> is an e mail newsletter of campus and national news and opportunities.
- **Writing retreat:** The program sponsors an annual writing retreat for faculty, providing access to methodological consultants, peer reviewers, research resources, and budgeted writing time.

### ***The Freshman Learning Project***

In 1998, the Freshman Learning Project was created to help faculty who teach large introductory courses develop better strategies for teaching. The FLP began with a three year grant of approximately 380,000 through the Indiana University Strategic Directions Initiative in 1998. Each year, co directors Joan Middendorf and David Pace take a cohort of faculty leaders from multiple disciplines through an intensive seven step model designed to help these faculty members examine their teaching strategies. The FLP method allows faculty to act on their competencies as researchers to create new strategies for maximizing student learning in their own courses. Assessment is a formal step in the model, explored by the FLP fellows during a two week intensive summer workshop, with follow-up consultations in subsequent years. Seventy-five IUB faculty members have participated in the program thus far, taking new insights and course innovations into large introductory class rooms involving more than 20,000 students to date.

In its initial years the FLP received additional funding from the Office of Academic Affairs and Dean of the Faculties, the College of Arts and Sciences, and the Lilly Retention Initiative. It now is sponsored annually by the Office of Academic Affairs and Dean of the Faculties.

### ***The Faculty Colloquium on Excellence in Teaching***

The Faculty Colloquium on Excellence in Teaching (FACET), established in 1989, recognizes the university's exemplary teaching faculty and librarians. FACET encourages teaching excellence across the university by creating a network of distinguished scholar mentors. More than 400 university faculty, 60 from the Bloomington campus, are involved in a range of cooperative and collaborative activities at the campus, university, and national level, promoting inquiry and engagement in teaching and learning. FACET activities include publishing articles related to effective teaching, sponsoring conferences and institutes exploring topics related to teaching and learning in higher education, and the development and training of associate faculty and future faculty.

## ***New Directions in Teaching***

### **Beyond lectures and exams: new curricular pathways**

---

In the *Handbook of Accreditation* (Version 1:10/03), the Higher Learning Commission acknowledges that

*The narrow definition of teaching as essentially giving lectures and grading exams misrepresents the multifaceted work that goes into effective teaching. Organizations providing higher learning must have qualified faculties ... who create the curricular pathways through which students gain the competencies and skills they need.*

The following case studies demonstrate some ways in which faculty are re-examining established frameworks for teaching within universities. In many fields of inquiry, faculty and students are establishing crucial interdisciplinary links that will lead to new curricular pathways for preparing students to understand, research, and contribute solutions to complex societal problems. IU Bloomington's highly developed infrastructure for scholarly teaching and learning has contributed significantly to the development of the new interdisciplinary collaborations described below.

## **The Human Biology Program**

---

### ***A new curricular approach to the biological sciences***

New curricula are arising where disciplines are rapidly changing. More and more, effective teaching requires new approaches that transcend traditional disciplinary boundaries and present existing knowledge in more sophisticated frameworks. Teaching students

about the effects of global warming, for example, requires collective thinking at disciplinary crossroads and new strategies for collaborative curriculum building. IUB's new Human Biology Program <http://www.indiana.edu/~humbiol/> is an example of a highly collaborative new curriculum currently being developed by an interdisciplinary community of scholarly teachers, with support from Campus Instructional Consulting and the CTE funds discussed in section 2b.

During their study of Human Biology, students will explore complex scientific problems, integrate their scientific knowledge with societal concerns, advocate for ethical and multi dimensional solutions, and be able to address difficult problems they will face in the future. The Human Biology Major and the Human Biology Area Certificate will combine studies in the biological sciences, biomedical sciences, social sciences, and humanities to provide a broad and rigorous introduction to the biological sciences. One goal of the program is to relate these sciences to the problems raised by the relationships of human beings to one another and to their environment, through an integrative core curriculum developed and taught by interdisciplinary faculty teaching teams.

The program will prepare students for further professional studies in medicine, optometry, dentistry, nursing, and occupational and physical therapy, as well as careers in the life science industry, public policy, law, journalism, research, and teaching.

***Designing a core curriculum with clear and measurable goals***

In May 2005, a five-day Human Biology Summer Institute brought together faculty from anthropology, biology, comparative literature, medical sciences, and sociology, as well as the School of Fine Arts and the Kelley School of Business. The curriculum designers engaged in a “backwards design” approach to course design, beginning the process by developing clear and measurable goals and assessment guidelines for their courses before creating assignments and syllabi that supported each of the established learning outcomes.

## **Community Outreach and Partnerships in Service-Learning**

---

In 2006, when the Office of Academic Affairs asked departments and schools to describe recent pedagogical or curricular innovations in their units, a significant number described courses with strong service learning components. Many faculty members are actively engaging in opportunities to expand learning and extend the scope of their students' knowledge beyond the traditional classroom, in spite of the challenge of expanding such initiatives within the context

of the new general education curriculum. Consequently, service learning has become an increasingly formal and refined pedagogy on the IU Bloomington campus. The Office of Community Outreach and Partnerships in Service Learning COPSL <http://www.indiana.edu/~copsl/> coordinates service learning initiatives for most departments and units on campus, and works in cooperation with other unit programs, such as the ten year old Civic Leadership Development Program in the Kelley School of Business and the College of Arts and Sciences' Leadership, Ethics, and Social Action minor.

One major component of COPSL is faculty advising: service learning instructional experts work with faculty to create and revise courses in order to effectively incorporate community engagement and service with academic study and research. To ensure that students are engaged in a learning process that is pedagogically sound, the program has devised several principles and practices for faculty to heed in devising their courses:

- Service is clearly connected to the academic component via readings, discussions, speakers, etc.
- A reciprocal relationship between the university and the community makes each a partner in the education of students.
- Service meets a genuine community need as defined by the community-based organization.
- Structured time for reflection is included in course requirements.
- The philanthropic and civic context of the students' service is discussed and examined. An emphasis on civic work distinguishes service learning from practica or internships, which focus more on professional preparation.

In the academic year 2006 07, COPSL hosted a faculty learning community. Charged with the goal of furthering service learning and community based research at IUB, this community also served as a resource for instructors considering adopting a service learning pedagogy or developing a community based research design. Six full time faculty members on the Bloomington campus, representing a variety of disciplines, will participate in the learning community as Faculty Fellows during the 2007 08 academic year. The fellows will take part in regular colloquia focusing on common readings, community issues, curriculum development, and research design.

### ***Examples of service-learning courses across the disciplines***

Faculty member James Farmer teaches R367 Leisure Program Development in the School of Health, Physical Education, and Recreation. Students in his class learn about developing and facilitating leisure programs, including program activity planning, budgeting, and public relations. Students work in groups to plan and execute a recreational program for selected local agencies. They also engage in direct

***Recreation programs  
designed by  
service-learners***

service at their chosen agencies to gain first-hand experience and to better understand the beneficiaries of their projects. R367 students have worked with the Youth Services Bureau of Monroe County, Area 10 Agency on Aging, Bloomington Area Birth Services, Girls Inc., Bloomington Boys and Girls Club, Monroe County Historical Society, Monroe County United Ministries, and others.

***Elementary school  
outreach in language  
and culture***

Students in faculty member Kelly Sax's fourth semester French language and culture course F250 in the College of Arts and Sciences Department of French and Italian demonstrate their knowledge by creating children's books to teach basic French language and culture lessons at two local elementary schools with high populations of students living in poverty.

***Marketing students  
create materials for local  
non-profits***

Lecturer Benjamin Schultz teaches M341 Creativity in Marketing, part of a two course sequence in the Kelley School of Business. Students in this course learn principles of layout and design while creating promotional materials using Photoshop and InDesign. When he taught the course in the summer of 2006, Schultz's students worked with the Bloomington Women's Writing Center to design a marketing plan that included brochures and Web pages. In academic year 2006-07, this course was combined with M340 to create M344, a full three credit hour course. In the fall of 2006, students in several sections of M344 applied their course based knowledge to the task of designing promotional materials for Bloomington Area Birth Services, the Monroe County Historical Society, and Bloomington Communities United to Strengthen America.

***Service-learners in  
statistics course help  
local Boys and Girls Club***

Associate Instructor Tatyana Ruseva teaches K300 Statistical Techniques, an introductory statistics course for students in the School of Public and Environmental Affairs. During the second half of the semester, students engage in a service learning project in which they apply the concepts and tools presented in the course to real world problems. Using statistical data gathered from local service agencies, their task is to present the data in descriptive forms graphs, pie charts, time series graphs, etc. that are meaningful and useful to the agencies. In a recent semester, students worked in teams of 5-6 over a period of four weeks to collect, organize, and analyze data for the local Boys and Girls Club, the City of Bloomington Sustainability Initiative, and the Chamber of Commerce's Franklin Initiative.

*(Read more about service-learning in Core Component 3c.)*

## Environmental literacy and sustainability

---

The Environmental Literacy and Sustainability Initiative (ELSI) is the project of a coalition of faculty, staff, and students who believe that environmental literacy should be a basic competency for all graduates, and that this can be achieved through a concerted pedagogical, service-learning, and community outreach effort. The project works to engage students, faculty, and staff in academic programs and administrative efforts that will enhance the campus environment and contribute to a healthy and sustainable world. The service learning components of ELSI projects are coordinated by the office of Community Outreach and Partnerships in Service-Learning (COPSL).

### ***Developing core strategies for environmental literacy***

In fall 2003, a coalition of faculty known as the Environmental Literacy Working Group held an interdisciplinary seminar series on promoting undergraduate environmental literacy across the campus. The series was coordinated by faculty and students in the Departments of Biology and Anthropology, and conducted in collaboration with the office of Campus Instructional Consulting. More than 15 presenters and over 20 faculty members participated, along with staff and students from 17 disciplines. In the first seminar of the series, “Cultivating Freshman Environmental Literacy,” participants came together to answer two key questions: “What should an environmentally literate person know?” and “What teaching and learning strategies are most effective in promoting environmental literacy campuswide?” Interest in the topics was so great that the series was extended for two additional semesters. The seminar received funding from the Dean of the Faculties Multidisciplinary Ventures and Seminars Fund, the College Arts and Humanities Institute, the College of Arts and Sciences, The School of Public and Environmental Affairs, Campus Instructional Consulting, and others.

The seminar discussions led to the development of a core strategy to achieve the teaching and learning goals identified in the original seminar series. The group then met with the IUB chancellor, student organizations, residence halls, and operational units to discuss implementation of the strategy. A working group was formed to identify the best institutional model for the Bloomington campus.

Since its inception ELSI has coordinated a number of co-curricular learning projects designed to teach environmental literacy on campus, including the popular “Prairie in the Planters” project <http://homepages.indiana.edu/011604/text/feature1.shtml>. With support from IU’s Council for Environmental Sustainability and a Campus Ecology Grant from the National Wildlife Federation, faculty,

staff, and students worked together to naturalize several large-scale planters on campus with prairie and woodland species native to Indiana. The ELSI project also helped lead to the formation of a sustainability task force <http://www.indiana.edu/~deanfac/Sustainability%20Report.pdf> composed of students, faculty, and staff. One of the first outcomes of this project was the creation of a number of 2007 summer internships for students to work with different offices on campus to develop and promote sustainable policies and activities. There also is a new sustainability Web site: <http://www.indiana.edu/~sustain>.

*(To read more about ELSI projects and associated courses, see <http://mypage.iu.edu/~mmwyatt/Mission.html>).*

## Evaluation of Teaching

### Guidelines, policies, and practices

---

Two campus policies guide teaching evaluation practices at IUB. The first, a policy of the Bloomington Faculty Council, requires each academic unit to develop appropriate methods for evaluating and improving teaching and to communicate this plan to the Dean of the Faculties. The second policy consists of campus guidelines for the evaluation of teaching in tenure and promotion dossiers. Thus, for any particular unit, teaching evaluation is understood to operate within two sets of guidelines: campus criteria for tenure and promotion, applicable to most faculty, and unit policies that may provide more specific guidance and address instructors for whom the tenure and promotion guidelines are not applicable. The policies mentioned above can be found in the *Academic Guide* and in the *Tenure and Promotion Handbook*, published by the Office of Academic Affairs and Dean of the Faculties [http://www.indiana.edu/~deanfac/handbk\\_guide.html](http://www.indiana.edu/~deanfac/handbk_guide.html).

The Bloomington Faculty Council policy recognizes first that individual disciplines are in the best position to determine how courses and instruction should be evaluated. Second, it suggests that the primary use of evaluation data should be for individual teaching improvement, rather than administrative use for personnel decisions. Third, the policy notes that teaching evaluation should be carried out by and for all instructors, not just those subject to the tenure and promotion criteria. All units are required to file a teaching evaluation policy statement with the Office of the Dean of the Faculties. A review of the academic units' policy statements on the evaluation of teaching reveals:

- Over half of all units require all courses to be evaluated, regardless of the status of the instructor. This insures that even full professors have the benefit of obtaining regular feedback from students. In the remaining units, the policy generally applies to those faculty members seeking tenure or promotion.
- The administration of an end of semester student rating form is a nearly universal practice, although the specific items are determined by the academic unit or instructor.
- More than two thirds of unit reports list other sources of evidence for effective teaching, besides student ratings of instruction. Most common are peer observation of classes, review of syllabus and course materials, and consideration of teaching publications, grants, and awards. This is consistent both with good practice in that it avoids over reliance on student ratings and with the campus tenure and promotion guidelines.

