

## PROGRAM

The planning team evaluated three aspects of space needs to determine future demand for academic, support, and campus life programs to be accommodated in the Campus Master Plan. These three aspects are: qualitative space needs, quantitative space needs, and social needs.

### QUALITATIVE SPACE NEEDS

The Space Needs Task Force worked with the planning team early in the master planning process to identify the qualitative challenges to educational space on campus. Input from this task force and the findings from the *IUB Educational Adequacy* report reveal a shortage of well-designed learning spaces. The renovation of existing spaces and the addition of quality learning spaces are vital to serving the needs of students and faculty members. The faculty increasingly encourages an engaged, interpersonal learning style based on discussion and classroom dialogue. All classroom types—including large lecture halls—should be upgraded to promote collaborative learning. In particular, new or renovated small seminar

rooms are needed to maximize the potential for group work and active learning.

In addition to enhanced teaching facilities, the campus requires a greater number of informal student gathering places. Facilitating student interaction in areas adjacent to lecture halls and classrooms will improve the effectiveness of study groups and peer mentoring. Learning spaces for graduate students should also be located within department homes and adjacent to faculty offices. This interconnectivity will help to characterize classroom learning as an extension of research-related activities.

Classrooms for undergraduates can be relocated throughout residential campus neighborhoods so that residential hall activities can become more fully integrated with course work. Additionally, future academic facilities can be located along major pedestrian corridors, interspersed with retail and dining options. Utilizing learning space in academic units, libraries, and residence halls will encourage student interaction inside and outside of the formal classroom.

Provisions should be made to incorporate new portable communication technologies into existing classrooms, including streaming video, web conferencing, and virtual learning software.



Student Collaboration at the Kelley School of Business



Group Work Space on Campus

## QUANTITATIVE SPACE NEEDS

Quantitative space needs include the mathematically driven elements that are necessary for future program development. They outline the physical building blocks of campus and identify specific space types. Space needs are in essence an assemblage of spatial parts from which to construct a physical vision of the future campus. It is important to apply this technical information through a qualitative filter and broad campus-wide lens.

For the purposes of the Campus Master Plan, the space needs were derived in assignable square feet (ASF) and subsequently converted to gross square feet (GSF). This conversion assumes a 63 percent ratio of ASF to GSF (1.58 multiplier). This building efficiency relationship was validated, on a campus-wide level, by the Indiana University Facilities Inventory Summary for the Bloomington campus. Campus space needs are divided into four broad categories of academic, academic support, auxiliary, and residential typologies.

### Academic Space

- Classroom, laboratory, research, office, service

### Academic Support Space

- Library, administrative, recreation, assembly, exhibit, physical plant

### Auxiliary Space

- Student center, health, athletics

### Residential Space

- Residence halls, dining facilities

### Campus Baseline: 2007-2008 Academic Year

Total Enrollment	38,990
Undergraduate	30,394 (78%)
Graduate	7,672 (20%)
Professional	924
Faculty	2,309
Staff	5,392
Total Campus Population	46,591

The planning team utilized the fall 2007 data as the point of departure for spatial and programmatic projections. Consideration of facilities needs, transportation requirements, and

infrastructure demands are based on aggregate totals of the campus population and not full-time equivalent (FTE) metrics.

### Historical Enrollment Growth

Historically, working in increments of 10 years, the University experienced an average growth of 4,600 students per decade from 1948 to 2008.

Over the last decade, IUB has experienced consistent growth in student enrollment. Using information from the Indiana University Reporting and Research database, from 1998 to 2008, the University grew from an enrollment of 34,937 to 38,990, adding 4,053 students, representing 11.6 percent growth.

Enrollment	Decade	% Growth
11,003 (1948)		
12,127 (1958)	1948-58	10.2
27,098 (1968)	1958-68	123.0
31,884 (1978)	1968-78	17.6
33,421 (1988)	1978-88	4.8
34,937 (1998)	1988-98	.5

### Projected Enrollment Target

Based on fall 2007 data, Indiana University reported a record student head count of 38,990 and an FTE enrollment of 34,653. The relatively high ratio of FTE to head count suggests a reasonably high utilization of campus facilities through the day. This spatial efficiency was confirmed during interviews with faculty representatives and reiterated in the Space Needs Analysis.

