MEMORANDUM

To   Board of Regents

From: Board Office

Subject: Follow Up Report on Organizational Review, (Recommendation III – 1)

Date: January 6, 2003

Recommended Action:

Receive the follow-up report on the Organizational Review, Recommendation III-1 related to total facility space needs, utilization, and criteria for design of new and renovated buildings.

Executive Summary:

In May 2001, the Board approved a three-phase Organizational Review of the Board, Board Office and the five institutions. MGT of America, Inc., a consulting firm from Tallahassee, Florida was selected to undertake Phase I of the Review, which identified areas to be studied to improve efficiency, effectiveness and accountability of the Regent enterprise.

At its September 2002 meeting, the Board received a report on the results of Phase II (short-term, in-depth studies of the areas identified in Phase I) and recommendations for Phase III (longer-term studies).

Recommendation III-1

The Board of Regents should examine criteria and models for assessing the total facility space needs and the level of classroom and laboratory utilization and for guiding the design of new and renovated buildings. This objective system should then be used as a guideline to assess the facility needs and utilization of each campus.

The Board Office recommended that Recommendation III-1 not be undertaken at the present time since the Regent universities currently have information and processes related to space in place, and they and the Board currently set priorities on a campus-by-campus basis through a long-term planning process.

Following discussion at the September Board meeting, the Board asked that proceeding with this recommendation be revisited at the January 2003 meeting.

Since that meeting, the Board Office has done extensive research on the three components of the recommendation (models for assessing facility needs; classroom and laboratory utilization; and guidelines for design) and the universities have provided detailed information on their campus space and its utilization, and their current planning processes.

General
Conclusions

Based upon the extensive information received and reviewed, the Board Office continues to recommend that Recommendation III-1 not be undertaken at the present time since the universities and the Board have detailed processes in place that have worked for a number of years.

Many experts have noted that developing models to assess total facility needs does not encompass a total analysis of space; a comprehensive approach, which is commonly referred to as space management, includes, among other factors, an analysis of the quality of the space.

The universities are actively engaged in space management; this comprehensive approach provides the highest quality of information, judgment and expertise, including consultants, in making facility decisions that allocate effectively limited resources. However, each university's approach is slightly different.

The university processes provide flexibility and responsiveness in planning for and addressing the unique short-and longer-term needs of the programs conducted in support of institutional missions.

If the Board were to embark on a systemized approach to assess facility needs, the Board would need to realize that each institution currently operates with a different planning framework, consistent with its organizational structure and institutional mission.

The legislature has recognized the unique nature and needs of the Regents institutions through a separate governance structure that has resulted in wise and effective oversight of the Regent universities' capital development.

Current processes require, among other steps, Board approval of all capital projects with budgets exceeding $250,000. These processes, which have effectively and efficiently provided the necessary framework for capital decisions, assure institutional and Board accountability for the manner in which limited resources are allocated.

While a portion of the recommendation focused on the level of classroom and teaching laboratory utilization, these spaces represent a very small percentage of the total net assignable campus space.

- At the University of Iowa and Iowa State University, classrooms represent less than five percent of total non-residential space, consistent with the percentages at public research universities.

- While the percentage is slightly higher at the University of Northern Iowa, classrooms represent less than nine percent of non-residential space.

- Even if the utilization of the existing classrooms were to be improved, there would be little effect on the total campus space.

Office facilities represent the largest classification of space at the University of Iowa and Iowa State University and the second largest category at the University of Northern Iowa.

- While this finding is not inconsistent with results of studies of public university space, the Board may wish to review carefully the allocation of space for offices in new or renovated facilities.

This executive summary and the report, in total, provide background information, a summary of the universities' analyses, and Board Office conclusions for each of the three components of the recommendation:

- Models for assessing facility needs;
- Classroom and laboratory utilization; and
- Guidelines for design.

FACILITY NEEDS MODELS

Background
Information

Formalized studies and publications dealing with the measurement and improvement of the utilization of college facilities date from the 1920s. University facilities shortages following World War II prompted greater interest, with a number of studies conducted in the 1950s and 1960s.

While some states adopted guidelines in the early 1990s, data currently available indicate that less than one-half of the states have formalized standards / guidelines in place to assess the total facility space needs and level of utilization. (The most recent available information on the states with guidelines is included as Appendix A, page 39.)

Developing space standards / guidelines for the Regent universities would not be appropriate since:

- Development of space guidelines may overestimate universities' space needs, according to some analyses. (see Norton, page 28.)

- Statewide standards do not always recognize institutional differences or distinctions, implying that one size fits all institutions, and can pit one institution against another as a justification for capital appropriations.

- Even in states which use standards, consultants have recommended that "differences in institutional mission, program diversity, or specific strategic plans should be considered in conjunction with standards." (Kaiser and Klein, Facilities Manager, page 11.)

- As noted by Dr. Ira Fink, an authority on campus planning, "Campuses vary considerably in culture, instructional modes, requirements for degrees and amount of research, all of which influence the amount of space needed for a program." (Fink, Planning for Higher Education, Spring 1999, page 11.)

- Space standards are quantitative tools and cannot easily incorporate measures for qualitative factors of physical condition or functionality.

Space Management

In the mid 1990s, the focus changed from development and use of space standards / guidelines to the wider purview of space management, which is the "art and science of maximizing the value of existing space and minimizing the need for new space." (Hier & Biddison, Facilities Manager, page 17.)

Space guidelines are often seen as an entitlement and space management as space allocation or resource management. (Fink, Facilities Manager, April 1996.) Space management can incorporate qualitative factors into the analysis.

University Detailed Analyses

As part of this report, Regent university analyses (details of which are included in Section 1, pages 10-24) contain information on:

- University process to assess space needs;

- Prioritization process of capital projects for new and renovated space;

- Type of space inventory used; and

- Summary of net assignable square feet.

Conclusions

Board Office review of literature on the subject and the information provided by the Regent universities lead to the following conclusions:

- Facility needs are driven by the Regent universities' missions and strategic plans and are consistent with the campus master plans, which are presented to the Board at least once every four years.

- Any space guidelines that are used by the universities provide a basis for analysis and further specialized studies. Since obsolete space does not support program activities as well as modern space, the studies provide a means for determining the program needs from both quantitative and qualitative perspectives.

- Space requirements have changed over time due to technology (such as computers in classrooms and offices).

- Each of the universities has a prioritization process in place for capital projects.

- As specific projects are developed through the planning process, they are communicated to the Board via a number of governance reports including the Five-Year Capital Request, Five-Year All Funds Capital

Plan, Annual Capital Program and Five-Year Plan of the Residence Systems. In this way, the Board is kept apprised of the projects in the planning process.

- Ultimate responsibility for approval of all capital projects with estimated costs exceeding $250,000 rests with the Board of Regents. The Board can request further information before approving any project.

- Each of the universities maintains a space inventory consistent with the *Postsecondary Education Facilities Inventory and Classification Manual* (1992 edition). The format of the Manual permits institutions to add special room use codes as long as these codes can be crosswalked to the codes in the Manual. Some Regent institutions have decided to add special codes.

  - The smallest category of space at the Regent research universities is classrooms. At the University of Iowa classrooms represent approximately 4.8% of the total space (excluding health care and residential); at Iowa State University classrooms represent 4.9% of the square footage, excluding residential space. These numbers compare to an average of 5.2% for 25 public universities, mainly large research campuses presented in a recent analysis. (Fink, Facilities Manager, June 2002.)

  - Classrooms at the University of Northern Iowa represent approximately 8.7% of the total square footage, excluding residential space. Since the University is not a research institution, classroom space is expected to be a higher percentage since there would be proportionally less laboratory space. The 8.7% percent is significantly less than the maximum of 12.4% reported for a public university in the above-referenced study.

  - Detailed information on the square footages and percentages of total space for other categories of space is included in pages 23-24 of this report.

CLASSROOM AND CLASS LABORATORY UTILIZATION

Background
Information

There are no national standards for the number of hours per week that classrooms should be used nor are there standards for the percentage of stations which should be occupied.

According to surveys, the most frequently reported number for classroom use was 30 hours per week.

Guidelines for station (seat) occupancy for classrooms ranged from 50-70% of the stations.

University Detailed Analyses

As part of this report, Regent university analyses (details of which are included in pages 25-35) included information on the following related to classroom and laboratory utilization:

- Specific classroom and laboratory information;

- Criteria and standards for classroom and laboratory space utilization;

- Effect of construction of new classroom space on existing classrooms;

- Process used to assign classes and laboratories; and

- Percentage of the classroom space scheduled by registrar.

The universities reported utilization for classrooms, scheduled by the central scheduling office, as follows:

	SUI	ISU	UNI
Room Hours per Week	36.2	27	35
Station Occupancy	62.4%	78%	N.A.

These weekly room averages are for all classrooms including some very poor rooms with low usage of less than 10 hours per week to some new rooms with technology that are scheduled as many as 50 hours per week.

Factors influencing classroom utilization include available technology within the classroom, as well as the room's condition, capacity, and location. Central campus classrooms are more highly utilized than classrooms located in buildings on the periphery of campus.

Reported utilization of classroom space includes only those credit-generating classes that appear on the schedule as meeting regularly. Classrooms are used, on a routine basis, for many other academic activities including: departmental sponsored seminars and colloquia, formal tutoring and drop-in course assistance, and faculty meetings because departmental conference rooms are not large enough.

Conclusions

Board Office review of literature on the subject and the information provided by the Regent universities lead to the following conclusions:

- Each of the universities maintains information on classroom and laboratory utilization and has criteria for the use of the space.

- The utilization rates reported by the Regent universities are not inconsistent with data reported for other public universities.

- The utilization rates reported by the Regent universities are an indication that the number of sections has decreased as faculty positions have been reduced, and the classes are getting larger as reflected in the station occupancy rates.

DESIGN GUIDELINES

Background
Information

In an 1989 study, MGT noted that space standards / guidelines represent square footage allowances to estimate the need for broad categories of space rather than design guidelines which are applied to specific construction projects.

Sustainable design provides a method for applying environmental principles to all aspects of building design, resulting in healthy, naturally lit, attractive buildings with lower operating and lifecycle costs.

University Detailed
Analyses

As part of this report, Regent universities provided information (details of which are included in Section 3, pages 35-38) on design criteria for new construction and major renovations.

Each of the universities has a design reference manual which is provided to architectural and engineering consultants, who are used extensively in the design of larger university projects. This design reference manual information is provided to achieve quality campus structures and landscapes, requiring minimum maintenance effort and operating expense.

Conclusions

Board Office review of literature on the subject and the information provided by the Regent universities lead to the following conclusions.

• The design of building additions and renovations are based upon Board approved program statements, which describe the facility in terms of purpose and scope. These usually detail the functions and square footages of the individual spaces to be included in the project.

• The consultant design teams provide valuable information related to current standards and best practices for a particular design challenge.

• The expertise of the university staffs and the professional design consultants hired for specific projects help to ensure that specific spaces are functionally optimal and fiscally responsible.

• The universities have utilized and are continuing to explore sustainable design options as one method to control future operating costs for new or renovated buildings.