### The role of teaching in tenure and promotion

---

A review of tenure and promotion cases in recent years 1999–2005 suggests that being awarded tenure on the basis of teaching is still relatively uncommon at IUB, especially in the College of Arts and Sciences. During this period, teaching excellence or the “balanced case” very strong performance in all three areas of teaching, research, and service were the basis for about 5 percent of tenure awards in the College. In the professional schools these accounted for about 20 percent of tenure awards. Campuswide, teaching excellence or the balanced case accounted for successful tenure applications about 12 percent of the time.

The promotion data, however, show a somewhat different trend. Over the same six year period, about 15 percent of promotions in the College, and 30 percent in the schools, were made on the basis of teaching excellence or the balanced case. Combined, these comprised about 20 percent of successful applications for promotion at IUB.

Discussions with several faculty members who had direct involvement with recent campuswide promotion and tenure committees suggest that teaching is treated more seriously by candidates, departments, and promotion and tenure committees now than it was in the past. While it is no surprise in a major research university that research remains the dominant category on which tenure cases are built, most of those interviewed felt that in recent years the bar for teaching competence has been raised.

In part this has been a deliberate strategy initiated by the Dean of Faculties. For example, beginning in 2000, faculty members were specifically asked to highlight publication related to scholarship of teaching and learning on their annual reports. And in the last five years the office has focused greater attention on modeling expectations for teaching dossiers. Similarly, academic deans have encouraged this trend. The Dean of the College of Arts and Sciences, for example, now has set higher standards for the teaching performance for all tenure candidates.

Dean of the Faculties Jeanne Sept, whose office coordinates promotion and tenure at the campus level, observed that the promotion and tenure process reveals “an increasing sophistication and subtlety among faculty in recognizing and evaluating effective teaching, as well as an ongoing need to further distill this process.” Sept referred to campus participation in the Pew Charitable Trusts Peer Review of Course Portfolio Consortium as one step toward establishing a more meaningful evaluative language for discussing the quality of teaching across disciplines.

*(Tenure and promotion data provided by the Office of the Dean of the Faculties.)*

## **Support Services for Teaching**

### **Instructional Support Services and related offices**

---

Under the leadership of Instructional Support Services (Office of Academic Affairs) and Information Technology Services (Office of the Vice President for Information Technology), the campus provides a comprehensive array of faculty centered teaching support services. The following are among the key offices and programs.

- **Campus Instructional Consulting:** Annually conducts individual teaching consultations, provides workshops and forums, and coordinates the Scholarship of Teaching and Learning Program and a variety of thematic faculty learning communities. The CIC has affiliate centers in the Kelley School of Business and the School of Education.  
<http://www.indiana.edu/-teaching/>
- **The Teaching and Learning Technology Centers:** Collaborate with faculty to develop instructional technologies to meet specific teaching and learning goals and last year provided 130 workshops and presentations for the campus and departments.  
<http://www.indiana.edu/-tltl/>

- **The Campus Writing Program:** Supports faculty use of writing assignments in their courses through consultation, workshops, training sessions for graduate student graders, and course development grants.  
<http://www.indiana.edu/~cwp/>
- **Community Outreach and Partnerships in Service-Learning:** Provides a link between the community and faculty who wish to incorporate a service component in courses, identifies potential community partners, consults with individual faculty, and facilitates workshop and discussions on service learning.  
<http://www.indiana.edu/~cops/>
- **Bloomington Evaluation Services and Testing:** Provides individual consultation and workshops on tests and other learning assessments, course evaluation, and educational survey design and administration, and also manages the Multi Op system for course evaluation.  
<http://www.indiana.edu/~best/>
- The service units **Classroom Technology Services** <http://www.indiana.edu/~cts/> , **Digital Media Services** <http://www.indiana.edu/~video/> , **Radio and Television Educational Services** <http://www.indiana.edu/~radiotv/ES/esover.html> , and **Publications and Graphics** <http://www.indiana.edu/~issgraph/> assist faculty in developing and using media in the classroom and in documenting courses for evaluation.

## **Preparing Graduate Students for Teaching**

### **Support for graduate students preparing for academic careers**

---

The mentoring of graduate students preparing for academic careers is overseen at the campus level by the University Graduate School <http://graduate.indiana.edu/academic.php>), which offers a variety of opportunities:

- **G700 Excellence in Teaching** is a three credit course designed to prepare future faculty for a variety of higher education environments. Open to all graduate students interested in a career in college teaching, G700 covers learning theories and cognitive aspects of learning, teaching styles and techniques, course preparation, testing and grading, and diversity in the classroom.
- **Preparing Future Faculty (PFF)** is a national program designed to help institutions better prepare aspiring graduate students for future academic careers. As part of its partner relationship with PFF, the campus

sponsors an annual conference for graduate students who are planning careers in teaching and research. The Preparing Future Faculty Conference (<http://graduate.indiana.edu/pff2006.pbp>) offers presentations on teaching, research, and other issues of professional development.

- The **Future Faculty Teaching Fellowships** enable advanced doctoral students to enhance their career preparation by teaching at one of IU's seven nonresidential campuses and several private state colleges; they receive mentoring and a financial stipend of up to 9,000 per semester. Applicants to the program must have one year's classroom teaching experience, at least one course in pedagogy, and must attend the Faculty Colloquium on Excellence in Teaching's summer institute for Future Faculty Teaching Fellows.

Preparing Future Faculty programs also exist in the Departments of English, History, and Sociology, and in the School of Journalism. In these professional development programs, graduate students become familiar with disciplinary faculty roles and responsibilities at different types of academic institutions through readings, discussions, campus visits, projects in the Scholarship of Teaching and Learning, and reflection. PFF programs are facilitated and mentored by faculty.

## Support for associate instructors

---

Associate instructors (AIs) are graduate students who receive assistantships for teaching. In the fall of academic year 2006-07 the Office of the Dean of the Faculties reported that 1,859 graduate student AIs were teaching on the IUB campus. Clearly, AIs play a considerable role in the educational experiences of undergraduate students, and an increasing focus on teaching at all levels has led recently to an increased interest in their preparation and support.

Academic units are primarily responsible for preparing AIs to teach effectively in their respective disciplines, and usually engage in multiple strategies to prepare and assist AIs with their teaching responsibilities. In recent years, the Dean of the Faculties has encouraged departments to share best practices and learn from each other with the goal of ensuring that AI led instruction is of the highest quality possible. In particular, the use of regularly scheduled departmental meetings for AIs and faculty observation of AI classrooms have increased significantly.

Beginning in the mid 1990s, each academic unit was asked by the Dean of the Faculties to submit an annual AI training plan. The practices described below were compiled from an overview of AI training programs assembled by the Dean of the Faculties:

- **Departmental orientation programs** vary in length from less than one day to over a week. These orientations introduce graduate students to basic disciplinary teaching expectations and strategies as well as to the people, policies, procedures, and degree requirements of the department. In some departments, including those involved in language instruction, orientation takes the form of a short course in pedagogy, lasting a week or more. In smaller units, orientation is typically accomplished informally through individual meetings with course supervisors. Several campus offices, including Campus Instructional Consulting and the Campus Writing Program, often participate in departmental graduate student orientations.
- **Two-day Campus Climate and Diversity sessions**, open to all AIs, are sponsored by the Office of Academic Affairs and the Dean of Faculties.
- **Microteaching** opportunities offer graduate students practice in giving short, engaging teaching presentations. Departmental peers and mentors provide feedback about these presentations. Campus Instructional Consulting helps departments design disciplinary microteaching opportunities as a component of an orientation program or pedagogy course or as a stand alone graduate instructor development opportunity.
- **Departmental workshops** provide opportunities for AI professional development in topics pertinent to the discipline. Individual offices in Instructional Support Services often collaborate with departments to design and implement custom workshops on topics such as grading, service learning, and other issues in teaching and academic career preparation.
- **Departmental pedagogy courses** are offered in 28 schools and departments around campus to develop graduate students' disciplinary teaching skills. Typically, departmental pedagogy courses are required for AIs before, or concurrent with, their first teaching assignment. These range from one- to three credit courses. For a list of course descriptions, see <http://www.iub.edu/-teaching/allabout/prepare/pedagogy.shtml>.
- **Classroom observation of AIs** by a faculty supervisor who can provide constructive feedback is common; more than 80 percent of units report that this practice has been instituted, and is used nearly always when AIs have independent teaching responsibility.

- **Associate instructor coordinators/trainers** are faculty who supervise graduate students teaching sections of large courses. These individuals maintain consistency among course sections by monitoring course goals, activities, assessments, and grading norms.
- **AI handbooks** are prepared by several departments and schools to provide guidance on departmental teaching policies, as well as common disciplinary teaching concerns. Campus Instructional Consulting maintains an online teaching guide, the IU Teaching Handbook [http://www.teaching.iub.edu/handbook\\_toc.php](http://www.teaching.iub.edu/handbook_toc.php).
- **Libraries of course resources** can be found in several departments, providing AIs with samples of syllabi, assignments, student work, and reflections from the primary instructor.
- **Midterm course evaluations** in AI taught courses are strongly encouraged in most units and required in about one third of all units.
- **End-of-course evaluations** are required in virtually all units. In many cases, the format is the same as that used by departmental faculty; for discussion or laboratory section leaders, a special form is generally used. Evaluation results are provided to both the instructor and department.

## Recognition for Teaching

### National honors for IUB faculty

---

In recent years a number of IUB faculty members have earned national teaching honors, including several highlighted below.

**Chemist Mu-Hyun Baik honored as “teacher-scholar”**

In 2006 IUB chemist Mu Hyun Baik was named a Cottrell Scholar by the Research Corporation. Cottrell scholarships provide 100,000 to promising junior faculty members in the physical sciences. According to the program guidelines, the awards “also seek to reinforce faculty mentoring, communication, and a heightened appreciation for instruction in university science departments.” Baik is IUB’s second Cottrell Scholar in recent years. Andrew Feig, also a chemist, won the award in 2002.

In recent years six faculty members have been named Carnegie Scholars by the prestigious Carnegie Foundation for the Advancement of Teaching. During their fellowship year, Carnegie Scholars create and disseminate examples of the scholarship of teaching and learning that contribute to thought and practice in the field. Toward this end,

each scholar designs and undertakes a project aimed at deepening understanding of an important teaching and learning issue.

***IUB Carnegie Scholars***

IUB's Carnegie Scholars are Barry Rubin, School of Public and Environmental Affairs (2003); Whitney Schlegel, Biology (2003); Carolyn Calloway Thomas, Communication and Culture 2001; Dennis Rome, Criminal Justice 2001; Craig Nelson, Biology 2000; and David Pace, History 1999. No other research intensive university has had as many Carnegie Scholars named.

***Craig Nelson:  
U.S. Professor of the Year***

In 2000, biologist Craig Nelson was named a U.S. Professor of the Year by the Carnegie Foundation for the Advancement of Teaching. Awarded annually to a highly select group of faculty across the nation, the award "salutes the most outstanding undergraduate instructors in the country, those who excel as teachers and influence the lives and careers of their students," according to the Council for the Advancement and Support of Education CASE.

**Campus awards for improving pedagogies**

---

Several faculty awards are designed to bestow recognition and support to faculty for developing and improving pedagogies:

- **AT&T Fellows Program:** In 1999 the Ameritech Foundation now the AT&T Foundation gave the campus a major gift to promote innovation in teaching and learning as facilitated through the use of information technology. For a list of AT&T Fellows' projects, see <http://attf.iu.edu/>.
- **Active Learning Grants:** Campus Instructional Consulting offers grants to support the revision of an existing course or the creation of a new course that engages students more actively in learning.
- **Instructional Summer Fellowships:** The Dean of the Faculties Office offers \$8,000 fellowships to support faculty who will work full time on new or improved approaches to instruction. Faculty fellows work with teaching resource consultants and with experts in computer technology.
- **Mack Fellowships:** Each year a group of fellows is selected from the full time faculty of IU campuses to advance the scholarship of teaching and learning. Projects must be innovative and well grounded in the emerging body of knowledge of SOTL. Research awards of 1,500 are presented to each fellow.
- **Media Development Grants:** These grants are designed to support instruction by providing funds for faculty projects that use media to fill a particular

instructional need or solve a pedagogical problem for a faculty member, department, or school.