For the purposes of the Campus Master Plan, the enrollment level of 39,000 was established as the planning target. Essentially, this suggests maintaining the student enrollment levels of the 2007-2008 academic year. More importantly, the University's strategic vision recommends an overall increase in graduate enrollment levels and commensurate faculty participation. This new direction underscores a renewed commitment to a quality student experience, enhanced learning environments, and the need for state-of-the-art facilities to meet the competitive academic needs of the future.

### Historical Facilities Growth

Based on fall 2007 baseline data, Indiana University contains more than 520 buildings on 1933 acres representing 15.3 million GSF of total facilities. Using information from the Indiana University Bureau of Facilities Programming and Utilization, from 1998 to 2008, the University grew from 14.4 to 15.3 million GSF, adding 0.9 million GSF and representing 6.3 percent growth. Historically, the University has experienced an average increase of 1.3 million GSF per decade:

Facilities	Decade	% Growth
10,688,569 GSF (1968)		
12,202,210 GSF (1978)	1968-78	14.0
13,474,772 GSF (1988)	1978-88	10.4
14,395,317 GSF (1998)	1988-98	6.8

### Process to Determine Need

The planning team conducted two studies to validate quantitative space needs for campus: (1) a benchmarking analysis of space allocation per student of peer institutions within the Big Ten system and (2) a space needs analysis comparing

current IUB space to a normative database of over 400 comparable universities across the country.

Indiana University provided the planning team with a staffing file, which included faculty and staff identified by job title and unit assignment, and a facility inventory that summarized space by space type and assigned unit. Enrollment information separated by school was also provided. During the study, the planning team met with campus leaders and deans in addition to representatives from various master plan committees to review unique space needs. The planning team visited the campus and toured selected buildings. The data was utilized to analyze space needs and to illustrate benchmarking data. For reference, the nomenclature "base year" refers to the academic year 2007 and "future year/target year" refers to a 10-year minimum planning horizon.

Refer to the Technical Appendix for the full *IUB Space Needs Analysis for the Master Plan* report.

## Data Analysis Summary

### SPACE ALLOCATION BENCHMARKING

A benchmarking analysis of space allocation per student was conducted to compare IUB to Big Ten peer institutions. At the outset of the study, the Indiana University Bureau of Facilities Programming and Utilization provided data on eight of the Big Ten institutions included in the analysis. (For purposes of this study, data from peer institutions was identified by letter designation only, resulting in identifications of University A through University H. The University did not provide information on which data matched a specific institution beyond the letter designation.) The following peer institutions were included in the benchmarking study:

- Michigan State University
- The Ohio State University
- The Pennsylvania State University
- Purdue University
- University of Illinois
- University of Michigan
- University of Minnesota
- University of Wisconsin

Institution	Total Campus ASF	Student FTE	FT Faculty	Faculty/Student Ratio
<b>Benchmark Institutions</b>				
University A	11,259,134	41,282	2,050	1:20
University B	11,167,870	39,341	1,960	1:20
University C	12,726,097	49,641	2,652	1:19
University D	11,041,403	40,709	3,152	1:13
University E	9,084,570	37,534	1,728	1:22
University F	18,931,032	39,993	2,439	1:16
University G	11,223,106	39,873	2,053	1:19
University H	10,561,758	48,133	n/a*	n/a*
<b>BENCHMARK AVERAGE</b>	<b>11,999,371</b>	<b>42,063</b>	<b>2,291</b>	<b>1:18</b>
<b>Indiana University Bloomington</b>	<b>9,002,327</b>	<b>36,062</b>	<b>1,401</b>	<b>1:26</b>
<b><i>IUB COMPARED TO AVERAGE</i></b>	<b>(2,997,044)</b>	<b>(6,001)</b>	<b>(890)</b>	<b>(8)</b>
<b><i>IUB as a % of AVERAGE</i></b>	<b>(25%)</b>	<b>(14%)</b>	<b>(39%)</b>	<b>(43%)</b>

\* Faculty data was not provided for University H.