• Since the Board must approve the schematic design for any new building, addition or renovation when the project budget exceeds $1 million, final authority for approval of the design rests with the Board of Regents. It is appropriate that the Board have this authority rather than relying on specific criteria which may not be appropriate for a given project.

The following provides a table of contents for the remainder of this report:

Background:

Phase I Report   The Regents Organizational Review included recommendations of areas to be studied to improve efficiency, effectiveness and accountability of the Regent enterprise.   A Phase III Recommendation (long-term) was proposed which would have the Board examine criteria and models for assessing total facility space needs. It would also include the level of classroom and laboratory utilization and guidelines for the design of new and renovated buildings. This "objective system" would then be used as a guideline to assess the facility needs and utilization of each campus.

The recommendation was based upon the following observations included in a report by MGT presented to the Board in January 2002:

- Facility construction and renovation projects are based upon carefully designed and approved campus master plans. However, neither the Regents nor the universities use facility planning and utilization guidelines in establishing the master plan or in determining when a university needs a new building or needs to remodel existing buildings. The evaluation processes currently in place represent sound management, but could be further improved by the use of needs assessment guidelines.

- Our sample analysis of facilities at the Regent institutions indicated that all of the institutions can improve the utilization of existing space. (MGT did not provide data as part of its report.)

Phase III Project   As part of the materials submitted to the Board for its September 2002 meeting, the Board Office recommended that the above identified Phase III project not proceed at this time.

In response to the Board Office recommendation MGT provided the following comments:

- This recommendation might appear to relate only to capital spending rather than operating expenditures, but the continuing development of new space places great stress on the operations and maintenance budgets of the universities (e.g. increased custodial and utility expense). You will recall that our Phase I analysis suggested that the universities are already overbuilt when compared with national norms. The absence of the recommended criteria, which were to be developed in Phase III, will continue the status quo and leave the Regents with no reference point to review proposals for new buildings. Ultimately, the absence of criteria will likely result in further diversions of operating funds to support only marginally needed facilities.

Board Office comments were as follows:

- It appears that the costs of this project would outweigh the benefits. The institutions and the Board currently set priorities on a campus-by-campus basis through a long-term planning process (five-year capital plan and annual capital improvement plans). By the time these projects get to be a top priority in the upcoming year (such as the Art Building at SUI), they are really several years overdue. Implementing a set model for assessing total facility space needs seems more appropriate when money is not an object and staff have extra time on their hands.

The Board asked, at its September 2002 meeting, that the proposed action of Recommendation III-1 be revisited at the January 2003 meeting.

Analysis:

While MGT noted (as stated above) that its Phase I analysis had suggested that the universities were already overbuilt compared with national norms, the Board Office cannot locate this conclusion in the Phase I report, and thus, cannot determine the basis upon which this conclusion was reached.

There are no data to indicate that the Regent institutions are overbuilt. In fact, a comparative space inventory study for Fall 1999 undertaken for 27 campuses of 14 institutions of higher education (primarily members of the Big Ten), which are members of the Higher Education Facilities Management Association, showed that in terms of Academic /

Administrative Assignable Square Feet per FTE enrollment, Iowa State University and the University of Iowa ranked at or below the mean. The data from the report are included on a graph in Appendix B, page 40.

Classroom utilization is a poor indicator of space needs on the campuses due to the low percentage of classrooms to total campus space and the need to allow scheduling flexibility for both students and faculty.

Three Components   The universities and the Board Office worked together to develop a comprehensive approach to inform the Board of the current processes in place to address the items included in Recommendation III-1. This approach included the development of a series of questions to address the three components of Recommendation III-1 on:

- Models for assessing facility needs;
- Classroom and laboratory utilization; and
- Guidelines for design.

The following three sections of the report include background information as well as the listing of questions and institutional responses.

Section 1: Facility Needs and Models

BACKGROUND   The following background information, including a review of the literature, on facility needs and models (often referred to as space standards) is provided:

Studies   Formalized studies and publications dealing with the measurement and improvement of the utilization of college facilities date from the 1920s. The facilities shortages following World War II prompted greater interest. A number of studies were conducted in the 1950s and 1960s.

1971 – *Higher Education Facilities Planning and Management Manuals*   In 1971, the Western Interstate Commission for Higher Education, in cooperation with the American Association of Collegiate Registrars and Admissions Officers, published the *Higher Education Facilities Planning and Management Manuals,* which were designed for individuals who were responsible for planning but who were not necessarily experienced specialists in the field. It was assumed that the primary audience for the manuals would be individuals in new and/or smaller four-year institutions, both public and private, and community colleges. (Western Interstate Commission for Higher Education, Manual 2, pages 4-6.)

- It appears that many of the space standards and utilization norms currently used as standards / guidelines by institutions and higher governing / coordinating education boards across the country were based upon the original work done in California in the 1950s and 1960s (MGT 1989 study, page iv) or the Manuals, although the Manuals indicate that they were not written for large public universities.

During the late 1970s and early 1980s there were only a few efforts in this area. "Slower enrollment growth and funding restrictions reduced the emphasis on studies in this area." (MGT 1989 study, page 1.)

Definition – Space Standard / Guideline	A space standard / guideline refers to the number of assignable square feet (ASF) (sometimes referred to as NASF – net assignable square feet) allowed per demand unit for a category of space, such as square feet per student for a classroom or teaching lab; square feet per graduate student for research activities; or square feet per faculty member for office space. (MGT 1989 study, page ii)
Space Standards / Guidelines in Other States	According to a 1996 study by MGT, which updated studies by the firm in 1989 and 1992, space standards or guidelines exist for 4-year institutions in 21 states. (page 4) However, in only 15 states are the standards and guidelines used by systems of higher education. Fifteen of the states reported standards being used for more than 10 years at the time the report was compiled (or prior to 1986).

- As referenced previously, a summary table from the MGT report, which show the states having space standards and guidelines, is included as Appendix A, page 39.

In a 1998 study, Harvey Kaiser and Eva Klein noted that those states with substantial capital expenditure experience (e.g. New York, California, Ohio and Texas) or those states anticipating large enrollment growths (e.g. Virginia, Florida and Georgia) place a higher emphasis on space standards as a component of their capital budget review process. (Kaiser and Klein, Facilities Manager, page 6.)

The authors further noted that typically policy documents for states which have space standards urge flexibility in their application (Kaiser and Klein, pages 7 and 8.)

Types of Guidelines	Guidelines are typically provided for classrooms and class laboratories although they may be provided for other space types:
Classrooms	The review of standards / guidelines for classroom space by MGT (see 1989 study) indicated that the formulas used by all states were similar, involving assumptions of the number of hours of room and station use per week and square footage allowances per station. (MGT 1989 study, page iv.)

- Classrooms actually represent a very small proportion of the nonresidential space at public universities. (Fink, Facilities Manager, June 2002.)

- The size of a classroom, when measured in area per station, is a function of the type of furniture in the room. Thus, the method of teaching and the type of learning environment can directly impact space requirements.

Teaching Laboratories	All states with guidelines estimate the need for teaching laboratories using a formula similar to that used for classrooms, except that the required number of hours of room use per week is lower than that in classroom formulas and expectations for station occupancy are higher.

- Most states with guidelines apply space allowances per station for instructional laboratories that vary by discipline and several states have space allowances that vary by type of institution and/or level of instruction.

- Many of the laboratory standards used in states are quite detailed. For example, there are 14 different categories for Agricultural Teaching laboratories in Alaska, with assignable square feet per station ranging from 40 to 80 square feet per station. (see MGT 1996 report.)

- Many of the states which have guidelines do not apply them to medicine, dentistry or veterinary medicine as the space for these space-intensive professional disciplines is determined on a case-by-case basis. (State Council of Higher Education for Virginia, page 1 and Alexander and Lewis, Planning for Higher Education, Fall 2000, page 32.)

Research Laboratories

In 1989, MGT reported that only 13 states had standards / guidelines for research laboratory space and the formulas used in those states varied substantially in terms of both demand factors and the discipline categories used.

- MGT's 1996 report provided information on the guidelines, some of which are quite detailed. For example, in Nebraska, assignable square footage (ASF) for civil engineering laboratories is 450 ASF per research position or student. In South Carolina, guidelines provide for civil engineering research modules ranging from 325 to 425 ASF. In Oregon, guidelines provide for engineering research labs of 300 ASF.

Other states compute the square footage based upon annual research expenditures. (State Council of Higher Education for Virginia, page 5.)

Other Spaces

A variety of demand factors are used by the states to generate allowances for academic offices and administrative support space for academic programs. (MGT 1989 study, page vi.)

- Some authors have noted that one of the areas in which campuses could concentrate future efforts is the management and distribution of office and support space, which generally accounts for the largest block of space on campus. (Fink, Facilities Manager, April 1996, page 32.

Guidelines do not Address Quality

Space standards used for planning and/or utilization analysis omit treatment of the condition of facilities as a component of the capital planning and space management process. "Space planning standards are quantitative; they lack a qualitative "condition factor" which includes the physical condition of a space and its suitability or functionality for a designated activity." (Kaiser & Klein, Planning for Higher Education, Spring 1999, page 8)

Other Problems
with Guidelines

Dr. Ira Fink, who has worked in the higher education planning field for more than 30 years, argues that space guideline formulas are often out of date and do not account for extensive use of information and computer technology in the office, classroom, and laboratory. He also states that guidelines fail to address other important campus needs such as student lounge or gathering space, or other space needs related to nonacademic needs. (Fink, Facilities Manager, April 1996, page 34.)

Dr. Fink argues that changes in technology, which require everyday use of desktop computers and related equipment, result in the need for more office space and more space within instructional areas. These needs have generally not been considered in the space standards and guidelines developed as "the current standards are a carry forward from the past to the present, not a projection of the needs of the future." (Fink, Facilities Manager, April 1996, page 33.)

Space
Management

In recent years, there has been a focus away from the development and use of space standards / guidelines to a wider purview of space management, which is the "art and science of maximizing the value of existing space and minimizing the need for new space." (Hier and Biddison, Facilities Manager, April 1996, page 17.)

- Traditional tools, which have concentrated on measuring inputs, include:

  - Space Guidelines – The authors report that in many cases the guidelines have not been updated to account for the impact of technology, new pedagogies, and new ideas about classroom furnishings, and are not good standards for contemporary functional needs. They also note that that since space requirements vary according to the unique needs of each institution, **ideally each campus should develop its own guidelines based on age and construction type of the buildings, specific teaching pedagogies, and technological infrastructure**. (emphasis added) (Hier and Biddison, Facilities Manager, April 1996, page 19.)

  - Space Inventory, which provides the baseline information for almost all space management analysis.

  - Space allocation modeling which compares the amount of space allocated and /or required for a department or administrative unit based on functional requirements versus the amount that may be suggested by space guidelines.

- Productivity tools, which measure outputs and outcomes, such as how well space is used include:

  - Classroom space utilization assessment including room and seat utilization.

- Financial performance target which applies to revenue-generating spaces.

- Capital asset plan charts a long-term plan for facility use and investment, including program changes, physical changes (both modernization and repair), projected capital outlays over a multi-year period, and phasing of cash flow. The capital asset plan utilizes four key tools:

  - Market assessment – ensure that customer satisfaction is covered.