- **Multidisciplinary Ventures Fund:** This fund, sponsored by the DOF, provides partial support for multidisciplinary projects focused on instruction, curriculum development, research, or outreach.
- **SOTL Grants:** Awards of 2,500 are presented to individual faculty for new or ongoing in depth, evidence based studies into issues of teaching and learning as part of the Scholarship on Teaching and Learning Program SOTL .
- **SOTL Leadership Grants:** Funded by the DOF, the 35,000 Scholarship of Teaching and Learning SOTL Leadership Award is given occasionally to a team proposing a scholarship of teaching and learning research initiative that promises to have a sustained impact upon instructional development and education.
- **Summer Writing-Teaching Fellowships and Grants:** Funded by the Campus Writing Program, these awards are designed to help faculty develop undergraduate courses that use writing in innovative and fruitful ways.
- **The Teaching and Learning Technology Centers Grants:** TLTC offers small grants of up to 1,500 to support instructional technology projects to be used to increase student engagement.

## Teaching awards of special note

---

For many years IUB has honored faculty for outstanding teaching through the presentation of awards and grants.

### ***Chancellor's Professors***

These professorships are intended to bring significant honor to those members of the faculty who have achieved local, national, and international distinction in both teaching and research or creative activity. Established by the DOF and supported through alumni endowments, the professorships carry the title, a \$2,500 grant for each of the first three years, and a 5,000 grant to be used on a project to demonstrate the ways in which teaching and research are mutually reinforcing.

### ***Tracy M. Sonneborn Award***

Nominees for the Chancellor's Professorships are automatically considered for this award, which carries a 3,500 cash prize. The winner of the award delivers a lecture of campuswide interest.

### ***Distinguished Teaching and Mentoring Award***

Presented by the University Graduate School, this award recognizes distinguished graduate level teaching and mentoring by an Indiana University faculty member.

### ***Trustee Teaching Awards***

These awards were established in 1997 to recognize and enhance excellent teaching at Indiana University, especially at the undergraduate level. The awards range from 500 to 1,500.

### ***Student Choice Award***

The Student Alumni Association selects faculty members based on their knowledge, class presentation skills, student rapport, and enthusiasm.

## **Campus awards for distinguished teaching**

---

### ***Frederic Bachman Lieber Award***

This award is granted for excellence in teaching in any division of the University at any professional rank.

### ***Sylvia E. Bowman Award***

This award recognizes distinguished teaching in fields relating to American civilization.

### ***Herman Frederic Lieber Award***

This award is granted to faculty of any rank for excellence in teaching.

### ***Lieber Associate Instructor Awards***

These are presented each year to outstanding teachers among the university's graduate students.

### ***President's Award***

This award given in any division of the university and at any professorial rank for excellence in teaching.

### ***Leo F. Solt Distinguished Service Award***

This award is granted for significant contributions to the excellence of graduate education at IUB.

## **Unit teaching awards**

---

In addition to the campus teaching awards, unit level awards are given in the Schools of Education, Informatics, Journalism, Law, and the Kelley School of Business.

## Core Component 3c

The organization creates effective learning environments.

*In this section we have chosen to focus on our commitment to first-year learning environments, not only because of their crucial importance to student success, but also because the campus's strategic approach to the first-year experience demonstrates how its large, decentralized structure has successfully coalesced around a common goal.*

*The equally important goals of advancing diversity and equity, and maintaining a cutting edge teaching and learning technology infrastructure are discussed at length in other sections. Diversity programs for first-year students and those that support first-year minorities and other underrepresented students are highlighted here, but these represent only a few of the programs on campus, many of which are coordinated through the Office of Diversity, Equity, and Multicultural Affairs. IUB's extensive planning, implementation, and investment in information and learning technology systems are detailed in Core Component 3d.*

## A Focus on the First Year

### Creating meaningful and manageable learning environments

---

There are hundreds of examples of effective learning environments across campus, ranging from student learning groups and labs within individual courses to larger structured environments such as Living Learning Centers. Field courses that transport students out of lecture halls to study geology in the Sierra Nevada Mountains or biology in the Costa Rican rain forest provide ideal targeted learning environments, as do service learning courses that transform aspects of the civic arena into unique learning environments. The many advocacy services offered by the Division of Student Affairs can be described as a student focused infrastructure designed to support IUB's largest student learning environment: the campus itself. And while the Freshman Learning Project (*discussed in section 3b*) is a faculty centered program, it deserves to be mentioned for its ongoing success in helping faculty evaluate their teaching and create better learning environments for students in large introductory courses.

The large range of curricular and cocurricular programs at IUB provides students with considerable choice when it comes to discovering which living and learning environments are best suited to their needs and interests. The challenge for campus leaders is to find optimal ways to provide incoming students with all the information they need to make good decisions, and to break down what may seem a dizzying array of choices into manageable and meaningful options.

## Focus on freshmen: an honor from *Time* magazine

---

An accumulating body of knowledge in higher education suggests that one of the most important goals colleges can set to encourage student success is to create effective and supportive learning environments for first-year students. “Helping new students survive has, in our judgment, become an essential responsibility of every college,” wrote Ellie McGrath in *Time* <http://www.time.com/time/2001/coyl/university.html> in 2001, when the magazine chose IU Bloomington as one of its four Colleges of the Year. The award was bestowed in recognition of IUB’s “highly effective programs to help first-year students make a successful transition into college life.” The campus earned the top honor in the research university category, where noteworthy mention was made for related efforts at Harvard, Stanford, and Michigan. The *Time* magazine honor remains a source of pride for all who work with undergraduates at IUB in a coordinated campaign that began nearly a decade ago to accomplish everything possible to help first-year students succeed.

### ***Lilly funds help freshman programs***

Funding for freshman initiatives was greatly enhanced in 1997 by a university wide, 8 million Lilly Endowment grant, which provided the Bloomington campus with \$2.5 million over a five-year period 1997-2002 to improve retention and graduation rates. The Retention Task Force, initiated in 1996 by Vice Chancellor Deborah Freund, laid the groundwork for “The Road to the Baccalaureate” project and determined that its primary focus should be early intervention. The goal of the project, as articulated by its coordinators, Associate Dean of the Faculties George Kuh and Associate Dean of the College Michele Moody Adams, was “...to bring together people from across campus who wouldn’t otherwise communicate in efforts targeting students’ early life at IU with the intent to enhance the atmosphere for all students.”

The interventions and initiatives described in this section were designed to address three major areas: academic foundations, community of learning, and connections. Several departments undertook key course reforms designed to improve basic math and writing skills. Faculty and staff worked across disciplines and units to develop new learning communities that offer smaller, more personal social and intellectual and living environments for freshmen, and to increase mentoring opportunities for minority and underachieving students, to name only a few examples.

Several proven successful strategies were expanded, including increasing the number of Academic Support Centers in residence halls. The opening of a new Math Learning Center and the develop

ment of new recruitment and orientation materials and procedures designed to help freshman students better understand the factors that lead to success in college were also significant gains.

***Freshmen required to live on campus***

The decision to require all freshmen to live on campus, announced by Chancellor Sharon Brehm in 2002 and implemented in 2003, helped enormously to bolster the strategy of linking living and learning environments on campus, and contributed to the Retention Task Force's goal of creating seamless and holistic environments for first-year students. The decision was based on national studies as well as internal campus research revealing that students who live on campus make the transition to college more easily and perform better academically than students who do not.

## Keeping track of student retention

---

In the late 1990s, the Retention Task Force invested considerable effort and planning into integrating and coordinating first-year initiatives to create a web of broad-based academic and social support for all freshmen. Since 2002, coordination of retention efforts have continued through the Campus Retention Committee, directed by the associate vice provost for academic affairs and campus retention coordinator. These ongoing efforts are supported in part by institutional data and reporting supplied by the University Budget Office, and by the office of University Reporting and Research, which tracks retention and graduation rates, and conducts research on factors associated with persistence, retention, and graduation.

Because first-year grades have consistently proven to be the strongest correlate with retention rates, many of the efforts described in this component involve mutually reinforcing strategies to ensure that first-year students receive the information and the academic support they need to succeed as soon as possible—in some cases, before they arrive on campus. IUB's admirable first-to-second-year retention rates strongly suggest that the programs and processes described below function as a web of interconnected learning environments, both meaningful and manageable, providing first-year students with crucial information, academic and social support, and the guidance they need to succeed. And many would argue that the coordination and effort required of so many to accomplish such a large scale campaign have made the university a better and more responsive place for all students.

*(See a discussion of IUB retention rates in this component under "Retention and engagement as measures of success.")*

## Orientation and Advising

### Getting a jump on the first-year experience

---

Research has shown that colleges can increase the chances that new students will succeed academically by teaching them their institution's academic and social norms. Students who have a clear understanding of what behaviors and skills are expected what they need to do to succeed academically and socially in college are more likely to make wise college enrollment decisions, devote their energies to educationally purposeful activities, and graduate. In the late 1990s, the Admissions and Orientation units within Enrollment Services made changes to student recruitment and orientation processes in order to better communicate the institution's values and expectations to students and their families. These efforts focused on communicating desirable academic and social norms, appropriate expectations for university life, and the behaviors associated with academic success. The new materials emphasized six key activities: talking with faculty about academic matters, studying the required amount of time, managing time wisely, getting involved in appropriate campus groups, living on campus and in academic theme units, and interacting with peers learning from one another. This new approach was then reiterated and reinforced through a variety of orientation practices, as described below. The new DVD produced by the Office of the Vice Provost for Enrollment Services also has continued to promote a strong academic emphasis.

### Student Orientation

---

In keeping with the strategy of early intervention to promote first-year success, Summer Orientation, managed by the Office of Orientation Programs <http://www.indiana.edu/-orient/staff/index.html>, is an elaborate two day event held on select dates in June, July, and August for registered groups of incoming students and their families. Faculty and staff participants are regularly trained to reinforce institutional expectations during orientation events, emphasize key issues (academics, community, and diversity), and identify specific skills for academic success (going to class, taking notes, using study skills centers, reading and using course syllabi). Strategic efforts to make Orientation a more meaningful and manageable experience for students include doing away with large orientation receptions in favor of smaller, more casual ones to create better opportunities for students and their families to talk informally with academic advisors, staff, and faculty. And students are now required to meet with an academic advisor during Orientation to discuss their first-year schedules, plans, and expectations.

Freshman Forum sessions were created to address the questions parents and students have about college transition and to convey strong messages about specific ways to succeed. Multicultural sessions now offer opportunities for students to learn more about specific programs and offices that serve minority students. Parent orientation programs have been strengthened in response to research indicating that first-semester freshmen tend to contact their parents first when they encounter academic or social problems. Parent sessions focus on appropriate parenting of college age students, academic success, housing, financial aid, and career resources.

IU Beginnings, new in 2000, is a popular and expanding program that offers students an optional “adventure-based” small-group orientation. Small groups of matriculating freshmen take on a variety of living and learning adventures, including backpacking, community service, team building, and others. Leaders encourage students to discuss issues pertaining to their first year at IUB, while enjoying new friends and challenges. These groups return to campus just in time for Fall Welcome Week, which emphasizes the history, traditions, and culture of IU Bloomington in an effort to help students develop a sense of place and community. A series of focused activities including the Freshman Induction Ceremony, the President’s Picnic, community service projects, and academic success workshops help students begin the transition to college life.

### **University Division: an academic home for first-year students**

---

The success of IUB first-year initiatives is due in part to the coordination of several core programs within one centralized campus unit, University Division UD <http://www.indiana.edu/~udiv/>, which is part of the Office of Academic Affairs. UD’s primary mission is to advise the vast majority of undergraduates in their first year, or until they are sufficiently prepared to declare a major.

From its inception, the academic emphasis in the division’s mandate has been clear. Responsible for advising and a multiplicity of other programs to ensure academic as well as social adjustment on campus, University Division is the campus’s answer to the question posed by first-year experts Gardner, Barefoot, and Swing: “Who if anyone, is ‘in charge’ of the first year on your campus?” For the vast majority 95 percent of matriculating students at IU Bloomington, the highly trained staff of UD is the “someone in charge” of the freshman year.

UD supports students in a variety of ways as they make the transition from high school to college. Students receive academic advising

in UD until they meet curricular requirements for certification into the degree granting unit e.g., College of Arts and Sciences, School of Education, etc. . UD advisors are knowledgeable about campus curricula and support services, and highly trained in addressing the developmental needs of first-year students.

### ***Freshman advising in residence halls***

UD freshman advising is provided in each of IUB's ten residence halls across campus. Freshmen are assigned to an individual advisor in their own residence neighborhood. This distributed advising system makes it more convenient for students to meet with their advisors. Individual advising appointments can focus on choice or confirmation of academic major, interpretation of degree requirements, planning courses prior to registration, help with study skills, referrals to important support services on campus, or participation in clubs and extracurricular activities.

### ***Advising for continuing and professional students***

The division also provides academic advising for continuing upper class but not yet certified) students, as well as specialized advising to pre professional students through its Health Professions and Prelaw Center HPPLC . University Division also runs Exploratory Student Resources <http://www.indiana.edu/-udiv/html/explore.html> , a nationally recognized program that develops exploratory materials for use in various stages of the advising process. The Exploratory Student Resources Web site, "Majors and Careers" <http://www.indiana.edu/-udiv/majors/> , won the 2002 National Academic Advising Association's Electronic Publication Award, and received national recognition from NAAA again in 2005 in the category of institutional programming.