### Benchmarking Analysis of Space Allocation

Institution	Total Campus ASF	ASF per Student FTE	ASF per FT Faculty
<b>Benchmark Institutions</b>			
University A	11,259,134	273	5,492
University B	11,167,870	284	5,698
University C	12,726,097	256	4,799
University D	11,041,403	271	3,503
University E	9,084,570	242	5,257
University F	18,931,032	473	7,762
University G	11,223,106	281	5,467
University H	10,561,758	219	n/a*
<b>BENCHMARK AVERAGE</b>	<b>11,999,371</b>	<b>288</b>	<b>5,425</b>
<b>Indiana University Bloomington</b>	<b>9,002,327</b>	<b>250</b>	<b>6,426</b>
<b><i>IUB COMPARED TO AVERAGE</i></b>	<b>(2,997,044)</b>	<b>(38)</b>	<b>1,000</b>
<b><i>IUB as a % of AVERAGE</i></b>	<b>(25%)</b>	<b>(13%)</b>	<b>18%</b>

\* Faculty data was not provided for University H.

The student FTE enrollment and full-time faculty for each of the provided institutions are illustrated in the data analysis summary table on previous page.

Following the comparative analysis, the benchmarking data was normalized by calculating the ASF per student and ASF per full-time faculty. Once normalized, the average for the peers was calculated and compared to the data for the IUB campus. The planning team compared ASF per student and ASF per full-time faculty campus-wide by type of space, and by school and college.

### **Space Allocation Findings**

The ASF per student at the peer institutions ranges from 219 ASF to 473 ASF per student. The average of the peers is 288 ASF per student. IUB has 250 ASF per student, ranking seventh in ASF per student when compared to the Big Ten institutions in the study.

IUB has less faculty per student than any of the Big Ten peers that were analyzed (1 full-time faculty per 26 students). This results in a relatively higher ASF per full-time faculty ratio than its peers.

The ASF per full-time faculty ranges from 3,503 ASF to 7,762 ASF per faculty. The average of the peers is 5,425 ASF per full-time faculty. IUB has 6,426 ASF per full-time faculty, placing IUB second in ranking with the Big Ten peers surveyed.

This benchmarking comparison demonstrated that IUB is extremely efficient in providing education to its student population in both space and faculty ratios compared to other Big Ten universities.

## SPACE NEEDS ANALYSIS

The *IUB Space Needs Analysis for the Master Plan* study focused on the campus-wide level and analyzed physical space needs by major space type. The study also evaluated space needs at the school level and provided information on where each academic school or college stands in relation to recognized space guidelines at current and proposed activity levels. The purpose of the study was twofold:

- To identify and define existing and future space needs to aid IUB in fulfilling its educational mission.
- To provide potential square footage requirements to aid in prudent land use, capacity, adjacency, and campus organizational decision making.

### Space Needs Analysis Findings

#### Existing Space Needs at the Campus-Wide Level

At the campus-wide level in the base year, IUB has a total space deficit of 1,427,014 ASF (2,286,000 GSF). This is equivalent to 26 percent of the existing space on campus.

#### Existing Space Needs by Category

The greatest existing space needs at the base year are in research space and academic office space. This is equivalent to more than 35 percent of the overall existing campus-wide need.

#### Capital Projects

According to the *IUB Space Needs Analysis for the Master Plan*, IUB has approximately 552,521 ASF (885,109 GSF) of capital projects that are approved, funded and programed. Projects included in the study include:

Building Name	ASF
Multidisciplinary Science Building 2	65,000
Auxiliary Library Facility II	21,651
Hutton Honors College	10,215
Ashton Apartment Complex	246,600
Optometry Clinic	13,200
Life Sciences Incubator Building	22,000
Griffey Research and Teaching Preserve	4,298
North End Zone Football Stadium	169,557

The Master Plan section of this report references a list of projects both in construction and under

design that add several current projects to the above list, totaling 1,407,076 GSF.