  - Programmatic assessment – building evaluation to determine which buildings meet program objectives in their current state, which need altering, and which can be reassigned to other, more appropriate campus needs.

  - Physical assessment – physical review to identify deferred maintenance and capital renewal requirements.

  - Financial assessment – baseline financial condition of a facility, including historical costs of operation, structure of existing debt service, and for revenue-producing facilities, net revenue.

UNIVERSITY DETAILED ANALYSES

The questions related to facility needs, space standards, and inventory information and the institutional responses are detailed below:

Question

Describe the university process, including quantitative and qualitative analyses, used to assess campus, college and departmental space needs. Include specific references to the campus master planning process, role of campus planning committees, and the process used to determine whether a request should be for new construction as opposed to a renovation.

UNIVERSITY OF IOWA

Introductory Comments

The University of Iowa is extremely diverse; consequently space-related decisions are made in a variety of ways, including consultative processes involving many people with broad ranges of expertise and responsibility, as are needed for the issue to be decided. Through a comprehensive approach, the highest quality of information, judgment and expertise are brought to bear in making decisions that allocate limited resources effectively.

The processes in place enable flexibility and responsiveness in planning for and addressing the unique short-and longer-term needs of the many programs conducted in support of the University's mission. Longer-term plans set a direction, but do not and should not impede decisions based upon immediate opportunities identified by academic leaders, student demands, changes in regulatory requirements, as well as the level and direction of private support.

One example of a significant driving force in the University's capital development is its success in attracting external funding. An essential requirement related to receipt of external funding is the provision of up-to-date facilities in sufficient quantity and quality to support the staff and research activity funded by grants and contracts.

Operations Manual Provisions and Related Processes

Chapter 36 of the University's *Operations Manual* (Control, Use, and Assignment of Physical Facilities Policy [attached as Appendix C, page 41]) sets forth guidelines that govern space planning and assignment on the campus. The policy states, "space assignment is the responsibility of central administration. Space is assigned to colleges, departments and support units of the University to enable them to carry out their assigned responsibilities and to house the personnel associated with those activities, consistent with strategic planning initiatives of the University."

To assure efficient utilization of space, including ongoing monitoring of space usage, the policy sets forth conditions (related to reductions in personnel, teaching, research or service loads) that will activate a space assignment analysis. This analysis may result in space reassignment or reversion of the space to the central administration for use in meeting other emerging needs of the University.

As stated in the policy, priorities for capital projects are determined by the president, provost, vice presidents, and collegiate deans. The Campus Planning Committee is a charter committee that advises the President and the Vice President for Finance and University Services on issues of campus planning and development. The President has created a Facilities Renewal and Equipment Committee (FREC) which includes a space subcommittee.

The colleges and the Office of Space Planning and Utilization conduct periodic surveys of space use. These surveys confirm room occupants by department and name, and verify floor plans and room use. Detailed space utilization plans are required by the federal government when indirect cost recovery rates on sponsored research are negotiated.

Campus Planning Framework – Campus Master Plan

Long-term campus-wide planning is structured through the campus master planning process, using the Campus Planning Framework campus master plan to guide the process. The plan includes development goals, objectives and policies (referred to as planning principles), and more specific implementation strategies and development guidelines, which become a guiding framework for development. This document is used by the Campus Planning Committee in the regular execution of its duties in advising on all campus capital projects.

Small Area Studies

The assignment of space and location of that space within the overall plan are determined when the specific requirements are known, at which time a more detailed planning--and often architectural/engineering--process is initiated. This more detailed small area or campus precinct study is initiated to assure the compatibility of space requests with the overall master plan.

Process for Space Allocation / Assignment

When academic units are unable to meet needs within assigned space, or through remodeling, they make requests for additional space through their collegiate Dean to the Provost's Office and the Office of Space Planning and Utilization, which review options for solutions.

The Provost evaluates proposals for most academic units, with the exception of the Health Sciences, and applies the principles from the University mission statement to guide the space assignment decisions. If the Provost determines that a proposal is aligned with the University's mission and strategic plan, the proposal moves forward to the Office of Space Planning and Utilization. Not only are the plans based on efficiency and effectiveness, they are intended to accomplish new initiatives and to continue stable, ongoing programs that further the teaching, research and public service missions of the University.

- The process for the Health Sciences campus is coordinated by the Vice President for Health Affairs with involvement by the Vice President for Finance and University Services.

This process can also work in the reverse order since staff in the Office of Space Planning and Utilization are often aware of new opportunities for space reassignment, as they work with the academic units to develop their space plans.

Planning Principles and Related Factors

In addition to an evaluation of the individual programmatic needs to be served and how these fall within the University's strategic plan, the University is guided by overarching principles in assigning and utilizing space. These include:

- the institutional priority assigned to a proposed new use;
- physical suitability of the space and campus location for the proposed new use, including the need for proximity to other academic units or services, and any accreditation standards that a given space must meet;
- compatibility of the new use with other functions at that location; and
- availability of funding to remodel the space.

An application of the planning principles is illustrated in Appendix D, page 42.

Physically Central Campus Location

The University places a high priority on keeping classrooms and academic programs serving the general undergraduate program in a physically central campus location. This placement respects students' frequent need to move about the campus within the 10-minute class change cycle.

Planning by Other University Entities

Beyond the University-wide process described above, a number of other areas of campus have highly specialized operations and needs, and accordingly have developed unique processes for managing their capital planning. These include among other units Residence Services and The University of Iowa Hospitals and Clinics, which each report to the Board

annually in governance reports. Information on the process at the University of Iowa Hospitals and Clinics is included as Appendix E, page 43, to this report.

IOWA STATE UNIVERSITY

Capital Project Process	Capital projects begin when departments believe that facilities are not available to allow them to successfully complete their goals. Projects often result from programmatic changes such as enrollment changes or shifting research activities, requiring new or additional space to support laboratory needs.
	Projects can be developed further after approval by the President and following review by the affected Deans or Vice President and the Provost.
	The Department of Facility Planning and Management (FP&M) helps the user clearly define the problem and investigate solutions. For major remodeling projects, FP&M develops a comprehensive project to address all of the facilities needs, including fire safety, deferred maintenance, accessibility, and energy conservation.
	College administrators and planning committees review the project to establish justification and priority. The college judges the project and its relationship to the strategic plan and the priorities of other projects in the same college. Changes may be made for a variety of reasons including the project is not needed because the problem can be solved in another way or the need is not great enough to warrant significant capital investments.
Cost Estimating	Cost estimating is important. Early cost estimates are based on the cost-per-foot for similar projects and their accuracy is limited by lack of detail. As the project concepts, including the site are more fully refined, specific and accurate component costs can be developed.
Capital Projects Council	Projects are reviewed by the President's Capital Projects Council (CPC) where concept approval is required before more detailed planning is initiated. FP&M assists the CPC by reviewing and preparing budgetary cost estimates to determine the feasibility of a project. There are a number of levels of review and decision points to make sure that a project is justified.
Context of Strategic Plan	The project is reviewed in the context of the approved University's strategic plan. Completion of the *Campus Master Plan* has allowed the University and the Board of Regents to relate the need for a project with long-term development plans of the University. Additionally, the review by the administration considers the relative priority of each of the projects and its likelihood of success and constituent support. Project needs often can be solved in a number of ways; sometimes several smaller projects can be combined into a single larger project. Projects are occasionally phased to meet either programmatic, construction, or funding constraints.

Facilities Assessment Model

A Facilities Assessment Model is used to provide comparative information about the relative need for space to support a department or program's goals and objectives. The Model provides a quantitative analysis based on the number of faculty/staff/students in a program and the types of activities that require space.

The following groups of data and room types are used in the Model, the details of which are included in Appendix F, page 45, to compare the actual and estimated areas for each department or unit. Each group is assigned a space factor that has been calculated to reflect the needs, hours of use and types of activities that take place in those rooms. To calculate the area required for each different room type, the manner in which the space is utilized must be taken into consideration to generate meaningful results:

- Enrollment
- Teaching Laboratories
- Classrooms
- General Use, Service Space
- Gymnasiums

- Offices
- Research Laboratories
- Library and Study Space
- Support Space
- Other Space Categories

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Comprehensive Campus Plan

The Comprehensive Campus Plan by Caudill Rowlett and Scott (1968), which addresses land use, architectural considerations, implementation strategies, and circulation and utility development, has guided the development of the University of Northern Iowa campus. The Plan's concepts have been closely adhered to throughout the years. The Facilities Planning office works with the administration, faculty, staff, and students in periodic updates to the Campus Plan, and in execution of the concepts through renovations and new facilities.

Facilities Planning Advisory Committee

In considering space needs, the University of Northern Iowa utilizes a broad based committee known as the Facilities Planning Advisory Committee (FPAC). Membership includes representation from the Academic Division, the Administration and Finance Division, the Student Services Division, and the Advancement Division of the University. In addition, there are representatives from the Faculty Senate, the Council of Department Heads, the Deans Council, and the government of the student body.

Requests for space are submitted to the Committee and considered in relation to the existing space, adherence to the University's strategic plan, and projected needs. Changes to existing space assignments are recommended by the Committee and forwarded for final action to the President's Cabinet consisting of the University President and the Vice Presidents.

Classroom Issues   When dealing with classroom issues, the FPAC receives recommendations from the Registrar's Office related to the quality and size of classrooms to ensure that critical needs of the University are being met.

Question   ***What is the campus process used to prioritize capital projects for new and renovated space? (While the focus of this question is academic space, please include residence system and auxiliary space to the extent that decisions related to new or renovated space are needed.)***

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Priorities for capital projects are determined based on the University's strategic plan through collaboration of the president, provost, vice presidents, collegiate deans, director of the Facilities Services Group, Facilities Renewal and Equipment Committee, and the Campus Planning Committee.

The capital planning process is based on efforts that are first carried out at the unit level, to best respond to the fundamental programmatic needs of the institution.

Capital projects evolve and may ultimately take different forms than initially assumed. The consultative design process can result in discovery of other needs and corresponding design solutions that compatibly and cost effectively address multiple space needs simultaneously.

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Continuous Planning   Planning for capital projects occurs continuously with the goal of having materials ready and approvals secured in sufficient time to submit them to those with the potential to provide resources. Thus, the capital planning process intersects with those processes that:

- establish institutional priorities for state capital fund requests;
- establish priorities for fund raising;
- seek to secure funds from various granting agencies; and
- manage and commit operating funds.

Capital planning includes faculty, staff and administrators from the department/unit that will benefit from the project; planning staff from Facilities, Planning and Management; the provost and vice presidents and/or their staffs; and the Capital Projects Council (CPC), which is chaired by the president.

Four Phases of
Planning

Planning occurs in four phases for projects with budgets $250,000 or greater. The phases, which are sequential and yet fluid, are:

- Phase One -- Problem Identification;
- Phase Two -- Preliminary Planning;
- Phase Three A -- Architectural Feasibility Study;
- Phase Three B -- Preliminary Funding Feasibility Study; and
- Phase Four -- Funding Feasibility Study

Approval from the CPC is required to move from one phase to the next. Within each phase there is considerable flexibility to gather and assess information, develop preliminary ideas and ultimately prepare a recommendation for submission to the CPC. The process precedes formal review and approval by the Board of Regents, State of Iowa. The entire process from identifying an issue or problem by a department/unit to the final approval from the CPC, prior to submission to the Board of Regents for approval, can be as long as a year.