## **First-Year Living-Learning Environments**

### **A "web of friendly interest groups"**

---

*Time* magazine accurately described the IUB strategy of using "several small, targeted efforts" to engage and sustain freshmen rather than a "one-size-fits-all" solution. Offering a broad array of supportive programs and strategies that appeal to various target groups within a large and diverse student body has proven to be a successful strategy for helping all undergraduate students, and particularly freshmen, succeed academically.

A 2002 report issued by the IUB Dean of the Faculties, "Factors Affecting Retention Behavior at IUB" ([http://www.indiana.edu/-iuncate/reports/retention\\_report.pdf](http://www.indiana.edu/-iuncate/reports/retention_report.pdf)) provides a detailed look at

the factors that influence first-to-third semester retention behavior on the campus. The research confirms that initial academic success plays a significant positive role in first-to-second-year persistence. There were also strong findings regarding social integration: the number of friendships students report and the number of extra-curricular activities they engage in can influence the likelihood of persistence. Creating successful learning environments for first-year students requires a network of components: academic and financial support, expert and easily available advising, and a social component that helps students feel engaged in a community of learners. Many of the programs described below have been particularly successful because they address at least two and in some cases all three of the most significant factors leading to first-year success or failure.

## Intensive Freshman Seminars

---

Created in 1989, the Intensive Freshman Seminars is one of the university's most popular first-year initiatives and one of its most successful programs. The goal of the Intensive Freshman Seminars <http://ifs.indiana.edu/index.php> is to provide a three-week summer transition program for an average of 350 traditional students matriculating in the fall. This summer program consists of small, three-credit-hour seminars, which are taught by faculty who are especially skilled in introducing first-year students to their respective disciplines. With titles such as "Life, Death, and H<sub>2</sub>O in the 21st Century," and "Personal Law," the seminars are grounded in discipline content and discourse, as well as thoughtful pedagogy. IFS faculty are encouraged to create courses that help students develop their reasoning and writing skills, as well as other skills crucial to lifelong learning: research and computer skills, ethical and multicultural sensitivities, and collaborative learning skills. The academic component is enhanced with extra-curricular programs designed to connect students with campus cultural and social resources. IFS students are supported by experts from Writing Tutorial Services, and receive orientations to the University Information Technology Services and the campus libraries. Supported by the Office of Academic Affairs and Dean of the Faculties, the program has been nationally recognized in 2001, by *Time* magazine as a model environment for first-year students.

### ***Evaluation and success indicators for IFS***

An IFS analysis of three freshman cohorts of the summer program (1999, 2000, and 2001) demonstrated that 90 percent of participants returned for their third semester. In these cohorts, the correlation between IFS grades and first-year academic outcomes was both positive and statistically significant. Students who participated in

IFS were also more likely to participate in other first-year programs associated with academic success, such as Freshman Interest Groups and the Minority Achievers program. On the 2004–05 IUB National Student Survey of Engagement, IFS respondents reported significantly higher levels of academic engagement than non IFS freshman respondents, especially with regard to faculty student interaction. And six year graduation rates are consistently higher for IFS cohorts in comparison with the general student population.

## Groups Student Support Services Program

---

The Groups mission is to assist the campus in supporting, retaining, and increasing the persistence rates of first-generation, low income, and physically challenged students. Established in 1968, the Groups Program <http://www.iub.edu/-groups/> is considered one of IUB's longstanding successes in the area of student support and retention, and was cited recently by the Education Policy Institute as a “best practice” program for promoting student success.

### ***Improving retention of underrepresented students***

The program targets students who have been identified as more likely to leave the university before completing their first year. In the program, such students persist to their sophomore year at a rate of about 80 percent. Over the last decade, an increased focus on academics, advising, and mentoring services also has helped program administrators to more than double the six year graduation rate for participants. Among those helped are students from Indiana's largest minority groups—African Americans and Latinos—as well as rural and immigrant populations, who are also underserved by the state's higher education institutions.

The program has also improved college attendance rates among its target students. Last year the IU trustees extended a new challenge, calling for the program to double the number of students admitted from under represented groups, primarily African Americans and Latinos, by 2014.

Approximately 300 matriculating students from across Indiana enroll in the program's full scholarship, six week residential summer experience each year. Students earn six credit hours in mandatory math, English, and critical thinking courses, which are integrated with comprehensive academic support services that help reduce student attrition. When the school year begins, Groups freshmen meet regularly with advisers and peer mentors to ease their transition to the social and cultural setting of the university. Groups students are encouraged to join living learning communities that reinforce

their academic goals and interests. Workshops offer counseling and planning assistance on financial management. The program serves a total of 800 students per academic year.

Each year, more than 600 Indiana high school graduates apply for admission to Groups, which now has an alumni roster of close to 9,000. In addition to budgeting 3.25 million for the program, the Bloomington campus has an ongoing commitment to additional resources and services, including the use of facilities. Groups is a program of the Office of Diversity, Equity, and Multicultural Affairs, and is a part of the Federal TRIO Program.

### ***Groups awarded federal grant to further program goals***

In 2005 the program was awarded a new five-year, \$2.1 million grant from the U.S. Department of Education. The grant will help support the program's efforts to graduate more underrepresented students, and to channel more funding to upperclass student initiatives. "A high percentage of underrepresented students leave the institution after their junior year primarily because of financial difficulty," Groups Program Director Janice Wiggins explained. Remaining grant funds will go toward increased staffing, tutoring, and financial aid.

## **Freshman Interest Groups**

---

First year research suggests that friendship and a sense of belonging may be important factors in maintaining student engagement. The Freshman Interest Groups FIGs <http://www.indiana.edu/-figs/> program is a living learning experience that helps students connect with friends who have shared intellectual interests in a common social setting. Administered by University Division, FIGs are clusters of up to 20 first-year students who elect to live near one another in the residence halls, co enroll in several courses, and take a FIGs Seminar <http://www.indiana.edu/-figs/> together. Participants choose from 35 different interest areas, taking seven to nine credit hours as a group. Approximately 390 students were enrolled in FIGs in 2005. The program, which typically attracts six to eight percent of IUB's freshman class, is organized around five broad goals:

- Community building connecting students to peers with similar academic interests
- Providing freshmen with information about the campus resources that best respond to their needs
- Involving freshmen in the cultural and intellectual life of the campus
- Helping students develop effective study habits and skills
- Facilitating positive contacts between the faculty and students

The FIGs Seminar XIII is a one credit course designed to help freshmen make the academic transition to college. The seminar focuses on academic skills, time management, and critical thinking, as well as activities that acquaint students with the intellectual and cultural resources of the university. Accomplished junior or senior students, called peer instructors, teach the seminar and organize cultural and intellectual activities for their FIGs group. They also help students form study groups and connect to academic resources on campus. Peer instructors must complete 40 hours of training before they can participate in the program.

***FIGs attract students from diverse backgrounds***

From its inception in 1999, the FIGs program has attracted students with a slightly weaker academic profile (based on predicted GPA, high school ranks, and SAT scores). Yet over the years, FIGs students have performed at least as well as their cohorts. First through third semester retention rates for FIGs participants are consistently higher than those of nonparticipants. And FIGs participants are more ethnically diverse: the proportion of African Americans, Latinos, and Asian Americans in FIGs is almost twice as high as in the general student body.

## Residential learning communities

---

In addition to IFS-Extended and FIGs, first-year students have a choice of several other types of learning communities centered around student life in the residence halls. There are 11 residence halls on campus, clustered into three neighborhoods, each with a distinct blend of programs, dining options, amenities, services, and resources. Academic support services are strategically clustered in these neighborhoods, providing easy access to advising, tutoring, study skill workshops, classrooms, and libraries.

Approximately 4,000 students live in more than 100 learning communities in campus residence halls each year. Both external and internal studies show that students who live in residence halls demonstrate consistently higher levels of academic achievement, satisfaction with college, engagement, and persistence. Those who choose to live in learning communities experience even greater benefits. For example, undergraduates in Academic and Thematic Communities earn higher GPAs and demonstrate better retention rates than those in the general student population.

Learning communities are usually cooperative ventures between academic units and Residential Programs. These collaborations have produced some of the campus's most innovative examples of

creative, meaningful, and seamless learning environments. The following types of learning communities are available to, but not exclusively for, incoming freshmen:

**Academic Communities** stress academic pursuits, support quiet study hours, offer opportunities for social and recreational activities, develop leadership skills, and provide opportunities for students to interact with professors in an informal setting.

**Thematic Communities** are organized around common academic, cultural, or personal interests, ranging from foreign languages to fitness. Students are not required to hold specific majors in thematic communities, but rather live on a floor with, or in very close proximity to, other students who share the same interests.

**Living-Learning Centers** require a high level of commitment and engagement, and generally offer curricula and service-learning opportunities related to their unique missions. The Collins Living Learning Center, which has offered a student-centered liberal arts curriculum and experiential learning philosophy since the 1970s, has been a successful model on which to build IUB's five newer centers. The campus offers freshman students residency in the following themed centers:

- Atkins Living Learning Center  
<http://www.rps.indiana.edu/llpatkins.cfm?aud=cur>
- Collins Living Learning Center  
<http://www.rps.indiana.edu/llpcollins.cfm?aud=fut>
- IFS Extended Living Learning Center  
<http://ifsx.indiana.edu/index.php>
- Fitness and Wellness Living Learning Center  
<http://www.rps.indiana.edu/llpfitwell.cfm?aud=cur>
- Foster International Living Learning Center  
<http://www.rps.indiana.edu/llpfosterint.cfm?aud=cur>
- Global Village Living Learning Center  
<http://www.indiana.edu/-college/global/>



### **Globalization Highlight**

## **Learning Support for the First Year and Beyond**

### **Academic support**

---

#### ***Academic Support Centers***

One of the most successful strategies for improving learning outcomes for first-year students is the placement of Academic Support Centers (ASCs) in residential neighborhoods. The primary mission of the ASCs program is to provide students with the wide range of support services necessary to meet the academic demands they encounter, with particular emphasis on first-year students and those at risk for academic failure.

ASCs offer a wide range of free services, including tutoring, advising, workshops, review sessions, and other academic support to help students make a successful transition from high school to college. Staffed to accommodate student schedules, the centers are open all day, and tutoring services are available Sunday through Thursday from 7:00–11:00 p.m. A diverse staff of professional advisors and trained undergraduates and graduate students offer individual tutorials, workshops, study groups, study tables, and academic advising. Math tutoring is the object of two thirds of student visits, but advising and writing tutorials are also highly sought after services.

Three centers, located in Briscoe, Ashton, and Forest Quads, serve an average of 3,000 students each year. In 2005–06 the centers reported a combined total of 13,400 visits.

#### ***Math Learning Center***

Math support was a key concern of the 1997–2000 Lilly retention initiatives, largely because introductory math courses had been identified as a stumbling block to the persistence of first-year students. The Math Learning Center (<http://otber.math.indiana.edu/programs/undergrad/mlc/>), developed in 1998 and managed by the College of Arts and Sciences mathematics department, plays an important role in providing math support for first-year students. In recent years, the center has averaged 1,800 tutorial sessions each fall, and 1,500 sessions each spring semester. The center provides tutorial assistance for all students enrolled in a math course on a walk-in basis Monday through Friday, 9:00 a.m. to 4:00 p.m. Math tutoring is available most evenings in the Academic Support Centers.

*(For more information about first-year students and math learning support, see the section *Improving Learning Environments through Curriculum Revision: A Case Study in Math*, later in this component.)*



### *Globalization Highlight*

#### ***Student Academic Center***

The University Division Student Academic Center (SAC) offers courses, consultations, and free workshops on time management, test taking anxiety, and stress reduction, and works with students on the development of many other study skills essential to college success.

#### ***Writing Tutorial Services***

Writing Tutorial Services (WTS) serves approximately 2,500 students each year, offering free 50-minute tutorials on all stages of the writing process. Trained graduate and undergraduate peer tutors work one on one with students on writing assignments for all types of classes. The program puts special emphasis on tutoring students in introductory level courses, and those in need of ESL assistance. WTS also works with faculty members to arrange course-specific or discipline-specific tutoring for particular courses. WTS services are available in Ballantine Hall – the largest and most centrally located classroom building on campus, the Herman B Wells Library, and in all three Academic Support Centers. Last year WTS offered a total of 7,430 tutorials, 26 percent of which were conducted with first-year students.

## **Mentoring**

---

#### ***Faculty and Staff for Student Excellence***

The Faculty and Staff for Student Excellence (FASE) Mentoring Program was developed and funded by a grant to improve undergraduate retention from the Lilly Endowment in 1991. FASE is a freshman focused mentoring program that pairs students with professors, staff members, and leaders from the Bloomington community. The program seeks to support students' academic progress and social adjustment through regular meetings with mentors and planned student activities to promote personal and academic goals.