#### Campus-Wide Projected Space Needs

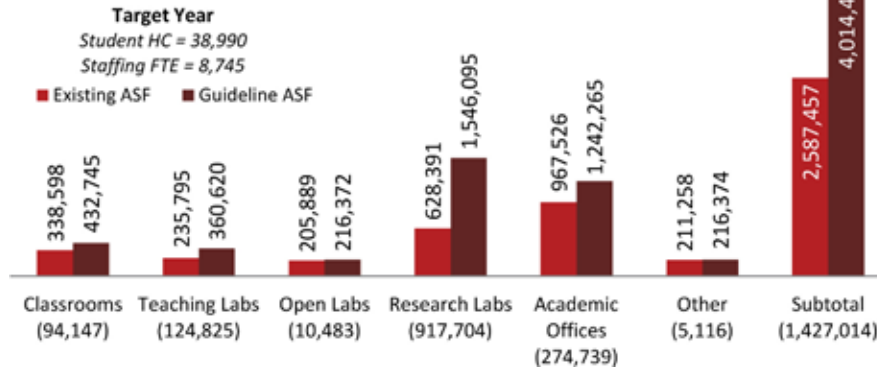
Future year projections, including consideration of the need to replace 602,161 GSF of demolition candidates, suggest that the University can anticipate an overall space deficit for the IUB campus of 2,063,000 ASF (3,270,500 GSF).

#### Projected Space Needs by Category

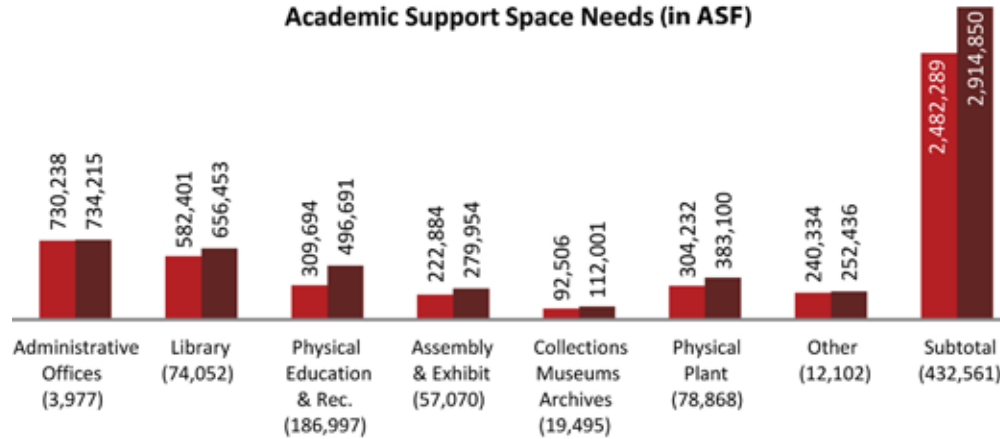
Future year projections show that the greatest space needs remain in the categories of research space and academic office space. These two categories represent 58 percent of the overall space needed at the future year.

Space Category	Future Needs	
	(GSF)	(ASF)
Academic Space	2,286,000	1,427,014
Academic Support Space	680,500	432,561
Auxiliary Space	304,000	203,349
<u>Subtotal</u>	<u>3,270,500</u>	<u>2,062,924</u>
<u>Demolition Replacement</u>	<u>602,161</u>	<u>379,361</u>
Total Space Need	3,872,661	2,442,285

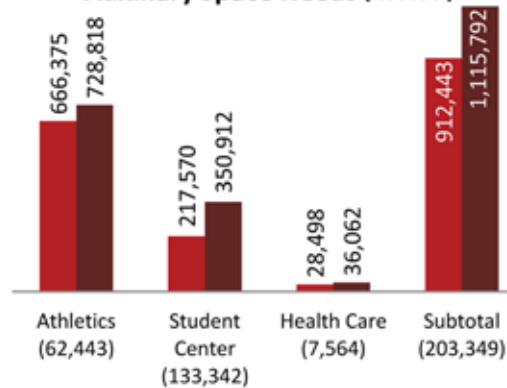
### Academic Space Needs (in ASF)



### Academic Support Space Needs (in ASF)



### Auxiliary Space Needs (in ASF)





Briscoe Quad

## SOCIAL NEEDS

### Residence Life

Campus living communities shape the Bloomington collegiate experience. As of fall 2007, the campus contains approximately 11,600 beds, or 12,500 beds including Ashton Residence Center currently under construction. The campus contains residential zones of different ages, amenity structure, and typology in three main residential areas:

- East of Jordan (Ashton, Eigenmann, Teter, Wright, Forest, Read, and Willkie)
- North Area (Briscoe, Collins, Foster and McNutt)
- Northeast Area (Evermann Apartments;

Campus View Apartments; Tulip Tree Apartments; Banta, Bicknell, Hepburn and Nutt)

Additionally, the campus offers a number of innovative learning communities. Each of these groups adds diversity, vibrancy, and amenities to the on-campus experience:

- Academic Communities
- Freshman Interest Groups
- Living-Learning Centers
- Thematic Communities

The vast majority of the 11,600 beds on campus, 83 percent, are traditional dorm rooms. Apartments on campus are 10 percent of the total, while the most popular form of on-campus housing, the suite-style units, are only 6 percent of the housing stock.