More complete information on the phases is included in Appendix G, page 51.

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University Capital
Plan

The Facilities Planning Advisory Committee that considers space needs at the University also considers and makes recommendations for the University's Capital Plan. Each year, the Committee receives recommendations from each division vice president regarding priorities, as well as updates from units with on-going capital projects. The Committee evaluates the requests in relationship to overall University needs, priorities, and consistency with the strategic plan, and forwards its recommendations to the President's Cabinet for final approval.

Master Plans

In addition to the campus master plan, several separate master plans have been created for varying entities.   The University uses these master plans to assess current facilities and to plan future facilities. A Food Service Master Plan was completed and is currently providing direction for major renovations to the Department of Residence and Maucker Union food service facilities. A West Campus Master Plan and Land Use Study was recently completed, as was as a South Campus Master Plan and Land Use Study. These studies are being used in planning development of these areas of campus.

Question   ***What type of space inventory does the university keep and what data elements does it include?***

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Current Space
Database

The space database currently in use, FIPS, is a "home grown" system residing on the campus mainframe computer. It contains the following data elements:

- Building name;
- Building address;
- Building number;
- Building gross square feet;
- Building net square feet;
- Year of building construction and major additions;
- Room number;
- Room description (e.g. "office," "laboratory," etc.);
- Department to which room is assigned;
- Square footage of each room;
- Room use code, denoting category of use (per *Postsecondary Education Facilities Inventory and Classification Manual, 1992*)
- Capacity, in the case of classrooms and instructional labs

Building Database   A second database, BLDG, provides functions to establish new buildings and update building information. It includes data elements for building information as in FIPS.

New Software   Finance and University Services is in the process of implementing a new space management software package, the Facilities Information System (FIS), which will be based on an Oracle relational database. This new system will be accessed by users through a Web interface, and will replace both FIPS and BLDG.

The software will be able to integrate space data with other Facilities Service Group management systems, including the work order system. The new software will improve capacities for queries and report generation and will eventually link space data directly to floor plans.

Plans are to integrate the new space management software package with the grants and contracts indirect cost study, thereby significantly streamlining the University's process for identifying spaces to include in the University's indirect cost calculation.

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Space Inventory
Program

The Space Inventory is maintained in a module of an integrated suite of software applications that support Facilities Planning and Management activities. Through data integration, the data are available to support Facilities Management work orders, preventive maintenance, issuance of keys and energy management. Other University departments including

academic departments, Environmental Health and Safety, Public Safety, Telecommunications, and the Business Office also use the data.

The Inventory contains detailed information on every site, building and space within each building, to allow gross and usable areas to be calculated. All rooms, departments, agencies, room types and functions (including instruction, organized research, department administration, extension, sponsored research support and student services) are given a unique code. The space is classified and listed according to the *Postsecondary Education Facilities Inventory and Classification Manual of 1992*. The Manual's common definitions allow interinstitutional benchmarking.

The capacity for classrooms and teaching laboratories is included in the inventory.

Every space within a building is given a room number on the building floor plan which matches the room number in the Space Inventory.

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Space Inventory Program

The University maintains an inventory of all space on campus utilizing a space management program called "Archibus." This program allows the University to track the following information:

- Building Name;
- Building Code;
- Floor Code;
- Room Code;
- Room Area;
- Room Standard;
- Building Gross Square Feet (GSF) and Net Assignable Square Feet (NASF);
- Division; and
- Department

All spaces on campus are classified in accordance with the *Postsecondary Education Facilities Inventory and Classification Manual of 1992,* which is the latest version and most widely used classification system for higher education.

Question

Provide a summary of the university's net assignable square feet using the Postsecondary Education Facilities Inventory and Classification Manual (1992 edition).

Each of the universities has provided summaries of their net assignable square feet (NASF) as shown in the following tables. (Components of each of the classification categories are listed in Appendix H, page 53.)

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The table below is a summary of the SUI net assignable square feet (NASF) as of October 2001:

Code	Classification	Net Assignable Sq. Feet.	% of Total (excluding Health and Residential)	% of Total
100	Classroom Facilities	288,835	4.79%	3.58%
200	Laboratory Facilities:			
	Instruction	326,365	5.41%	4.05%
	Research / Nonclass	835,382	13.86%	10.35%
300	Office Facilities	1,864,827	30.94%	23.11%
400	Study Facilities	516,188	8.56%	6.40%
500	Special Use Facilities	607,129	10.07%	7.53%
600	General Use Facilities	719,778	11.94%	8.92%
700	Support Service	550,806	9.14%	6.83%
00	Unclassified Service	317,869	5.27%	3.94%
	Subtotal	6,027,179	100.00%	74.70%
800	Health Care Facilities	673,566		8.35%
900	Residential Facilities	1,367,297		16.95%
	Subtotal	2,040,863		25.30%
	TOTAL NASF	8,068,042		100.00%

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The table below is a summary of the ISU net assignable square feet (NASF) as of October 2002:

Code	Classification	Net Assignable Sq. Ft.	% of Total excluding Residential	% of Total
100	Classroom Facilities	213,690	4.88 %	3.16%
200	Laboratory Facilities:			
	Instruction	474,627	10.85%	7.02%
	Research	646,391	14.77%	9.56%
300	Office Facilities	1,148,132	26.24%	16.99%
400	Study Facilities	274,722	6.28%	4.06%
500	Special Use Facilities	738,756	16.88%	10.93%
600	General Use Facilities	363,142	8.30%	5.37%
700	Support Service	372,252	8.51%	5.51%
800	Health Care Facilities	63,335	1.45%	.94%
	Unclassified Service	80,871	1.85%	1.20%
	Subtotal	4,375,918	100.00%	64.74%
900	Residential Facilities	2,383,350		35.26%
	TOTAL NASF	6,759.268		100.00%

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The table below is a summary of UNI's net assignable square feet (NASF) as of October 2002:

Code	Classification	Net Assignable Sq. Ft.	% of Total (excluding residential)	% of Total
000	Unclassified Facilities	19,657	1.00%	0.70%
100	Classroom Facilities	170,148	8.67%	6.09%
200	All Laboratory Facilities	228,458	11.64%	8.17%
300	Office Facilities	413,800	21.08%	14.80%
400	Study Facilities	165,548	8.43%	5.92%
500	Special Use Facilities	502,886	25.62%	17.99%
600	General Use Facilities	352,168	17.94%	12.60%
700	Support Facilities	106,087	5.41%	3.79%
800	Health Care Facilities	3,934	.20%	0.14%
	Subtotal	1,962,686	100.00%	70.20%
900	Residential Facilities	833,154		29.80%
	TOTAL NASF	2,795,840		100.00%

Section 2: Classroom and Laboratory Utilization

BACKGROUND The following background information, including a review of the literature, on classroom and laboratory is provided:

Definition Utilization standards / guidelines refer to the expected number of hours available classrooms and teaching laboratories will be used each week and the proportion of student stations (the seats in the room) which are expected to be filled.

No National Utilization Standards No national room utilization rate standards exist for academic facilities. While a 1971 study by the Planning and Management Systems Division of the Western Interstate Commission for Higher Education specifically declined to recommend room utilization rates for classrooms, it suggested that "typical assumed Average Room Utilization Rates (RUR) might range from 20 to 32 hours per week and assumed Average Station Occupancy Ratios (SOR) from 0.45 to 0.85 hours per week" (Western Interstate Commission for Higher Education, Manual 2, page 61) but the rates at individual institutions are affected by such factors as the size, type, location, and age of the institution, course requirements, section size cutoff and scheduling practices, teaching methods, time preferences of faculty and students, and the suitability and condition of rooms. (Western Interstate Commission for Higher Education, Manual 2, pages 145–149.)

The manual notes that the factors which tend to raise the RUR may lower the SOR, and vice versa. "Section Size is by far the most pervasive factor in all of the decisions which affect the establishment of SOR criteria." (Western Interstate Commission for Higher Education, Manual 2, page 149.)

Room utilization rates reflect management philosophy and practices and pedagogy (better instruction with two 1-½ hour blocks of time as opposed to three 1-hour blocks).

If rooms are scheduled too heavily, the scheduling may restrict the flexibility needed for modern teaching methods. If they are scheduled too lightly, there may be an overabundance of classrooms.

Since a class laboratory is typically designed for a particular course or group of courses, it is usually assigned to the control of a department or similar organizational unit.

MGT 1996 Study

The 1996 MGT study referenced earlier in this report noted that 20 states had standards / guidelines for four-year institutions for classroom weekly room hours and station occupancy ratios.

Classroom Weekly Room Hours

Weekly room hour guidelines ranged from a high of 42 hours per week in the University of California System to a low of 28 hours per week in doctoral institutions in South Dakota (a difference of 14 hours). The most frequently reported number was 30 hours per week.

Guidelines usually apply only to credit-generating classes that appear on the schedule as meeting regularly. Classrooms are used for many other academic activities on a routine basis, but this usage is not included in the utilization reports.

Classroom Station Occupancy

Guidelines for classroom station occupancy ranged from a high of 71.4 % in California to 55% for doctoral institutions in South Dakota, a difference of 16.4%.

Class Laboratory Hours and Stations

Twenty-three states reported standards/guidelines for teaching (class) laboratories. Since a class laboratory is typically designed for a particular course or group of courses, it is usually assigned to the control of a department or a similar organizational unit. Due to the specialized nature of the facilities, the required number of hours of room use per week is lower than for classrooms, but the expectations for station occupancy are higher.

The reported guidelines ranged from 25 weekly room hours and 80% occupancy ratios to for the California State University and University of California Systems to a low of 16 hours per week with a 75% occupancy ratio for doctoral institutions in South Dakota.

UNIVERSITY DETAILED ANALYSES

The questions related to classroom and laboratory utilization and the institutional responses are detailed below:

Question   *Does the university maintain specific classroom and laboratory information, including accessibility, type of technology available etc., by room?*

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Classrooms   For the centrally scheduled General Assignment classroom pool, the University central space database (FIPS) lists all general assignment classrooms and classroom support spaces, such as closets for equipment pools. This database records size and seat capacity for each room.

The Office of Space Planning and Utilization manages the general assignment classrooms. The Office maintains a database of classroom equipment and furnishings. This database supports budget projections and maintenance schedules with information on model and purchase date for each equipment item in each location.

The Office of Space Planning and Utilization maintains a Web page (http://spu.fsg.uiowa.edu/GA%20Rooms.HTM), listing each classroom with its seat capacity, location, equipment and other physical characteristics, and information on equipment operation.

All general assignment classrooms are physically accessible. Rooms seating 70 or more are equipped with assistive listening technology.

The central database lists departmental classrooms and instructional laboratories, with their size, seating capacity and departmental assignment.

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Classrooms   The complete inventory of classrooms is maintained in a database as part of the room scheduling system. The database contains information about the room's location, capacity, furniture style, air conditioning, technology, and accessibility. As departments develop their course offerings, they specify their preferences for classroom allocations based on the features of a room that are needed to meet the specific requirements of a class. The system attempts to match the available classroom resources with the departmental requests.