Each academic year the FASE Mentoring Program serves an average of 150 students, three fourths of whom are typically from underrepresented groups. Mentors are drawn equally from IUB faculty and staff; the program also trains and employs 15 student consultants, each of whom serves as a peer advisor to approximately 10 students. Now in its 15th year, the program has received national recognition for its role in supporting underrepresented students.

With student leadership and direction, FASE has sponsored an annual Men of Color Leadership Conference (MOCLC) since 2003. This successful and increasingly well attended conference aims to support African American, Asian American, Latino, and Native American men by empowering them with the skills and knowl

edge needed to foster academic success, establish support networks, support the goal of graduation, and improve personal achievement by influencing leadership. Over 200 students from across the state and beyond attended the 2005 conference.

### ***The Office of Strategic Mentoring***

The Office of Strategic Mentoring (OSM) was created in August 2003 with support from the Office of Academic Support and Diversity and the vice president for institutional development and student affairs. Intended to build on the success of the FASE Mentoring Program, OSM works collaboratively with students, faculty, and staff to provide mentoring support systems that personalize and improve the quality of the undergraduate educational experience. While serving all students, the program places special emphasis on sophomores, juniors, and seniors from underrepresented populations. In its first three years, the office has provided for the training, support, and supervision of over 100 student mentors, some providing mentoring support over three or more semesters.

## **Programs that offer academic and financial support**

---

### ***The Hudson & Holland Scholars***

The Hudson & Holland Scholarships provide financial and educational support to academically talented undergraduate science and technology students from traditionally underrepresented populations. The program is an integral part of IUB's efforts to foster the benefits of educational diversity through recruitment of underrepresented groups. In 2006, IU created a package of new financial aid incentives for Indiana students, including the Hudson & Holland Scholar Supplement, which adds 1 million per year to the Hudson & Holland Scholars Program. As of 2007, this funding will make possible a significant increase in the number of Hudson & Holland Scholars enrolled each year. Currently, there are 523 Hudson & Holland Scholars enrolled at IUB.

The program focuses specifically on students pursuing degrees in biology, chemistry, computer science, mathematics, and physics. Scholars receive academic support in the form of tutoring, mentoring, career advising, internship development, engagement activities, and more.

### ***Hutton Honors College***

The Hutton Honors College recruits diverse, talented, and highly motivated students. Students are recruited directly into the Honors College and receive their first-year advising and other services within its administrative structure. The program offers a range of



### ***Globalization Highlight***

challenging courses and a variety of extracurricular opportunities, including an International Experience Program. This format, combined with close working relationships with top faculty, provides students with the intimacy of a small college and the breadth of a large research institution.

### ***The Wells Scholars Program***

Named in honor of former IU President Herman B Wells and based solely on merit, the Wells Scholarship provides full tuition, mandatory and course related fees, and a living stipend for four years of undergraduate study at IU Bloomington. Scholars may choose to spend one of these years studying abroad through the university's overseas study programs. Between 18 and 22 Wells Scholarships are awarded each year to incoming freshman.

### ***Research Scholarships***

In 2006, IU began a program of research scholarships for entering undergraduates. Funded by an anonymous donor at the remarkable level of 47 million, these scholarships enable high school students who show great promise in research to attend Indiana University and work directly with faculty research mentors in the field of their choosing. The program is projected to grow to more than 150 students a year over the next decade.

### ***21st Century Scholars***

In 1990, the Indiana General Assembly created the 21st Century Scholars program to raise the educational aspirations of low and moderate income families. The program encourages students to attend institutions of higher learning by reducing the financial burden on eligible students and their families. One important aspect of this initiative is early outreach; participating students begin to think of themselves as college bound when they sign a pledge of good citizenship and responsible behavior in the 8th grade. In exchange for keeping the pledge, scholars are guaranteed up to eight semesters of tuition costs at a participating public college, university, or technical school in Indiana.

In the fall of 2006, IU created a new 21st Century Covenant program, which will supplement the state tuition grants of IU's 21st Century scholars with subsidies for room, board, books, and other expenses, essentially creating a full scholarship for Indiana's low income students. Approximately 900 scholars are currently enrolled on the IUB campus, where they receive mentoring, academic advising, tutoring, and advocacy services. By supplementing and coordinating with this state sponsored program, in keeping with our mission, IUB has exemplified a number of the strategic goals of the ICHE.

## ***Improving Learning Environments through Curriculum Revision: A Case Study in Math***

### **A comprehensive reform for introductory math**

---

In the mid to late 1990s, an important series of engagement and retention efforts focused on key course revisions in several disciplines. Major curricular reforms were undertaken in the Department of English to address student needs in composition and critical literacy, and others targeted introductory courses in chemistry and biology. At that time, mathematics was identified as the major area of concern. Those who worked with undergraduates were aware that many students struggled with key introductory math courses. M118 Finite Mathematics and M119 Brief Survey of Calculus, in particular, had proven to be significant stumbling blocks to first- and second year students, often impeding their entry into quantitative and business disciplines.

An assessment of student success and failure in M118 and M119 revealed high percentages 35 percent and higher of students receiving grades of D or F, and high withdrawal rates. In 1999, with funds from the Lilly Retention grant, significant steps were taken to rethink these courses in order to better engage students in learning basic college math skills. Working with campus instructional experts, the mathematics department redesigned M118 and developed D116 and D117, a less accelerated, two semester version of the course. In addition, a newly designed M119 was offered simultaneously with the old course in 1999 2000, creating the opportunity for faculty to compare the traditional and reformed versions.

Significantly expanded math tutorial services were another key component of the revision. The mathematics department trained graduate students and talented undergraduates to offer tutorial programs in the newly created Math Learning Center, and in residence hall based Academic Support Centers to accommodate students' nocturnal study habits. A popular Web based homework system was also developed for both courses.

#### ***Math TV and the Finite Show***

With support from Campus Instructional Consulting, the department also developed two closely related instructional media programs to support and enhance learning in D116 D117. Math TV, which combined the appeal of MTV with instruction, dovetailed with students' nighttime study habits and their reticence to seek out instructors for individual help. Another popular TV based support strategy, The Finite Show, was a call in television program with a

humorous but extremely helpful take on M118. In recent years, the demand for these popular and successful shows has been largely replaced by a substantial increase in the availability of one on one tutorial help, but the shows are recommended to students, and remain available through the math department Web site.

### ***X101 Learning Strategies for Math***

For students with low scores on the Math Skills Assessment required of all incoming students, a supplemental course, X101 Learning Strategies for Math two credit, one semester, graded course, was developed. Taken simultaneously with M118, the goal of X101 is to support students by teaching them to approach math as active, independent problem solvers, rather than relying on memorization, step by step procedures, or outside authority.

## **Evaluation and results**

---

Revising the introductory mathematics curriculum proved to be one of the most successful strategies for improving the first-year experience and beyond. Most of the math initiatives described above continue to support better learning outcomes, but the most significant impact has been derived from the creation of D116–D117 the decelerated version of M118, which is largely responsible for the more than 10 percent decrease in D/F/W rates in M118. Many students now exercise the option to drop back from M118 to D116, rather than failing or withdrawing from the course.

The department typically runs an average of eight sections of D116 and six sections of D117 per academic year. During the pilot years of the revised curriculum 1999–2001, over 200 freshmen exercised the drop back option. The withdrawal rate from D116 averaged two percent in that period, and over 90 percent of students enrolled in the course received a C or better. Since the introduction of these courses, withdrawal rates for M118 have remained considerably below pre initiative averages.

After the first full year (2000–01) of implementation of the newly designed M119, the D/F/W rate was 28.5 percent. This represented the lowest rate of the last 10 years and compared favorably to the rate of 39.5 for the pre reform M119. More than 6,000 students enroll in these courses each year, and over the last six years it is reasonable to suggest that thousands of students have benefited from these reforms. However, course articulation and transfer are ongoing issues of concern. The department continues to evaluate incoming students' math skills and to intervene with students who are at risk for failure in introductory courses. And, in fact, we currently are

undertaking a comprehensive analysis of high school math preparation and first-year college math course performance for the fall 2006 and fall 2007 cohorts of IUB freshmen.

## ***Service-Learning and the Expansion of Traditional Learning Environments***

### **Community Outreach and Partnerships in Service-Learning**

---

As described previously, a growing number of IUB faculty are employing the experiential pedagogy of service learning to help students place disciplinary practices, theories, and concepts in real world contexts. These efforts are coordinated through the Office of Community Outreach and Partnerships in Service Learning COPSL [http://www.indiana.edu/~copsl/community\\_partners.shtml](http://www.indiana.edu/~copsl/community_partners.shtml) , which provides consultation, instructional materials, and grants to faculty interested and engaged in service learning and community based research. For several years running, COPSL has helped to design and coordinate an average of 65 service learning courses per year across schools and disciplines, through partnerships with an array of community agencies.

And perhaps most relevant to this discussion of first-year learning environments and retention, COPSL, with support from the Lumina Foundation for Higher Education, has been working with faculty to develop service learning opportunities for courses traditionally taken by large numbers of lower division and underrepresented students. COPSL received a 100,000 three year Lumina Grant beginning in 2002 with the goal of increasing the retention of underrepresented students through service-learning courses. By offering course development grants for courses taken by large numbers of lower division and underrepresented students, COPSL is working to raise the numbers of underrepresented students engaged in service learning, with the goal of increasing engagement and retention. The grant enabled COPSL to provide targeted course development funding and support for eight new service learning courses in 2003-04.

### **Advocates for Community Engagement**

---

COPSL supports a variety of significant part-time student leadership positions that promote student engagement. In a concept originally developed and coordinated by former IU graduate student Julie Reed, learners and area service providers are linked through a program known as Advocates for Community Engagement ACEs [http://www.indiana.edu/~copsl/aces\\_new.shtml](http://www.indiana.edu/~copsl/aces_new.shtml) . ACEs are undergradu

ates who serve as liaisons between service learning classes and community partner agencies in Bloomington and the surrounding area. ACEs take on a number of responsibilities both inside and outside the classroom, and receive payment for their leadership and service approximately 10 hours per week . They promote community engagement among their peers, coordinate students' responsibilities and orientation at each site, oversee and enhance student reflection and learning, assist their agencies with programming needs and services, and work with faculty on curriculum development related to the needs of community partner organizations.

COPSL supported 23 ACEs in the academic year 2004 05. Each ACE brought an average of 100 undergraduates into the community through course based learning, research, or volunteer capacities.

## ***Retention and Engagement as Measures of Success***

### **First-to-second-year retention**

---

Research has shown that perhaps the most critical step a college or university can take to ensure graduation (the most basic measure of student success) is to reduce its first-to-second-year attrition rate among undergraduates. Levitz, Noel, and Richter have demonstrated that attrition rates are halved each year following the first year, suggesting the crucial importance of providing extra support for first-year students.

In 2005, only 68 percent of the nation's first-year college students returned to the same institution for the second year, according to data collected by the American College Testing Program. That same year, 87.2 percent of IUB's 2004 freshman cohort returned for their second year on campus.

In the table below, at first glance, first-to-second-year retention rates for full time beginners (represented as FTB Freshman) appear strong and relatively stable through the last decade, and do not seem to reflect significant gains from a major campuswide retention initiative, most of which was put in place between 1997 and 2002.

***First-to-Second-Year Retention Rates for IUB Freshmen***

Academic Year/ Cohort	FTB Freshman Enrollment	One-Year Retention %
1996	5,837	87.6
1997	6,042	87.8
1998	6,748	86.9
1999	6,519	87.7
2000	6,872	87.1
2001	6,743	88.0
2002	7,018	88.3
2003	6,747	88.2
2004	6,307	87.2
2005	6,909	87.1

**Note:** *Data excerpted from the Official Undergraduate Retention Reports: University Reporting and Research; data on one-year retention of 2006 cohort not yet available.*

But freshman enrollment numbers in the table above reveal that the campus was in fact able to maintain or improve its first-to-second-year retention rate during a series of record breaking enrollment increases. Between 1996 and 2002 the campus experienced a 17 percent increase in freshman enrollment.

This trend culminated in 2002, when the campus set an all time high for headcount and credit hour enrollment. That year IUB's one year retention rate for full time beginners was also at its highest, strongly suggesting that freshman programs were in fact making a difference for many students.

***Predictors of academic success and retention***

The success of freshman initiatives appears more pronounced when predictors of academic success are taken into account. While research shows that students with weaker academic preparation are less likely to persist, IUB demonstrated a strong retention rate even among students whose academic backgrounds were weakest.

**SAT scores:** In the peak enrollment year of 2002, for example, 70 percent of incoming freshmen had SAT scores in the middle range 800-1190, and a little over two percent had scores below 790. Persistence to the second year for students in the middle range of the SAT 800-1190 was 87.4 percent, nearly as strong as for those with SAT scores of 1200 or above 90.6 percent. That year IUB retained a particularly impressive number of its most academically challenged students: 87.2 percent of those whose scores were below 790 continued to the second year.