### Existing On-Campus Housing Breakdown

Traditional Rooms	9,730 beds
Suite-Style Units	750 beds
Apartments	1,190 beds
<u>Total</u>	<u>11,670 beds</u>
New Ashton Apartments	830 beds
<b>Grand Total</b>	<b>12,500 beds</b>

*An Indiana University Housing Master Plan Update* was developed separately from the Campus Master Plan effort. This study found that the University was over-supplied in the number of traditional dorm rooms, and underserved by more modern suite-style and apartment-type living. It recommended a significant change in the composition of residential beds on campus, decreasing the amount of traditional rooms and increasing the amount of suite-style and apartments.

In order to remain competitive with its peer institutions, the University must re-evaluate and update its housing stock and provide a wider variety of on-campus housing. This will include a balanced mix of renovated, traditional



residence halls, innovative suite-style units, and new apartment models. This re-mix of housing will attract a greater cross-section of the student population, including retention of more upper classmen living on campus.

In addition to residence life program housing, there are approximately 4,000 students living in Greek housing along North Jordan Avenue. This housing area is largely built out. In order to serve the housing needs of the Greek system and to respond to other thematic residential communities, the University will need land area identified for such future growth.

### CAMPUS GATHERING SPACES

Currently, the Bloomington campus lacks sufficient gathering spaces conveniently located to the variety of users on campus. Gathering spaces include a range of retail and commercial uses, recreational uses, student-run businesses and services, public spaces, small restaurants, casual food, coffee houses, and evening destinations. They encompass both indoor and outdoor spaces, and provide opportunities for interaction, recreation, healthy living, arts, culture, and fun—creating a more fully integrated, lively, and intellectually stimulating on-campus experience.

Direct observations and results from the Student Spending Habits Survey, fall 2004, show the campus is underserved for food choices, and that students generally evaluate the availability and quality of food options, services, amenities, and entertainment on campus as unsatisfactory. Faculty, staff, and visitors attending events and performances are also under-served by campus amenities and gathering spaces.



Starbucks at the Indiana Memorial Union



Indiana Memorial Union Terrace



Existing Retail at the Indiana Memorial Union

### **Untapped Potential**

The University attracts a wide cross-section of the population at different times of the season or year for various purposes that can provide a market for enhanced retail and gathering spaces on campus.

#### **Primary Users**

- Indiana University Students, Faculty, and Staff
- Overnight Guests at the Campus Hotel
- Conference Attendees
- Summer Camp and Direct Indiana University Academic Summer Program Attendees

#### **Secondary/Regional Users**

- Residents of Bloomington
- Residents of Monroe County
- Visitors to Monroe County

Campus athletic events and other popular campus festivities (Little 500, IU Sing, IU Arts Week) draw a significant number of users to

campus. Other key destinations on campus include:

- Indiana Memorial Union: 20,000 visitors (daily, during the academic year).
- Jacobs School of Music: 43,755 visitors (2007-2008).
- Indiana University Auditorium: 400,000 visitors (annual).
- IMU Conference Center: 750,000 visitors (annual).

Taking into account retail expenditures and economic activity in the city of Bloomington and the region, the IUB campus has the potential to capture up to \$40 million annually in expenditures on campus. The primary user group for campus is projected to account for 87 percent of potential expenditures. Thirteen percent of expenditures is projected to come from the secondary/regional user group. Students are projected to account for 70 percent of the total expenditures. This potential commercial expenditure can be translated into the equivalent of up to 30 small businesses and

amenities on campus, for a combined total of approximately 40,000 GSF of additional retail and enhanced gathering spaces. Amenities could range from simple, small food carts/kiosks with outdoor seating to concepts of 600 to 2,000 square feet.

In order to ensure the success of future campus retail, amenities, and enhanced gathering spaces, they must be closely integrated with the renovation of the IMU, areas of campus density, and areas of high pedestrian activity.