Classroom attributes available to match with department scheduling preferences include the following:

- Seating Capacity;
- Location by Zone and Partition;
- Air Conditioning;
- Moveable Tables and Chairs;
- Moveable Tablet-arm Chairs;
- Fixed/Stationary Tables;

- Fixed/Stationary Tablet-arm Chairs;

- Video Projector ½" VHS;

- Video Projector and Computer Output;

- Chalkboard Greater than 36 Linear Feet; and

- Projection Screen Size for Simultaneous Projection

Class Laboratories   The laboratory information contained in the Facilities Inventory is much more limited. The equipment inventory of these spaces is maintained in a database, but it is not used centrally as a basis for scheduling these rooms because departments are responsible for scheduling their own laboratories to meet the specific needs of their own classes.

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The University endeavors to ensure that all physical barriers that would preclude learning are removed to provide an accessible learning environment. Several entities maintain information about classroom technology. The Center for Educational Technology, Registrar's Office, and individual departments track amenities that are available in individual classrooms. When specific requirements need to be met for an instructor, these entities work together to accommodate the needs.

Question   *What type of criteria and standards (quantitative [hours per week, number of seats occupied etc.] and/or qualitative [classrooms or laboratories that are only used when no other space is available due to poor quality etc.]) are applied by the universities in managing the utilization of classroom and laboratory space?*

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General
Assignment
Classrooms
For the centrally scheduled general assignment classroom pool, the regular teaching week is 50 hours, running from 7:30 a.m. to 5:30 p.m. five days a week. Courses are expected to be offered at the regular teaching times, to maximize room use.

At the start of the scheduling process, the Office of the Registrar sends a Call for Copy to departments, enclosing "Scheduling Regulations and Departmental Allocations" (copy for the 2003-2004 academic year is attached as Appendix I, page 55) and each department's allocation of teaching hours. This allocation sets an expectation for the number of class hours the department may use, based on previous course offerings, and assigns teaching times spread across the day. Departments plan their courses for the semester within this allocation, and return their proposed schedule to the Registrar and the Office of Space Planning for room assignment. Courses enrolling over 100 are assigned rooms first, as there are fewer rooms large enough to accommodate these courses.

Courses are assigned to rooms to maximize utilization, and to spread instruction across all hours and days of the week. In particular, first priority is given to placing courses that spread their teaching times across the week. Classes that meet once a week are scheduled into early or late hours of the day, which are less in demand.

Departmentally Assigned Classrooms / Teaching Laboratories

For departmentally assigned classrooms and teaching laboratories, the departments must schedule their own classrooms at least 30 hours per week before requesting use of general assignment classrooms. Laboratory sections are scheduled around lecture times, and scheduled to permit sufficient time for set-up and removal of lab equipment and supplies.

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Square Footage Standards

The University uses the following standards when planning for adequate instructional space for classrooms and teaching laboratories.

Classrooms

The space factor assumes a student station size of 16 Net Assignable Square Feet, 30 hours of scheduled use per week and a 67% occupancy rate. This produces a 0.80 NASF/SCH factor. The total undergraduate and graduate classroom generated student clock hours (SCH) are obtained from the "Report on Enrollment and Use of Rooms." The total SCH are then multiplied by the factor, (0.80 NASF/SCH), to produce the total space required for classrooms/auditoriums and support space.

Teaching Labs

The standards for teaching laboratories include the station size for each department based on the individual needs of each course or program, usage of 20 hours per week, and an 80% occupancy rate. The total undergraduate and graduate teaching laboratory generated student clock hours (SCH) are obtained from the "Report on Enrollment and Use of Rooms." The total SCH are then multiplied by the factor to produce the total space required for teaching laboratories and support space.

Qualitative Standards

No qualitative standards have yet been established, but the Department of Facilities Planning and Management is currently working with a committee with faculty representation to create classroom criteria to be used in the development of new classrooms and an evaluation of existing classrooms when remodeling opportunities would allow improvement.

- A room-by-room analysis of classroom use is a reasonable indication of classroom quality because faculty and students prefer some rooms to other rooms; the utilization of rooms shows that the best rooms are used more heavily than those with deficiencies.

- The exceptions are the large lecture rooms where usage is very high because the University has no choice, even though some of the rooms are in poor condition.

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Typical utilization goals for classroom space are 65-70% for peak instructional hours. Classroom scheduling responsibilities are centralized at the University of Northern Iowa in the Registrar's Office; however, departments may be given scheduling priority for specific rooms. The Registrar's Office monitors the utilization of classrooms assigned to departments and analyzes their utilization rates when removing or assigning classrooms to departments to achieve the best use of the room.

During renovations and new construction, the University uses benchmarks to compare departments with others across campus and with other universities. Outside consultants, who specialize in the specific type of facility being constructed or renovated, are often hired to assist in establishing benchmarks and making recommendations to the University. These recommendations help establish the most effective size and number of classrooms and laboratories in each of the new or renovated facilities.

Question   ***How does construction of new classroom space affect existing classrooms? If the space is no longer used as classrooms, how is the future use for this space determined?***

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New Classrooms   New classrooms are constructed to meet growth and increasing demand, pedagogical requirements, and to replace poor quality classrooms that have been taken off line and converted to other uses by departments.

The classroom pool must be of optimal size and configuration to meet teaching needs. Addition of new rooms to the classroom pool may create an opportunity to reassign poor quality teaching spaces to new uses such as open offices, departmental computer rooms, or conferencing space. If rooms are reassigned to new uses, future use is based on the criteria used for any reassignment of space, consistent with the policy included in the University's *Operations Manual*. These criteria include:

- Institutional priority assigned to the proposed new use;

- Compatibility of the new use with other functions in the building;

- Physical suitability of the space for its proposed new use; and

- Availability of funding to remodel the space.

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New Classrooms   The University has tried to include the development of new classrooms when buildings are being constructed. This provides the opportunity to upgrade the general classroom inventory with state-of-the-art facilities. It is rare that classrooms are taken off-line as a result of these additional rooms because these rooms do not create a significant surplus and are still functional for some classes.

The University reports that the utilization studies developed each fall are used to keep the needs and resources in a reasonable balance. The studies which are located on the web: http://www.fpm.iastate.edu/planning/classroom_utilization_report/ include information on classroom utilization by building and room; hourly distribution of courses in classrooms; classroom utilization by room capacity; and teaching laboratory utilization. For rooms with low usage, the report includes for each room a listing of the factors contributing to its low use. Factors can include the quality of the facility, location, size of room, or presence of fixed seating. The report notes the importance of setting realistic course enrollment limits since the limits are the basis for finding classrooms of the appropriate capacity.

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Space Assignment Procedures   Space assignment procedures are established to utilize the University's space for the maximum benefit of the entire University. Space is considered University space and does not belong to separate units.

When it is proposed that a classroom no longer be used, the University has an established process to remove the classroom from use. The department wishing to remove a classroom from use must obtain a recommendation from the Registrar's Office. The recommendation is forwarded to the Academic Affairs Council, and then to the FPAC, who in turn, makes a recommendation to the President's Cabinet for final action. The FPAC makes recommendations for assignment and use of the space to the Cabinet.

Question   ***What is the process used to assign classes and laboratories? How does class (laboratory) size, quality of the space and technological enhancements "figure into" the process?***

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General Assignment Classrooms   Departments in the Colleges of Liberal Arts and Sciences, Business Administration, Engineering and Education are assigned an allocation of general assignment class times, distributed across the day, based on previous course offerings and enrollments. Departments determine a class schedule based on this allocation, and the Office of Space Planning assigns rooms to optimize the fit between seat capacity and projected enrollment, and to make the best use of all room periods, across all days and hours.

Additional consideration is given to faculty requests for preferred locations and for instructional technology, which is installed in 50% of the general assignment classrooms, and available to all on mobile carts. Departments are given a higher priority for classrooms in their buildings than are classes from other departments with similar enrollments.

Departmentally Assigned Classrooms

Criteria for allowing other than central scheduling include:

- Need for specialized spaces that cannot be shared between departments;

- Campus location that makes shared use of classrooms impractical;

- Need to teach outside the regular general assignment classroom schedule; and

- Ability to demonstrate a need for departmental control.

All classrooms for the Colleges of Law, Dentistry, Medicine, Nursing and Pharmacy are considered to be departmental classrooms.

Departmental classrooms and laboratories are assigned by the department, based on associated lecture times and projected enrollments. Enrollment in laboratory and discussion sections may be limited to prevent total occupied laboratory seats from exceeding the maximum possible enrollment for the associated lecture.

If utilization is below the threshold for acceptable use, the Office of Space Planning and Utilization and the Provost's Office may further investigate the appropriateness of the room use.

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Room Scheduling System

Schedule 25 is a room scheduling system that assigns classes to rooms based on pre-defined information. Groups of rooms and classrooms are arranged into zones called Campus Partitions and are given codes which allow them to be easily identified. Each department develops a profile that identifies a group of room preferences that are best suited to departmental requirements.

Departments receive data on section course offerings from the Registrar and return it to both the Registrar and Room Scheduling Office with any amendments. The data are entered into the computer system and Schedule 25 is run to produce the preliminary room assignments. The preliminary schedules are sent to departments approximately three weeks before the student schedules are released to allow the departments time to make any changes. Once the course placements are finalized, information is available to students via the WEB.

Resource 25 – Interactive System

After classes are placed using Schedule 25 they are moved to Resource 25, which is a multi-user, on-line, interactive system for class and event scheduling. Resource 25 allows the user to quickly and easily assign, view and change reservations for campus spaces. Resource 25 provides

a room matrix for viewing open hours; this matrix can be helpful to user departments if they need to schedule additional classes or events.

Room Utilization Information

The Room and Enrollment System uses the data generated by Schedule 25 to produce room utilization information which shows the number of student clock / contact hours which have been scheduled in each room. Departments also confirm the location of classes scheduled in departmental rooms so that the Room Scheduling Office can enter the data into the system with the other schedule information. This process ensures that the room utilization figures are as accurate as possible. The complete Utilization Report is available on-line for department reference use as course offerings are being developed.

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Registrar's Control

All classrooms and laboratories are under the control of the Registrar's Office. The Registrar may choose to grant a department authority to schedule a specific classroom or laboratory. Many classrooms assigned by the Registrar's Office are assigned by the Registrar to a specific department or college for priority scheduling by that department/college. The priority assignment is based upon established need and assists departments/colleges in addressing class size, quality and technical enhancements to classrooms. The Registrar's Office reserves the right to override priority assignments in cases where class size and room utilization become an issue.

A majority of classrooms assigned by departments/colleges are typically specialized laboratory classrooms that are discipline specific. Classrooms that are assigned by departments/colleges are available to other areas in coordination with the Registrar's Office.

Question

What percentage of the classroom space (number of classrooms and number of total seats) is scheduled by the registrar (or other central scheduling office) as opposed to being assigned by a college? What are the criteria for allowing other than central scheduling? What are the utilization factors in the aggregate (hours per week and percentage of seats occupied) for the centrally scheduled space compared to space scheduled by a college?