**GPA:** First-year GPAs are another important indicator of first-to-second year persistence; for example, records indicate that in the high enrollment year of 2001, the campus retained almost as many students whose fall semester GPAs were in the range of 2.0 to 2.99 87.8 percent as students who earned a 3.0 or above 93.7, and nearly 60 percent of students whose GPAs fell below 2.0.

### ***Retention and ethnicity***

The first-to-second-year retention rate for African Americans was lower than the overall rate in the most recent freshman cohort of 2004, but still strong at 82.6 percent, averaging 83.6 percent over a five-year period. African American students comprise four percent of all undergraduate students. Hispanic students, who make up two percent of undergraduates, were retained at a rate of 84.5 percent in 2004, averaging 87 percent over five years.

While the enrollment, retention, and graduation rates of minority students have risen slowly and steadily over the last decade, the university is actively working to increase minority representation through outreach and interest development around the state. In recent years, IUB also has invested significantly in research and programs to improve learning outcomes for minority students. For more details about these goals, see the Report on the Status of Minorities at Indiana University (<http://www.indiana.edu/~idsa/reports/StatusMinorities03.pdf>), published by the Office of the Vice President for Student Development and Diversity in 2003.

## **Measuring academic success with the National Survey of Student Engagement**

---

A substantial amount of empirical evidence suggests that what college students do with their time is the best predictor of academic success. Each academic year, participation in the National Survey of Student Engagement (NSSE) (<http://nsse.iub.edu/>) provides IU Bloomington with direct input from its students regarding their educational experiences inside and outside of classes. Because NSSE data are student reported rather than faculty reported, the

survey provides a student-centered perspective on campus efforts to support, engage, and sustain academic success. NSSE data are organized into five key clusters of academic activities, which have been identified by substantial research as “linked to desirable outcomes”:

- Level of academic challenge
- Active and collaborative learning
- Student faculty interaction
- Enriching educational experiences
- Supportive campus environment

The NSSE has been administered to sample groups of first-year students and seniors every year since 1999. In 2006, IU Bloomington was one of 557 colleges and universities administering the survey.

***IUB scores compared to peer institutions***

The NSSE results over the past five years show that IUB has usually rated above average in the dimensions measured by the survey. This suggests that our current faculty, curriculum, and support services do well with student engagement, but also confirms the importance of continuing to research and apply new methods of engaging students in academically meaningful ways, particularly for students in their majors. As we move towards implementing our new General Education curriculum, the *Shared Goals* focus will catalyze renewed attention on student engagement in the senior year through capstone courses and other strategies.

***NSSE Benchmark Scores: IUB and Doctoral-Extensive Peers, 2001-2005***

	Class	IU 2001	Peers 2001	IU 2003	Peers 2003	IU 2005	Peers 2005
Level of Academic Challenge	1 <sup>st</sup> Year	54.0	52.2	55.0	52.5	54.3	51.1
	Senior	55.0	55.0	56.0	55.7	55.4	55.0
Active and Collaborative	1 <sup>st</sup> Year	37.0	37.8	41.0	38.6	42.8	38.8
	Senior	47.0	45.4	46.0	46.7	48.8	47.8
Student-Faculty Interaction	1 <sup>st</sup> Year	35.0	34.2	40.0	35.0	35.1	30.6
	Senior	44.0	40.8	41.0	42.8	40.4	40.6
Enriching Educational Experiences	1 <sup>st</sup> Year	48.0	47.8	49.0	47.8	29.7	28.1
	Senior	49.0	45.0	45.0	44.8	41.5	40.9
Supportive Campus Environment	1 <sup>st</sup> Year	58.0	56.9	60.0	58.9	57.0	56.8
	Senior	57.0	51.7	55.0	54.2	54.1	53.1

**Note:** Benchmark scores are calculated on a 100-point scale and are based on the average student responses to the survey items in each cluster.

## New financial packages for 1,000 incoming freshmen

---

Retention experts emphasize that the best retention and engagement efforts cannot keep students in college if they simply cannot afford to be there. In 2006, the Office of the Vice Provost for Enrollment Management announced four new financial aid initiatives that are expected to benefit as many as 1,000 additional matriculating Indiana freshmen in the 2007 academic year. The four new initiatives, a mix of merit and need based programs, will rise to nearly 10 million annually during the next few years. The initiatives are designed to provide incentives for Indiana's high school students to enroll in the state's flagship campus, and to recruit more minority and low income students. Two of the new incentive programs, the new 21st Century Scholar Covenant and the Hudson & Holland Scholar Supplement have been described above, and, in addition, the following new programs will be available to matriculating freshmen in 2007:

- **IU Excellence Award:** This program will pay full tuition to as many as 400 Indiana students who meet pre set achievement standards for high school. It is specifically designed to provide a new incentive to top achieving students to choose IU over out of state institutions. The program will cost 2.9 million in 2007.
- **Research Scholar:** This program will provide full attendance costs to as many as 160 students who demonstrate strong academic potential in high school. They will "earn" a portion of their grant by working in laboratories side by side with IU research faculty. The program, which will initially cost 2.4 million, will be expanded to 4.7 million annually.

Without a doubt, one of the most important goals the campus can address to improve student success in the future is the need for financial support for students from the outset of their college experience. This need is particularly acute for minority and first-generation students. The Retention Committee has suggested that, in its studies of the domains of student life at IUB, "the greatest impediment to retention and graduation continues to be the rising costs of going to college and remaining there."

This recent investment in financial aid is both a demonstrable success in the effort to improve access to the flagship campus for in-state students, and an illustration of IUB's capacity to address issues of access, recruitment, and retention, through multiple dimensions of support.

## References

---

ACT, Inc. 2004 . What Works in Student Retention? Research Report  
Iowa City, IA: W.R. Habley and R. McClanahan. Retrieved November  
27, 2006 from <http://www.act.org/path/policy/reports/retain.html>

Gardner, J.N., Barefoot, B.O., and Swing, R.L. 2001 . *Guidelines for  
Evaluating the First-Year Experience* Four Year College version . 2nd  
ed. Columbia, SC: University of South Carolina, National Resource  
Center for the First Year Experience and Students in Transition.

Levitz, R., Noel, L. and Richter, B. 1999 . Strategic Moves for  
Retention Success. *New Directions for Higher Education*, 108, 31-49.

Smith, R., Changing Institutional Culture for First Year Students  
and Those Who Teach Them. *About Campus*. March-April,  
2003. Retrieved November 27, 2006 from [http://media.wiley.com/  
assets/143/09/jrnls\\_ABC\\_JB\\_smith801.pdf](http://media.wiley.com/assets/143/09/jrnls_ABC_JB_smith801.pdf)

## Core Component 3d

The organization's learning resources support learning and effective teaching

*In the previous sections of Criterion Three we have described the ways in which effective teaching and learning are valued, nurtured, and assessed. In this section we highlight some of the critical resources that make those activities possible: libraries, classrooms, and other learning spaces, and, especially, information technology (IT). The emphasis on IT in this section in no way minimizes the vital role of other campus resources; rather, we have chosen to emphasize technology because it is an area in which the campus has invested heavily over the past decade and for which we have acquired national prominence.*

### **Building an award-winning information technology environment**

During the late 1990s, for three years in a row IUB was ranked second “most wired” among U.S. public universities, according to a survey conducted by *Yahoo! Internet Life* magazine. More recently, the university gained recognition for its wireless capacity after ranking first on Intel’s “Most Unwired” list of colleges and universities. IU’s embrace of information technology is one of the reasons *Newsweek* named the campus “hottest big state school” in 2005.

As flattering as such recognition may be, it would have little relevance to the instructional mission were it not for the fact that the university has also made a concerted effort to apply information technology in systematic and thoughtful ways to the challenges of teaching and learning in a large public university. Along with an impressive infrastructure, whether wired or unwired, IUB invests considerable resources to encourage, assist, and train faculty in the productive use of instructional technologies and to offer students ready and informed access to those technologies.

Indiana University provides its students, faculty, and staff one of the nation’s best environments for the use and application of information technology. In 1997 an ambitious master plan for IT was developed. Since that time, the campus’s information technology strategic plan, *Architecture for the 21st Century* <http://www.indiana.edu/~ovpit/strategic/>, has continued to guide the development and allocation of technology resources. In order to provide students with the best possible access to current hardware and software, a student technology fee was instituted in 1991. Since that time the fee has provided almost 90 million to support student computing at IUB. During the 2004 05 budget year, 9.6 million 46 percent of the Bloomington budget for University Information Technology Services UITS was allocated to support for teaching and learning, of which 6.81 million 71 percent was funded by student technology fees.

*(Student technology fee data were provided by the Office of the Dean of Students and Vice President for Student Affairs.)*

## **Information Technology Support for Faculty**

### **The Teaching and Learning Technologies Centers**

---

The mission of the Teaching and Learning Technologies Centers TLTC is to assist faculty in exploring and integrating technologies into university teaching and learning. The TLTC was formed in 1994 with support from both University Information Technology Services (UITS) and the Office of Academic Affairs. With locations in both the Wells Library and Ballantine Hall, the campus's largest classroom building, the TLTC is a primary mechanism for keeping faculty abreast of new technologies and their possibilities. The centers are now administered by UITS.

The TLTC serves as a collaborative environment for faculty and instructional technology providers in the design, development, implementation, and assessment of teaching and learning materials for both classroom and distributed education. The centers provide free workshops and presentations, one on one consulting, and as much direct practical experience applying teaching and learning technologies as faculty members and instructors need or request.

TLTC clients can expect considerably more than just “how to” advice concerning a technology. For example, a faculty member who asks center staff for assistance with creating online case studies likely will be asked to talk about her teaching goals and the context in which the case studies will be used, to help insure that the resulting product meets the intended purpose. Sample faculty projects can be viewed at the TLTC Web site <http://www.indiana.edu/~tltl/index.html> .

In addition to responding to individual faculty needs, the centers also provide leadership in the piloting and implementation of new instructional technology tools, such as Oncourse CL described later ; Turnitin.com, a Web based tool designed to reduce student plagiarism; and Macromedia Breeze, a desktop conferencing and presentation system.

Last year, the TLTC reported over 10,000 contacts and conducted 120 workshops and presentations for more than 2,000 faculty and support personnel across campus. Plainly, instructional technology facilitates teaching and learning at IUB.

## Grants for development of instructional technology

---

### ***IU/AT&T Fellows Program***

The IU/AT&T Fellows Program previously Ameritech and SBC Fellows funds innovative faculty projects that integrate information technology into campus and distance teaching and learning. The program calls upon innovators to serve as mentors to other faculty in their disciplines, presenting their knowledge in workshops or departmental consultations coordinated by IU teaching and learning centers.

The program was created in 1999 with a \$1 million grant from what was then Ameritech. Since 1999, 69 faculty members have been named IU/AT&T Fellows, receiving grants of up to \$15,000 each. Of these, about one third have been awarded to faculty on the Bloomington campus.

In 2005 more than a dozen faculty members from various campuses showcased projects at the fifth annual IU/AT&T Summer Leadership Program. Projects included an interactive hospital game that allows medical students to complete tasks and interact with one another while their skills are being assessed; a music theory placement test; a Spanish course for health care personnel; robot assembly programming; and Web based resources for African languages.

*(Final project reports and examples of good practices in teaching and learning with technology are available on the program Web site (<http://attf.iu.edu/>)).*

### ***Teaching and Learning Technology Grants***

Teaching and Learning Technology Grants, funded through Instructional Support Services and the Office of Academic Affairs, provide assistance for projects that need specialized knowledge or talents, or that require concentrated or intensive efforts. A committee of IUB faculty reviews the proposals. In the most recent year, awards of up to \$1,500 each supported five instructional technology projects designed to increase student engagement in the areas of English literature and American media, the mechanics of human movement, cultural history, counseling and educational psychology, and a history of American landscapes.

### ***Active Learning Grants***

This long standing program awards summer stipends of \$1,500 for the revision of an existing course or the creation of a new course that engages students more actively in learning. Often these projects include a technology component. For example, recent awards have included Web based interactive tools to provide descriptive accounts of reasoning processes history and philosophy of science , the use of

remote sensing and aerial photographs to establish an understanding of environmental changes geography , and the development of Excel workbooks for an introductory statistics course psychology .

## **Technology training for faculty, staff, and students**

---

Previously in this section, workshops and training in instructional technologies offered by the Teaching and Learning Technologies Centers were described briefly. In addition, UITTS has an entire division devoted to providing broader technology education for faculty, staff, and students. UITTS IT Training & Education (<http://ittraining.iu.edu/>) offers instructor-led computing workshops and provides self-study training resources to the Indiana University community and beyond. The program reaches more than 50,000 participants each year across all campuses through hundreds of instructor led workshops and self study training programs. Data for IUB show that UITTS conducted 847 class sessions during the 2004 05 academic year, involving 8,904 faculty, staff, and students, and 3,328 hours of instruction. The current catalog lists more than 90 workshop titles, ranging from basic sessions in word processing, spreadsheet, and database tools, to advanced sessions in Web development and programming.

IT Training & Education also provides access to more than 1,200 self paced NETg courses to the statewide IU community through its IT Training Online service. NETg courses cover topics ranging from basic IT skills for beginners to advanced training and specialized courses that prepare technical staff for certification.

## **Information Technology Support for Students**

### **Student access to IT in labs and residence halls**

---

With 75 student computer labs distributed across campus, IU students are never far from e mail, word processing, and other computing tools they need to succeed in their courses. In campus terminology, there are three basic types of computer labs in addition to specialized facilities :

- Residential Technology Centers, located in campus housing
- Student Technology Center Classrooms, which can be reserved by faculty for classes, but are otherwise open for individual student work
- Student Technology Centers study only , which are always available for individual student use

The following table shows the number of each type of facility, number of stations seats available, typical hours during which they are open, and total student logins last year.

***Specifications and Utilization of Student Computer Labs***

Type of Lab	Number	Seats	Typical Hours	Logins 2005-06
Residential Technology Centers	26	285	24 hours a day	684,765
Student Technology Center Classrooms	25	723	7AM-10PM	549,365
Student Technology Centers Study-Only	24	1,309	7AM-10PM	1,872,407

Of the 1,309 study only seats, 269 are in the Information Commons described later, which is open 24 hours a day, seven days a week, and 74 are in the Information Commons II, open 8:00 a.m. 2:00 a.m. A team of over 200 hourly consultants staffs about two-thirds of the labs, including the Information Commons, which is staffed 24 hours a day, 361 days a year.

A wide range of software is available on each computer in the labs, including the complete Microsoft Office suite, Web development and graphics tools, statistics packages, and dozens of specialized tools used in particular courses or departments. Specialized labs contain even more advanced software.

A lifecycle equipment replacement fund is used to replace the oldest computers in the Student Technology Centers each year, and virtually guarantees that no equipment in the centers is more than three years old. (The same fund is used to subsidize faculty and staff desktop computer replacement on a similar schedule.

*(See the Student Technology Center Web site (<http://stcweb.uits.indiana.edu/apps/public/apps.cfm>) for a current list of software available in the STCs.)*

## The Adaptive Technology Center

---

The Adaptive Technology Center ATC <http://www.indiana.edu/~iuadapts/> serves individuals with disabilities and specializes in assistive technologies that help with reading, writing, studying, and information access. They provide services for students, faculty, and staff with blindness or low vision, mobility impairment, hearing loss, and learning disabilities dyslexia, ADHD, and others . The ATC is a hub for alternate media production, where print material can be rapidly converted to accessible media for those who experience difficulty using traditional print media. The ATC practice of creating electronic text to provide a variety of accessible formats has been adopted by many other post secondary institutions.

Recently, the ATC has increased Braille support, added an alternative media specialist to meet the increased needs of blind and low vision students, and begun work on an expanded talking GIS map for the IUB campus. Seven adaptive applications are now delivered via server to all the workstations in the Information Commons and will be standard equipment in more locations in the near future.

## Some special features of the IU online environment

---

### ***Oncourse***

Oncourse <http://oncourse.iu.edu> is a locally developed online course management system that permits faculty and students to create and maintain Web based teaching and learning resources. Oncourse offers content development and management tools through a single, consistent Web interface and provides a framework for building teaching materials without requiring knowledge of programming or HTML.

The original Oncourse was launched in 1999. In December 2003, IU began working with three other institutions to build Oncourse Collaboration and Learning CL , a course management and collaborative environment. Known as the Sakai Project, this effort was launched with a 2.4 million grant from the Andrew Mellon Foundation. The goal of the project is to develop open source tools that are the best of their kind for course management, research collaboration, assessment, portal, and workflow. Oncourse CL is intended for use in both courses and projects and was designed to allow for innovative ways of accessing and sharing materials and information. By the fall of 2007, Oncourse CL will replace the original Oncourse as IU's online environment for teaching and learning.

### ***The Knowledge Base***

The Indiana University Knowledge Base KB <http://kb.iu.edu> is a custom built system used to collect, maintain, and publish online answers to information technology questions at IU. The Knowledge Management team writes the documents that make up the KB and publishes them to the Web. To support the IU community, team members work with information technology providers throughout IU to publish both centralized and decentralized information in the KB. The Knowledge Base currently contains more than 12,000 documents. During 2004-05, the KB was accessed 8,829,685 times.

## **Support for personal student computing**

---

In addition to the widespread availability of computer labs, students who bring personal computers to campus will find Ethernet connections in every room in the residence halls, with in room consulting available from Residential Technology Center staff. Also, there is wireless Internet connectivity in virtually every academic building and residence hall, the student union building, and many outdoor areas of the campus. Students living off campus are provided with free dial up access to the Internet and IU online services.

All students, as well as faculty and staff, can obtain an impressive array of communications and productivity software for free or at greatly reduced cost, as a result of site licensing agreements the university has negotiated with vendors such as Microsoft, Macromedia, and Symantec. For example, the entire Microsoft Office Professional suite (which retails for more than \$400) is available to students for free download, or can be purchased on CD for 25.

The Microsoft agreement, in particular, has resulted in huge savings for the university. In 2004-05, an investment of 1.5 million resulted in the distribution of almost 15 million in Microsoft products. In all, the licensing agreements negotiated by UITs save the university community some \$19 million annually, the difference between the cost of the licenses and the value of the products that are distributed.

*(For more information about IU support for personal computing, see <http://uits.iu.edu/scripts/ose.cgi?ameb.ose.help>).*

## **Evaluating resources to enhance teaching and learning**

For more than a decade UITS has worked with the IU Center for Survey Research and the Center for Statistical and Mathematical Computing to administer a survey of its users to assess satisfaction with UITS services <http://uits.iu.edu/scripts/ose.cgi?anwq.ose.help>. The most recent survey had a sample size of 2,000, 40 percent of whom were undergraduate students. The overall response rate was 47 percent. The survey consists of over 100 items and covers every significant service and system maintained by UITS. Generally, respondents indicate both level of use and satisfaction.

Many service changes have been implemented in recent years as a result of the UITS user survey. For example, changes made following the two most recent reports include:

- Introducing new capabilities for online collaboration and learning through Oncourse CL
- Increasing the amount of online storage available to users
- Increasing the number of front line consultants in the Support Center
- Increasing the number of wireless network access locations
- Expanding the Information Commons IC by creating the IC Loft on the second floor of University Library
- Enhancing technology consultant training to improve support to students as they move into residence halls

In addition to the annual user survey, UITS gathers data from other sources, some of which are automated, including:

- Suggestion boxes on all major systems, such as Oncourse
- Hits to Web sites and Knowledge Base KB articles
- Customer satisfaction questionnaires sent randomly to every sixth user after interactions with a support consultant via phone or in person
- Ombudsman reports that provide anonymous and valuable feedback about operational, personnel related, and service related issues

## **The IUB Libraries**

### **A wealth of specialized collections and technologies for teachers and learners**

---

The IUB Libraries <http://www.libraries.iub.edu/> system consists of the Herman B Wells Library formerly the Main Library and 25 specialized collections located in schools, departments, and research

institutes. The Libraries contain nearly 6.8 million bound volumes, ranking 13th in size among North American research libraries. The collections include, among other items, 7.4 million manuscripts, 666,000 maps, 254,000 sound recordings, and 3,000 historical films. The most recent Libraries annual report 2004 05 lists expenditures of 35 million and an endowment valued at 21 million. Some noteworthy features of the Libraries include:

- Highly regarded collections in African Studies, Russian and East European Studies, Uralic and Altaic Studies, East Asian Studies, and West European Studies
- The largest, most comprehensive folklore collection in the world
- The Lilly Library for rare books and manuscripts, world renowned for its unique collections, particularly those in American and British history and literature
- Depositories for documents from the U.S. government, the United Nations, and the European Union
- The William and Gayle Cook Music Library, the first music library in the country to deliver high quality digitized music distributed over a computer network
- IU Link, which allows researchers to link Google Scholar search results to sources available through IU, often including full text articles

The Libraries also have an array of special tools and services for student researchers, including online “how to” guides, electronic reserves for class materials, and library designed Web pages for particular courses. In addition, special services are provided for students enrolled in IU distance courses and IU doctoral candidates not residing in Bloomington. Faculty can arrange library information sessions for their students, geared to their disciplines. And the Libraries offer a Web toolkit that allows instructors to provide links from their class Oncourse site to journal articles, indexes, and databases. During 2004 05, more than 23,000 members of the IUB community participated in instruction and orientation sessions conducted by the Libraries.

*For more information about support for students using the IUB Libraries, see (<http://www.libraries.iub.edu/index.php?pageId=40>).*

## The Information Commons

---

One particular student service merits further discussion. The Information Commons IC <http://ic.indiana.edu/> is a state of the art technology and information center operated jointly by the Indiana University Libraries and University Information Technology

Services UITS. The Information Commons brings together several campus units in one place. Writing Tutorial Services offers on-site help for students writing research papers. IU's Adaptive Technology Center occupies a prominent location at the entrance of the IC and provides technology based solutions for students with disabilities. Housed within the Commons is a multimedia production lab and IT Training and Education classroom and instruction areas.

The IC is located on the first two floors of the west tower of the Herman B Wells Library. The Information Commons I IC<sub>1</sub>, on the first floor, provides an environment conducive to active learning and collaborative work, and the Information Commons II IC<sub>2</sub>, on the second floor, provides a productive environment for quiet, individual work.

The IC<sub>1</sub> includes a 24 hour Student Technology Center that provides group work space, more than 250 individual and group configured computer workstations, wireless networking, a multimedia production lab, and many other features. The IC<sub>2</sub> features nearly 70 additional individual computer workstations and wireless networking, electrical power, and seating for more than 100 laptop users. The IC<sub>2</sub> observes the same hours as the Wells Library west tower. A current, high use core book collection, career and general reference collections, technology consultation, library reference assistance, and printing are also available. In addition, the IC is a centrally located place for students and faculty to interact, attend technology training classes, and have full service access to the latest technologies.

## The Digital Library Program

---

The Indiana University Digital Library Program DLP <http://www.dlib.indiana.edu/> is dedicated to the production, maintenance, delivery, and preservation of a wide range of high quality networked information resources for scholars and students. The program supports efforts to provide electronic information resources to the campus community and beyond. The Digital Library Program is a collaborative effort of the Indiana University Libraries, the Office of the Vice President for Information Technology, and the university research faculty, with leadership from the School of Library and Information Science and the School of Informatics.

The DLP includes collections of text, images, music, and video. For example, the Indiana University Sheet Music collection allows users to search some of the holdings from the Lilly Library's approximately 150,000 pieces of sheet music, including those for which

digitized images are available. *The Chymistry of Isaac Newton* <http://webapp1.dlib.indiana.edu/newton/index.jsp> is a scholarly online collection of Newton's extensive alchemical manuscripts, including digital copies of his laboratory notebooks, indices, and more. The project is supported by the National Science Foundation.

### ***William and Gayle Cook Music Library***

One of the more remarkable projects of the DLP is its collaboration with the William and Gayle Cook Music Library <http://www.libraries.iub.edu/index.php?pageId=90> to create Variations2 <http://variations2.indiana.edu/research/>, a collection of digitized musical performances and scores available to faculty and students. The project was begun in 2000 with a \$3 million grant from Digital Libraries Initiative Phase 2, a multi agency federal program with funding from the National Science Foundation and the National Endowment for the Humanities.

With the click of a mouse, students and faculty have access to a collection of music in a variety of formats and from a range of musical styles and types. For example, students can listen to sound recordings while displaying images of musical scores, or they may listen to computer generated music while viewing computerized score notation or while improvising a new part on a computerized music keyboard. More than 10,000 online recordings and hundreds of scores recommended by IU faculty for use in instruction are accessible in Variations 2.

### ***Digital Library Program National Leadership Grant***

Last year the DLP received a \$768,747 National Leadership Grant to extend the digital music library to teachers and students across the country. The grant will support the development of an online learning tool similar to the highly successful version already in place at IUB, which can be easily deployed at a wide range of college and university libraries. Funding came from the Institute of Museum and Library Services, an independent federal grant making agency. By offering this "digital music library in a box," IU will respond to the teaching and learning needs of large academic libraries, small colleges, and music conservatories, many of which have expressed enthusiastic support for the digital music library that has transformed music instruction at the IUB Jacobs School of Music. At the completion of this three year project, known as Variations3, institutions nationwide will be able to introduce, expand, or upgrade their current online music offerings in ways that provide new benefits for their students.