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The Office of Space Planning and Utilization (SPU) calculates utilization rates annually for both general assignment classrooms and departmental classrooms.

Utilization Data

The following table provides utilization data from Fall 2001. The rates are based on use for scheduled instruction from 7:30 a.m. – 5:30 p.m. In addition to these times, classrooms are scheduled for Saturday and evening classes, review sessions, examinations, departmental meetings and programs and student gatherings.

University of Iowa Utilization Data, Fall 2001				
	General Assignment Classrooms	Departmental Classrooms	Total Classrooms	Departmental Laboratories
Rooms:				
Number of Rooms	199 (69%)	88 (31%)	287	110
Average Room Periods Used per Week	36.2 Hours	15.6 Hours	29.9 Hours	18.6 Hours
Stations:				
Number of Seats/Stations	10,739 (67%)	5,217 (33%)	15,956	2,693
Utilization of Stations when Room is Occupied	62.4%	53.9%	60.8%	71.6%

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Classrooms
Centrally
Scheduled

All classrooms (236 rooms and 13,692 seats) are scheduled centrally by the Room Scheduling Office at the Department of Facilities Planning and Management. Less than two percent of the total recitation, lecture, and discussion classes are scheduled into departmental facilities. These departmental rooms, which are most often conference rooms, support relatively small classes (usually graduate courses), and the scheduled times are usually arranged to meet the needs of students and faculty. The Room Scheduling Office allows and encourages departments to use their own conference rooms for some of these small classes to relieve the pressure on centrally scheduled classrooms.

The University has provided the following utilization data for Fall 2001:

Iowa State University Utilization Data, Fall 2001				
	General Assignment Classrooms	Departmental Classrooms	Total Classrooms	Departmental Laboratories
Rooms:				
Number of Rooms	236		236	500
Average Room Periods Used per Week	27 Hours	N.A.	27 Hours	9 Hours
Stations:				
Number of Seats/Stations	13,692	N.A.	13,692	
Utilization of Stations when Room is Occupied	78%	-	78%	80%

| Room and Station Utilization | As noted above, the Fall 2001 utilization rates for classrooms is 27 hours per week (30 hours per week is the University's standard) and 78% station occupancy (67% is the University's standard). The rates are an indication that the number of sections has decreased as faculty positions have been reduced, and the classes are getting larger as reflected in the station occupancy rates. These averages include all classrooms including some very poor rooms with low usage of less than 10 hours per week to some new rooms with technology that are scheduled as many as 50 hours per week. |

Other Routine Uses of Classrooms

The University reports that there are many other academic activities, in addition to regularly scheduled classes, that use classrooms on a routine basis. These include:

- Departments often reserve classroom times for department sponsored seminars and colloquia. For example, the University reports that every Friday afternoon the Department of Chemistry has a seminar, which is nearly mandatory for faculty, graduate students, post docs, and technicians, in one of the lecture halls;

- The Academic Success Center uses classrooms for tutoring both individuals and small groups. These sessions are scheduled into open slots once the scheduled classes have been assigned;

- Athletic Academic Services holds study tables and tutoring sessions in classrooms when there are open times;

- Many departments sponsor help sessions in classrooms for drop in help. One classroom in Physics Hall is used continually by the Department so no classes are scheduled in it;

- Faculty meetings are often scheduled in classrooms because no large conference rooms are available within departmental space; and

- Student organizations routinely schedule classrooms for meetings.

If classrooms were not used for these activities, space would need to be included within departmental space. For example, the Chemistry seminar would require a very large room that would get marginal use except for Friday afternoons.

Teaching Laboratories

In addition to the general classrooms, there are nearly 500 teaching laboratories and studios, with approximately 9,000 seats, scheduled by departments. These instructional spaces house equipment that is important to the laboratory experiences of students that could not be provided in a general classroom. Some of the rooms are very small with as few as three seats in a small veterinary medicine laboratory to as many as 200 seats in a music studio / recital hall. The actual use of these rooms is 9 hours per week with 80% station occupancy.

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The primary criteria used to allow assignment by academic departments/colleges is discipline-specific needs. Other criteria include location and room size.

Room Utilization
Utilization goals of 65-70% room utilization are the same for both centrally scheduled space and space scheduled by a department/college. The Registrar's Office monitors the utilization of classrooms assigned to departments and analyzes their utilization rates when removing or assigning classrooms to departments based upon needs. Since rooms that are scheduled by a department/college are also available for scheduling by the Registrar's Office for the times that they have not been scheduled by the department/college, the utilization factors for classrooms scheduled by individual departments/colleges are similar to those for classrooms scheduled by the Registrar's Office.

Station Utilization
At the current time, the University does not track station use or the utilization of departmental laboratories. Laboratory usage is especially difficult to track, as laboratories are open for student use outside scheduled instructional periods; students are encouraged to utilize the laboratories when they are not scheduled.

The following table summarizes room utilization data for Fall 2002:

University of Northern Iowa Utilization Data, Fall 2002				
	General Assignment Classrooms	Departmental Classrooms	Total Classrooms	Departmental Laboratories
Rooms:				
Number of Rooms	115 (70%)	50 (30%)	165	175
Average Room Periods Used per Week	35 Hours	35 Hours	35 Hours	N.A.
Stations:				
Number of Seats/Stations	6,333 (69%)	2,846 (31%)	9,179	4,274
Utilization of Stations when Room is Occupied	N.A.	N.A.	N.A.	N.A.

Section 3: Design Guidelines

BACKGROUND
The following background information, including a review of the literature, on design guidelines is provided:

Design Standards
In its 1989 study (referenced previously), MGT noted that space standards / guidelines represent square footage allowances to estimate the need for broad categories of space rather than design guidelines which are applied to specific construction projects.

Sustainable Design
During the 1990s the architectural profession in the United States identified principles of "sustainable," "high performance," or "green" building design. The approach, which applies environmental principles to all aspects of building design, can result in healthy, naturally lit, attractive buildings with lower operating and lifecycle costs.

Sustainable design embodies the following goals:

- Minimize use of resources;

- Minimize waste generated from construction, renovation and demolition of buildings;

- Minimize waste generated during building occupancy; and

Encourage better management of waste.

UNIVERSITY DETAILED ANALYSES
The universities were asked to respond to the following question related to design characteristics.

Question
Please provide information on university design criteria for new construction and major renovations (include references to design considerations and space standards).

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Upon establishment of a formal project, design consultants are referred to the *Design and Construction Services Design Reference Manual* (on the web at: **http://fsg-domino-srv.fsg.uiowa.edu/DRM.nsf**).   The Manual details University design expectations for all construction projects. Each consultant hired by the University is held accountable for meeting the requirements provided in this Reference Manual.

The Manual includes design standards from University Information Technology Services, University Utilities, Operations and Maintenance, and Space Planning and Utilization. It also directs all design consultants on methods to be followed in each of the design stages of the project. The Manual includes guidelines on how the construction documents are formatted and printed, document review processes, and direction on design issues that will insure that the resulting design will match University expectations, including that a facility will perform optimally and age gracefully.

During the active programming and design phases of a major project, the University utilizes the expertise and experience provided by the consultant design firm. Often these design teams provide valuable information related to current standards and best practices for a particular design challenge.

The design team works with both local and national building codes, as well as established University standards to create spaces that responsibly serve the University and the State. In public and shared areas, life safety and Americans with Disabilities Act access issues drive

the organization of spaces. In classrooms and spaces specifically tied to the operation of a University unit, guidelines provided by the Department of Space Planning and Utilization of the Facilities Services Group, and the Provost's Office or a particular college aid in creating appropriate design.

The Office of Space Planning and Utilization uses the following as guidelines:

- Typical faculty offices – 135 to 145 square feet

- Staff offices – approximately 120 square feet

- Department Head offices – approximately 180 square feet

The University reports that space "standards" such as these are derived from those outlined in the *Higher Education Facilities Planning and Management Manuals* (included in the list of references for this report). But, these standards are not applied rigidly. Rather, they serve as guidelines to be applied flexibly, thoughtfully, and in light of facility, equipment and technology changes and improvements of the past 30 years.

Beyond these guidelines, the design team primarily designs such spaces based on functions and associated furniture needs within the space. Since the University design efforts are for the "long haul," standardized office layouts are the norm rather than individually customized spaces.

In recent years, recommended classroom size has increased slightly in order to provide adequate sight lines for modern multimedia technology. As such, a typical classroom furnished with tablet-arm chairs should provide approximately 18-20 square feet per station.

Other space criteria are very specific to the activity to be contained within the space to be designed, especially when research needs are accommodated. The expertise of Facilities Services Group Design and Construction Services staff and the professional design consultants hired by the University serve to ensure that these specific spaces are functionally optimal and fiscally responsible.

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The *Facilities Design Manual*, which is located on the Web at http://www.fpm.iastate.edu/planning/aes/design_stds/design_manual/, has been prepared by Facilities Planning & Management personnel responsible for the planning, construction and maintenance of University's facilities to document design criteria for all renovations, additions and new construction. This information is provided to achieve quality campus structures and landscapes requiring minimum maintenance effort and operating expense.

Adherence to the Facilities Design Manual is required. Deviations for equal or improved concepts, methods or products must be called to the attention of, and reviewed with, the University's Project Manager; these deviations must receive written approval before implementation.

A tabulation of net assignable areas for required spaces is usually provided to the design consultants as part of the building program for the new or remodeled facility. These space standards are maintained as closely as possible by the consultant throughout the project design.

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The University has established a design reference manual for architects and engineers to use in designing facilities for the University. This manual, which can be found on the Department of Facilities Planning website at: http://www.vpaf.uni.edu/facplan/, was written by Facilities Planning personnel, with significant input regarding operating and maintenance issues provided by Physical Plant personnel. The manual helps ensure quality campus structures and landscapes, requiring minimal maintenance effort and operating expense.

- Adherence to this design reference manual is required. Any deviations from the manual must be called to the attention of, and reviewed with, the design staff of the Department of Facilities Planning, and receive written approval prior to implementation.

A preliminary program of spaces is usually provided to the consultants on new building or renovation projects.

BOARD APPROVALS

In contrast to many governing boards, the Board of Regents approves the schematic design for all new buildings, additions and renovations when the project budget exceeds $1 million. Final authority for any design thus rests with the Board.