## Classrooms and Special-Purpose Learning Facilities

### Upgrading technology in the classroom

---

Instructors who are using technology to create course materials and Internet based activities also expect to be able to display a wide range of digital media and technology in their classrooms. For example, the use of laptop and computer display equipment in classrooms increased 46 percent in 2005 compared to the previous year, double the annual increase in requests experienced in the previous two years. Action 21 of the IT strategic plan developed in 1998 proposed that,

*Beginning immediately, all planning and renovation of classrooms and other teaching spaces should evaluate and incorporate information technology needs. The costs of information technology identified in prior planning efforts, as well as future efforts, should be fully base funded to provide for acquiring and installing equipment, as well as for maintenance, repair, lifecycle replacement, and support.*

#### **Increasing installed technology in classrooms**

To address these goals, a five-year plan, finalized in May 2000, called for installation and support of technology in classrooms, design coordination, and renovation of classrooms to enable the use of that technology. The plan also articulated a need for more installed technology and less reliance on mobile equipment. Implementation was coordinated among UITS, Instructional Support Services, the University Architect's Office, and campus physical plant offices. Individual campus plans are reviewed and updated annually. As part of the planning process, the Classroom Committee undertook an analysis of all general purpose classrooms that took into account both facility and technology needs.

At IUB, the 267 general-purpose classrooms scheduled by the Office of the Registrar fall into three categories, according to the level of technology available:

- **Basic:** Analog display capability. Overhead transparency projector and a TV/VCR or TV/VCR/DVD, wired/wireless network access
- **Enhanced:** Analog/digital display capability. Overhead transparency projector, video/data projector or flat panel, laptop connection, external A/V interface, computer optional, VCR/DVD optional, wired/wireless network access
- **Advanced:** Analog/digital display capability. Overhead transparency projector, video/data projector(s) or flat panel(s),

computers, VCR/DVD, laptop connection, external A/V interface, document camera or other special equipment, such as video cameras and recording capability, interactive pen tablets, and wired/wireless network access

In 1997, only 19 percent of general purpose classrooms were categorized as Enhanced or Advanced. Currently, the proportion of classrooms in those categories has increased to 57 percent and the projection for December 2007 is 90 percent. In addition, over 50 departmental classrooms in education, law, SPEA, informatics, Residential Programs and Services, and the Kelley School of Business Graduate and Executive Education Center have classroom technology installed. These follow the established campus standards.

### ***Classroom Technology Services***

Classroom Technology Services (CTS) <http://www.indiana.edu/-cts/>, the UITs unit that manages classroom media and equipment, is responsible for all aspects of classroom technology support, including long range planning, installation, repair and maintenance, and life cycle replacement of equipment, as well as providing individual training and support for faculty using these facilities. Approximately 1.5 million per year is budgeted for this support. The most recent UITs User Survey suggests that faculty needs in this area are being well met. CTS received average ratings of “satisfaction” or higher from 96 percent of respondents.

## **Planning and implementing classroom upgrades**

---

The IUB Classroom Committee <http://www.indiana.edu/-classrms/iub/cc.html> has as part of its charge the development of a long range plan to improve the physical condition of all general purpose classrooms and other learning spaces.

To guide the renovation of existing classrooms and the design of new classrooms, the committee developed a model classroom description that documents the relationship between facility and technology. This description is reviewed annually and was revised extensively following a university wide classroom retreat held in 2004. A learning environments team is available to consult on new construction projects, renovation projects, and special projects. Over 2,500 hours of consultation were provided in 2004-05.

In the last 10 years, 70 percent of the general purpose classrooms have had some level of physical improvement:

- 11 auditoriums were renovated completely.
- 137 classrooms received a general “facelift,” which can include painting, new ceiling and lights, new accessible

door hardware, chair rail, projection screens, and replacement of old tablet armchairs.

- Four new buildings were constructed, adding 26 general purpose classrooms.
- Three of the oldest buildings on campus were renovated, including 17 classrooms.

## Special-purpose learning facilities

---

In addition to classrooms and general purpose computer labs, the campus maintains more than 300 special purpose learning facilities teaching labs, clinics, studios, and practice and performance spaces. Special purpose learning facilities are located in some thirty schools and departments, including music, fine arts, journalism, law, optometry, the sciences, languages, and many more. Departments and schools regularly monitor and evaluate the adequacy of their special purpose facilities and resources, and assume primary budgetary responsibility for maintenance and upgrades when required.

The descriptions of special purpose facilities below represent only a few examples of campus facilities that offer students access to up-to-date technologies and hands-on experience in many fields.

### ***The Advanced Visualization Lab's CAVE***

The campus supports a number of innovative and technologically advanced teaching and learning environments. One highly specialized lab is the *Cave Automatic Virtual Environment CAVE*, a virtual reality installation that supports teaching, research, and creative applications. Constructed in 1997, the CAVE is an 8' x 8' x 8' structure with high resolution, three dimensional images projected onto three walls and the floor. Using a control wand and special 3-D glasses, participants can view or interact with a display of visual information, such as a model of the solar system, a simulation of groundwater flow around a well, or a virtual reality artwork. The CAVE offers students and researchers new insights about data beyond what is possible with traditional charts and graphs. For example, instead of a collection of graphs to illustrate a series of observations, a three dimensional representation can be created to show how a data point changes over time. Researchers in fields such as crystallography find the CAVE ideally suited for the interpretation of large sets of data. Seismologists can simulate earthquakes, doctors can practice surgery on virtual patients, and artists can display interactive electronic art.

### ***Department of Apparel Merchandising and Interior Design***

The Department of Apparel Merchandising and Interior Design maintains two computer aided design labs, one for apparel design and another for interior design. The department also offers its graduate and undergraduate students accessible sewing and textiles labs,

two fashion design studios sewing stations, pressing equipment, and student lockers, and an interior design studio drawing tables, design resource room, etc. . The *Elizabeth Sage Historic Costume Collection* is another valuable departmental resource for teaching, research, and learning. This extensive collection, housed in the IU Art Museum, contains both a high quality permanent museum collection for exhibition and research, and a hands on collection used in classroom instruction and fashion design studios.

### ***The Department of Astronomy***

The Department of Astronomy is a partner in the WIYN <http://www.astro.indiana.edu/wiyn.shtml> telescope consortium, which consists of the University of Wisconsin, Indiana University, Yale University, and the National Optical Astronomy Observatories (NOAO). Indiana University has a 17 percent share in WIYN. WIYN operates both a 3.5 meter telescope and a 0.9 meter telescope atop Kitt Peak, southwest of Tucson, Arizona. The department's *Morgan Monroe Station (MMS) of the Goethe Link Observatories* <http://www.astro.indiana.edu/facilities.shtml> is situated in the Morgan Monroe State Forest, twelve miles north of campus away from light pollution. The MMS station houses research telescopes that operate on most clear nights. For teaching purposes on the main campus, the department maintains the historic *Kirkwood Observatory*, which features a 12 inch refracting telescope and a solar telescope housed in the same building to view sunspots and prominences. Teaching facilities also include two telescopes located on the roof of Swain West, the astronomy department's campus location.

### ***Department of Chemistry***

Like most IUB departments of science, the Department of Chemistry maintains its own teaching labs. Five general chemistry labs are used for eight different courses; each lab accommodates up to 24 students per three hour section. In the academic year 2005-06, these labs served one to four sections per day, three to four days a week, including eight evening labs. Three additional labs are maintained for five advanced undergraduate courses that serve up to 16 students per section. An analytical physical chemistry lab is also used for up to four different courses of 18 students per section, three to five days per week, and a graduate-level electronics lab (fall semester only) serves five students per section, three days a week.

### ***The Jacobs School of Music***

IUB's renowned Jacobs School of Music maintains more than 170 practice rooms, choral and instrumental rehearsal rooms, as well as 100 faculty office/studios within an extensive six-building complex. The *Musical Arts Center (MAC)* features technically advanced opera production facilities and an acoustically designed theater with an audience capacity of 1,460. Operas, ballets, and concerts are performed in the MAC, and many famous performers, as well as future stars, have appeared on its stage. The *Center for Electronic and*

*Computer Music*, also located in the MAC, features two state of the art studios available as private composition facilities for students and faculty, as well as a classroom and lab serving the center's curriculum. The center's facilities enable composition students to create their own compositions using the latest technologies in digital sound synthesis and sampling, MIDI, digital recording and editing, and video.

***The School of Nursing***

The IU School of Nursing on the Bloomington campus is in the process of conducting a study to assess the feasibility of upgrading and renovating its *Nursing Learning Resource Center (NLRC)*, located in Sycamore Hall. The center, which opened in 1998, houses facilities for teaching basic skills and physical assessment to the campus's 200 nursing students. Computer stations for student use, a mock critical care unit, a room equipped with video for teaching small groups 10 students per section, a three bed unit for simulating acute care, and a physical assessment room enable students to practice crucial nursing skills. The center is accessible to students for weeknight and weekend study.

*Criterion Three  
Concluding Statement*

*The future of teaching and learning at Indiana University Bloomington*

The past ten years have seen the faculty of IU Bloomington shift the prevailing culture of teaching toward a more public, evidence based, and theory framed perspective, and they can be expected to continue this trajectory over the next decade. Administrators, faculty, and staff have clearly invested in the task of helping students know about, manage, and benefit from the extensive learning opportunities available to them in a large research institution. The campus offers exceptional choice with respect to the breadth and depth of the curriculum, academic support services, and living-learning environments. In addition, considerable financial resources have been strategically directed to the ongoing task of maintaining and upgrading the campus's cutting edge learning technologies and support services. Finally, the campus has taken important steps to minimize the bewildering sense of being "lost in the shuffle" that undergraduates often encounter in a large institution by providing early intervention in the form of academic, social, and financial support. Following the maxim of former IU President and University Chancellor Herman B Wells, we strive to be a large, diverse campus that "feels small."

In recent years, IUB has focused on creating supportive learning environments that move students from the first to the third semester. The campus has demonstrated success in this effort, as noted in both *Time* magazine and *U.S. News and World Report*, which recognized IUB for its success in promoting learning communities that build "connections among fellow students and between students and professors."

The Campus Retention Committee continues to provide leadership to strengthen the existing bonds between programs that, when carefully coordinated, form a successful, functioning support network for first-year students. The campus, in fact, feels so strongly about the importance of enhancing student learning that a new responsibility center, the Office of Academic Support and Diversity, was created in the toughest of fiscal times to insure that students receive a wide variety of academic support. Of special note within this unit are the Academic Support Centers, late night tutorial centers designed to provide curriculum based assistance for students where they live; these centers represent partnerships among academic departments, advising units, Residential Programs and Services, the Office of the Dean of Students, and other stakeholders across campus.

While the campus has demonstrated both commitment and success in providing learning environments that support the academic success of most students, it continues to grapple with the more challenging task of extending that success to underrepresented student populations. These efforts are well underway in the form of outreach, recruiting, engagement, mentoring, and other forms of academic support. Campus experts in academic support and diversity services agree that much has been accomplished, but more must be done. The absence of adequate financial aid continues to pose daunting challenges in the campus's efforts to recruit, retain, and successfully graduate underrepresented students.

The teaching, learning, and educational scholarship at Indiana are watched carefully by other institutions of higher education around the country and around the world. A dynamic and critical culture of teaching places IUB at the forefront of a sea change in higher education. It is perhaps one of the best examples of a public, research priority institution taking on teaching as an intellectual activity worthy of rigorous inquiry, iterative development, peer review, and high standards.

Serving to complement these intellectual developments, instructional technology is pervasive at IUB in classrooms, residence halls, computer labs, faculty offices, and even many outdoor areas. While the university has a growing presence in online education, technology at IUB has generally supported, rather than replaced, conventional face to face instruction. Libraries and lecture halls, among the oldest university "technologies," are also being transformed in the digital era. The digitization of text and images is making library materials available for research and learning in ways never before possible. And by the fall of 2007, nearly all classrooms on the campus will have installed technology to facilitate displaying digital media.

The questions IUB faculty must answer now and in the future are ambitious and dynamic: Who are the undergraduate students of the twenty-first century—from Indiana and beyond? What kind of teaching practices will resonate with them and move them toward successful and timely completion of their degree programs? How can we extend these successful practices to our entire student body? What do we know about the relationship between teaching and learning? What practices can be developed leveraging technology, problem solving, simulation, active learning, community engagement to take advantage of what is already known? How can we represent that knowledge so that it can be shared and transferred to other classrooms and other settings? And how can IUB's considerable consultative and technological resources best serve the design and implementation of the new general education curriculum?

Such questions will undoubtedly be addressed in collaborative and interdependent communities of inquiry, research partnerships, and reflective teaching circles. Supported by a significant allocation of resources by the administration, the faculty has in large part embraced the idea that the learning styles and expectations of each new population of students are dynamic, that teaching practices must adjust to meet the students where they are, and that they must work collectively to provide all students with a rigorous undergraduate education. As a result, notions of teaching as a private activity, static practice, or intuitive skill have given way to approaches that are more public, critical, and collaborative.

In the next ten years, the IU Bloomington faculty can be expected to continue to gather in small groups around questions exploring how students learn and how teaching can facilitate learning. They can be expected to bring their research skills and disciplinary expertise to bear on these questions. And they can be expected to share what they find through formal and informal channels, building what they know collectively as successful education. We continue to promote the sustained educational value of an undergraduate residential experience at a large public university, as our campus follows our mission to meet “the changing educational and research needs of the state, the nation, and the world.”