Joan Racki

Approved: Gregory S. Nichols

Gregory S. Nichols

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Table 1

State Systems with Space Standards

Characteristics of Facilities	AK	AZ	CA	CO	FL	KA	LA	MD	NE	NH	NY	OH	OK	OR	PA	SC***	SD	TN	TX	UT	VA	WI	WY
Budgeting Process (4 / 2)	4* / 2	4	4 / 2	4 / 2	4 / 2	4	4 / 2	4 / 2	4	4	4 / 2	4 / 2	4 / 2	4	4 / 2	4 / 2	4	4 / 2	4	4 / 2	4 / 2	4	2

1. Space Standards or Guidelines exist
2. Standards or Guidelines used in the Budgeting Process
3. Standards and Guidelines used by:
   - Individual Institutions
   - Systems of Higher Education
   - Executive Budget Office
   - Legislature
   - Other
4. Different standards used by 2-year or 4-year Institutions
5. Standards and Guidelines were used for:
   - Campus Facilities Planning and Management
   - Building Project design
   - Institutional Facility Budget Requests
   - Education System Budget Requests
   - Governor's Facility Budget Recommendations
   - Allocation of Funds to Building projects
6. Standards or Guidelines are Accepted by:
   - Institutions of Higher Education
   - State Coordination/Governing Bodies
   - State Building or Construction Authorities
   - Governors Budget Office
   - Legislature
   - Other
7. Standards or Guidelines were Developed by:
   - Institutions
   - State coordinating or Governing Body
   - State Building or Construction Authority
   - Governor's Budget Office
   - Legislature
   - Outside Consultant
   - Other
8. Standards or Guidelines were used:
   - Less than 5 years
   - 5 to 10 years
   - More than 10 years

*4 represents university systems while 2 represents community college systems.
**Used in planning process, budgets key to masterplans.
*** South Carolina is in the process of adopting standards and should have them in place by July, 1996.

Source: MGT 1996 Study

ACADEMIC/ADMINISTRATIVE ASF/FTE ENROLLMENT
HEFMA Room Type Study - Fall 1999

Group Mean = 177.34

Group Mean = 96.24

ASF/FTE ENROLLMENT

4-Year Research Inst.

Iowa-Iowa City

Iowa State-Ames

4-Year Campuses

Source: Space Inventory Data – Higher Education Facilities Management
Association. Data available for comparison purposes only.

Appendix C
2002 University of Iowa Operations Manual

PART V. ADMINISTRATIVE, FINANCIAL, AND FACILITIES POLICIES

CHAPTER 36: CONTROL, USE, AND ASSIGNMENT OF PHYSICAL FACILITIES POLICY

(President 2/59; amended 5/91; amended 9/93)

36.1 GENERAL.

Space assignment is the responsibility of the central administration. Space is assigned to colleges, departments, and support units of the University to enable them to carry out their assigned responsibilities and to house the personnel associated with those activities, consistent with strategic planning initiatives of the University.

36.2 REASSIGNMENT OF SPACE.

Reductions in personnel, teaching, research, or service loads may result in the reassignment of space assigned to the unit. The following conditions will result in a space assignment analysis, the result of which may be the reversion of space to the central administration for reassignment:

a. the absence of authorization to replace vacated personnel lines, to include faculty, graduate assistants, and staff;

b. the relocation of a unit to different space;

c. the loss of sponsored research support that results in a reduction of personnel supported by the research grant (the space which would continue to be assigned will be determined using an appropriate level of facility support per faculty member by discipline);

d. the loss of students enrolled in courses for which space is assigned to the unit, such as teaching laboratories or special classrooms; and

e. the phasing out of educational, research, or support programs, or adjustments made as the result of strategic planning.

   Space which reverts for reassignment will be used to meet the emerging needs of the institution, including those of the unit initially losing the space, consistent with University strategic planning priorities. Under some circumstances, space which would normally revert may remain under the temporary use of the occupying unit pending subsequent reassignment to other units.

36.3 APPROVAL OF ASSIGNMENTS OF SPACE.

Space assignments will be approved by the central administration, specifically, the space subcommittee of the Facilities Renewal and Equipment Committee (FREC), following receipt of recommendations from the offices of the Provost and Space Planning and Utilization after a consultation with appropriate deans and directors. Comments concerning the reversion of space for reassignment may also be submitted to the FREC subcommittee.

**Appendix D
University of Iowa Example –
Application of University Planning Principles**

Biology Sciences Renovation/Replacement Project

The planning process began at the departmental level with the identification of a number of shortcomings in the space assigned to the department. These included: amount and quality of research laboratory space available, fragmentation of departmental programs and personnel in three different buildings, substandard condition of space, failure to meet modern HVAC operational standards, fundamental fire safety deficiencies, lack of access for persons with disabilities, and insufficient teaching laboratory space.

Consultants were retained to assemble a plan to identify solutions, provide cost estimates, and formulate preliminary plans for departmental, collegiate, and central administrative review. The project was then included in the University's Five-Year Plan and Capital Request. Issues of institutional priority and physical location were successfully addressed. When completed in 2003, the project will have taken nearly ten years to finish, from conceptual planning to completion.

Numerous construction options were considered, including renovation, new construction, and building replacement. The final solution was a combination of the complete renovation of the former Biology Annex, construction of an additional building wing (Biology Building East), the removal of the obsolete top floor of Old Biology, and subsequent phased renovation of Old Biology and Biology I and II. The overall phasing of the project allowed the University to address immediate severe space and quality concerns (in the case of the Biology Sciences Library and the construction of the new teaching laboratories in the Biology Building East) while constructing the project in a timeframe that was consistent with the availability of state funding.

Appendix E
University of Iowa Hospitals and Clinics
Planning Processes

As with the General University, space assignments have been and are made at the University of Iowa Hospitals and Clinics (UIHC) based on goals established within the UIHC strategic plans and the operational strategies set forth within these plans. The UI Hospitals and Clinics' Director and CEO has the ultimate authority for the assignment of space, with consultation and advice provided by the UIHC Facilities Development Steering Committee. Additional recommendations are generated by the UI Health Care Joint Space Planning Group. The Assistant Director for Planning holds responsibility for routine space assignments and general oversight, including coordinating and implementing space planning.

When clinical or hospital departments are unable to meet their needs within their assigned space, their requests for additional space are placed in an inventory and acted upon based on their relative merit and the availability of space. A new database is now being developed that will provide more comprehensive and up-to-date information on space usage. When fully developed, this system will be an invaluable resource when evaluating space requests and in determining the most appropriate location for the assignment of space.

In assessing and determining whether space requests will be approved and in establishing priorities for the assignment of new space or the reassignment of existing hospital space during the process of project conceptualization and evaluation, a number of parameters are used. These include:

- Review and evaluation of the program statement for the department or service requesting additional space;

- Consistency of the proposed project with the UI Hospitals and Clinics' mission and strategic plan;

- Assessment of need for the additional space;

- Evaluation of the capabilities and/or deficiencies of the existing program or service;

- Advantages and limitations of the proposed project;

- Impact of the proposal on patient care services and health science education;

- Financial assessment of the capital and operating costs associated with the project;

- Evaluation of the space requirements, availability and location; and

- Assessment of how the proposal meets the following UIHC Budget Guidance Committee's criteria:
  - Affect on patient outcomes and clinical differentiation;
  - Impact on operating efficiencies or on other departments' operating expenses;
  - Necessity for maintaining an existing service or developing a new service or new source of revenue;
  - Impact on patient, family, or visitor satisfaction;
  - Impact on staff, faculty, or volunteer satisfaction;
  - Necessity to meet regulatory agency codes or standards and impact on safety; and

- Necessity to comply with federal, state or local regulations and requirements of the Board of Regents, State of Iowa, the University of Iowa, and the UI Hospitals and Clinics.

In addition to the aforementioned criteria, very specific "Space Planning Parameters" are now under development at UIHC to prescribe the manner in which different functional spaces (e.g. faculty and staff offices, patient rooms, examination rooms) may be assigned and utilized. These parameters will be used in the development of future Five-Year Capital Plans and in the assessment of requests for space.

Beyond the use of specific criteria and parameters, the UIHC makes use of special studies to evaluate the most appropriate assignment for new or existing space. An example of this is the exhaustive study that was conducted to determine how best to accommodate the space needs of the Department of Radiation Oncology. This analysis included conducting code, functional, and environmental assessments of existing patient care and support space assigned to this department; identifying and evaluating options for the expansion of the department's facilities in space adjacent to its existing facilities, as well as a review of site options; analyzing the current state-of-the–art in radiation therapy and determining what treatment modalities are on the horizon and should be considered when determining the space requirements for an expanded or new facility; benchmarking with peer institutions; evaluating the existing patient treatment volume as well as the potential to increase this volume if additional space and services were made available; and developing revenue and expense projections based on several operational scenarios. This analysis included the completion of a comprehensive strategic plan for the development of a new Center of Excellence in Image-Guided Radiation Therapy and served as the impetus for obtaining the necessary funding and project approvals to proceed with the development of the Center.

Appendix F
Iowa State University
Facilities Assessment Model

A Facilities Assessment Model is used to provide comparative information about the relative need for space to support a department or program's goals and objectives. The Model provides a quantitative analysis based on the number of faculty/staff/students in a program and the kinds of activities that require space. The Model results are used as an indicator of space needed. When warranted, a more thorough study is initiated to verify the model data and to analyze the qualitative characteristics of the department's space. While the model considers all space of equal quality, the more detailed study is an opportunity to identify space that has become functionally obsolete and no longer meets department needs. The following section describes how the model estimates space needs for each category of space.

The following groups of data and room types are used in the Model to compare the actual and estimated areas for each department or unit. Each group is assigned a space factor that has been calculated to reflect the needs, hours of use and types of activities that take place in those rooms. To calculate the area required for each different room type, the way in which the space is utilized must be taken into consideration to generate meaningful results:

(1) Enrollment

Information is received from the Registrar's office listing all the enrollment figures by curriculum/major. The figures are then condensed into headcount enrollments for the facilities "model" departments.

(2) Offices

Office space is projected for staff FTEs in academic/administrative departments who are employed by the institution and require office accommodation. Information on collaborators and the emeritus faculty comes from the Provost's office. Information on teaching assistants (T.A.'s) and research assistants (R.A.'s) comes from the Graduate Research Survey sent out by Facilities Planning every fall to be completed by each department. The headcount numbers of teaching assistants and research assistants are allocated 90 net assignable square feet (NASF) /station, as are emeritus faculty/staff. The FTE numbers of technical and service staff are allocated 90 NASF. The FTE numbers of visiting staff are used with a station size of 180 NASF.

Faculty/staff FTEs must be further broken down into proportions of teaching and research. Once the number of research faculty FTEs has been established, they are subtracted from the total number of faculty FTEs to obtain the number of teaching faculty FTEs.

The standard used for office space requirements is 180 NASF per FTE (with the exception of T.A.'s, R.A.'s, emeritus, technical and service personnel at 90 NASF). This assumes that 150 NASF will be used as an office and the other 30 NASF will allow for conference rooms, reception areas and office service areas.

(3) Teaching Labs

Teaching Laboratory space is based on the amount of scheduled activity in these departmental instructional facilities. The station size, hours per week and station occupancy are used to create a NASF/SCH to estimate space need. Student Clock Hours (SCH) are obtained from the "Report on Enrollment and Use of Rooms." The station size for each department is based on the individual

needs of each course or program. (A table that shows the factors for each department is included at the end of this Appendix.) The standards assume the labs will be used for 20 hours per week, with 80% station occupancy. The hours of use per week are lower for laboratories to accommodate individual study between scheduled lab classes and to set up experiments and demonstrations.

(4) Research Labs

Research laboratory space is based on the number of FTE faculty/staff/student associated with research multiplied by an area factor. The information on faculty research FTE's comes from a study prepared by the Business Office which details the research efforts for all faculty reported by departments. The FTE research number of visiting scientists, research associates, scientists, collaborators and postdocs is based on 100% of their FTE staff appointment. The number of headcount graduate students requiring research space comes from the Graduate Research Survey.

(5) Classrooms

The space factor assumes a student station size of 16 NASF, 30 hours of scheduled use per week and a 67% occupancy rate. This produces a 0.80 NASF/SCH factor. The total undergraduate and graduate classroom generated student clock hours (SCH) are obtained from the "Report on Enrollment and Use of Rooms." The total SCH are then multiplied by the factor, (0.80 NASF/SCH), to produce the total space required for classrooms/auditoriums and support space.

Classroom need is included in departmental model estimates to recognize the teaching space needs of a department even though the amount is deducted from the department total and added to the General Classroom estimates. This is especially important if a department is being considered for new building space because classrooms need to be developed in close proximity to other department spaces.

(6) Library and Study Space

Departmental Libraries / Study Space
Library and study space includes those rooms classified as study rooms in the facilities room inventory. This space is not projected at departmental level but is included at 100% of the existing space for the department.

Central Administrative Libraries / Study Space:
It is assumed that 20% of headcount undergraduates, 25% of headcount graduates and 10% of the total faculty FTE's will be seated. The stack space factor is 0.083 NASF per bound volume and the standard for service and processing space is 23% of the stack and study space.

(7) Other Academic Space

This category refers to unclassified rooms that are temporarily out of service or unusable due to remodeling or poor conditions. The factor is typically 1% of all other department space. This space category covers a wide range of categories such as field building and spectator seating.

(8) General Use and Service Space

General use space is normally a function of campus-wide need. The campus-wide need at ISU is satisfied by the facilities in the Memorial Union so the space generated in this category is for lounge or communal space within a department. The factor is approximately 2.10 NASF for each headcount student and 2.10 for each FTE faculty/staff member.

(9) Support Space

Support space includes storage, shops, communications media, data processing, vehicle storage and associated service areas and is given a factor of approximately 2% of all other room types. Each department has a pre-determined support space factor based upon individual requirements.

(10) Gymnasiums

The Department of Health and Human Performance and the Department of Facilities Planning and Management plans for gymnasiums based on a station size of 200 NASF and 20 hours of facility use per week and 72% station occupancy which equals 13.89 NASF / SCH. [The total number of student clock hours is divided by the total number of headcount undergraduates to give the number of student clock hours per undergraduate.] For the Athletic Department and other administrative departments it is assumed that 100% of the existing area is required.

(11) Other Space Categories

The following space categories are very difficult to estimate because no standards have been established due to the specialized facilities in each of these categories. The model uses the current inventory as the estimate of need. The University realizes that this is not a completely accurate method to estimate the need so the departments with this kind of space are generally included in more detailed studies to generate useful information:

Greenhouse Facilities	Field Stations
Clinics	Animal Rooms
Hospital Facilities	Production Labs
Field Buildings	Armory

IOWA STATE UNIVERSITY SPACE FACTORS - FALL '02

	Teaching Lab		Research Lab		Teaching Lab		Research Lab
	NSF/SS*	NSF/SCH Sp Factor	NSF/ RSTA**		NSF/SS	NSF/SCH Sp Factor	NSF/ RSTA
AGRICULTURE				FCS			
AG ADM	40	2.50	0	FCS ADM	32	2.00	30
AGRON	65	4.06	350	FCEDS	32	2.00	30
A ECL	40	2.50	400	HD & FS	70	4.38	300
AN S	40	2.50	300	HRI	110	6.88	250
AG ED & ST	32	2.00	30	TC	50	3.13	300
ENT	40	2.50	350				
FOR	60	3.75	350	LAS			
HORT	70	4.38	350	LAS	30	1.88	0
PL P	70	4.38	350	AFAS	30	1.88	0
				ANTHR	20	1.25	0
				BOT	70	4.38	350
BUSINESS				CHEM	60	3.75	350
BUS ADM	30	1.88	50	COMS	30	1.88	20
ACCT	30	1.88	50	GE AT	75	4.69	300
FIN	30	1.88	50	ENGL	30	1.88	20
MGMT	30	1.88	50	F LNG	24	1.50	20
MKT	30	1.88	50	HIST	20	1.25	20
TRLOG	30	1.88	50	JL MC	55	3.44	10
				MATH	20	1.25	50
				M S	30	1.88	0
EDUCATION				MUSIC Lab *	58	3.63	0
EDUC ADM	32	2.00	30	N S	30	1.88	0
C & I	50	3.13	30	PHIL	20	1.25	0
IED T	120	7.50	30	PHYS	53	3.31	200
H H P	200	13.89	200	POL S	20	1.25	20
PR ST	32	2.00	30	PSYCH	40	2.50	150
				SP CM	50	3.13	20
ENGINEERING				STAT	30	1.88	20
ENGR ADM	40	2.50	0				
AG ENGR (ABE)	110	6.88	450	VET MED			
AE EM	120	7.50	300	VET ADM	75	4.69	400
CH E	110	6.88	250	V AN	75	4.69	400
CCE	100	6.25	300	VCS	75	4.69	400
E CPE	80	5.00	250	V PTH	75	4.69	400
I E (IMSE)	40	2.50	250	VPP	75	4.69	400
M S E	90	5.63	300				
M E/NEC E	120	7.50	300	INTERCOLLEGE			
				BB	60	3.75	350
				ECON	30	1.88	20
DESIGN				FSHN	65	4.06	320
DSGN ADM	30	1.88	50	MIPM	75	4.69	400
ARCH	45	2.81	120				
ART	45	2.81	200	SOC	20	1.25	20
C R P	45	2.81	120	ZOOL/GEN	40	2.50	400
L A	45	2.81	120				
				*Music Practice	90	-------	
	SS=Station Size*		RSTA=Research Station Size**				

An example of the **Space Model's Standard Grid report** :

DEPARTMENT SPACE ANALYSIS					*	FALL 2002			
					*				
DEPARTMENT	**SAMPLE**				*	**(1) Enroll UG**	**521**		
DEPT NUMBER	**04150**				*	**Enroll GR**	**60**		
DATE	**9/26/02**				*	**Total Enr**	**581**		
			Factor Value	**Factor Unit**	*	**Generator Value**	**Generator Unit**	**Projected ASF**	**Fall 02 ASF**
(2) Offices:					*				
	Teaching Faculty		180	NASF/FTE	*	16.00	FTE	2,880	
	Research Faculty		180	NASF/FTE	*	12.13	FTE	2,183	
	Visiting Faculty		180	NASF/FTE	*	0.00	FTE	0	
	Research Associates		180	NASF/FTE	*	0.75	FTE	135	
	Scientists		180	NASF/FTE	*	0.00	FTE	0	
	Collaborators		180	NASF/FTE	*	0.00	FTE	0	
	Post Docs		180	NASF/FTE	*	0.00	FTE	0	
	Administrator		180	NASF/FTE	*	3.00	FTE	540	
	Clerical		180	NASF/FTE	*	4.50	FTE	810	
	Technical & Service		90	NASF/FTE	*	0.00	FTE	0	
	Emeritus Faculty		90	NASF/HD	*	11	HD CNT	990	
	Teaching Assist.		90	NASF/HD	*	15	HD CNT	1,350	
	Research Assist.		90	NASF/HD	*	29	HD CNT	2,610	
	Office Sub-Total				*			**11,498**	**13,105**
(3) Teaching Laboratories:					*				
	Based on 20 hrs./wk, 80% sta. occupancy and station size equal to	40*			*				
	2.50 SqFt/SCH x Lb SCH		2.50	SqFt/SCH	*	820	UG SCH		
					*	26	GR SCH		
					*	846	Total SCH	2,115	
	T. Lab. Sub-Total				*			**2,115**	**408**
(4) Research Laboratories:					*				
	Research Faculty		150	NASF/FTE	*	12.13	FTE	1,819	
	Visiting Faculty		150	NASF/FTE	*	0.00	FTE	0	
	Research Associates		150	NASF/FTE	*	0.75	FTE	113	
	Scientists		150	NASF/FTE	*	0.00	FTE	0	
	Collaborators		150	NASF/FTE	*	0.00	FTE	0	
	Post Docs		150	NASF/FTE	*	0.00	FTE	0	
	Experimental Grads		150	NASF/HD	*	44	HD CNT	6,600	
	Theoretical Grads		50	NASF/HD	*	0	HD CNT	0	
	R. Lab. Sub-Total				*			**8,532**	**6,221**
(5) Classrooms:					*	10,902	UG SCH		
					*	350	GR SCH		
	0.80 SqFt/SCH x Cl SCH		0.80	SqFt/SCH	*	11,251	Total SCH	**9,001**	**0**
(6) Library Space:				100 %Existing SqFt	*	525	SqFt	**525**	**525**
	First Cumulative Sub-Total				*			**31,671**	**20,259**
(7) Other Academic:	**1% of the First Cumulative Sub-Total**				*			**317**	**0**
(8) General Use:	**2.10 SqFt x Staff + St**		2.10	NASF/HD	*	628	HD CNT	**1,320**	**0**
	Second Cumulative Sub-Total				*			**33,307**	**20,259**
(9) Support:	2.00	**% of Second Cumulative Sub-Total**			*			**666**	**579**
Total Calculated Need					*			**33,973**	**20,838**
Less General Classroom Space					*			9,001	0
TOTAL DEPARTMENTAL SPACE					*			**24,972**	**20,838**

A report similar to the sample on the previous page is generated for every department each year based on fall semester information. The University states that the report is a useful resource for both short term and long range capital planning. It provides a guide in reallocating space to meet the immediate needs of a department. For example, the sample department on the previous page would appear to have a surplus of office space but significant deficits in both teaching and research laboratories. Converting some of the department's office space to laboratory space may be a solution to the laboratory shortage. The University reports that without this report, it might not be apparent that a solution is possible within the department's existing space allocation. For other departments, a report may show a departmental surplus that should be reallocated to another department with identified needs.

If there are no opportunities to reallocate usable space and if there is a shortage of usable space for a number of departments, the model reports may suggest that a long-range approach of constructing new facilities is needed.

The University reports that the model is a valuable tool to provide an objective guide to resource allocation for both short and long range planning. It shows where the University should concentrate its more specialized space studies; these studies may reveal that space quality is so poor that it is functionally obsolete. Renovation could then become a good alternative to either reallocation or new construction.

Appendix G
Iowa State University
Four Phases of Planning

Phase 1 -- Problem Identification

In Phase 1, a concept paper is developed that describes the space or facility problem that has been identified. Problems are identified, typically, by the occupants of the space or through a routine inventory of facilities conducted by Facilities, Planning and Management (FP&M). Most of the work in this phase is done at the department level with information provided by FP&M as requested. The concept paper states the nature of the problem in programmatic terms, assesses the adequacy of the existing space, and may pose some possible solutions to the problem. Resolving the problem might occur through relocation, renovation, reallocation, or new construction. The dean/director forwards the concept paper to the provost or vice president who, if he/she concurs, takes it to the Capital Projects Council (CPC). The CPC discusses and decides whether preliminary planning should be done to develop a solution to the identified problem. The results of the CPC discussion are reported to the requestor and dean (for academic projects) by the provost or vice president.

Phase 2 -- Preliminary Planning

The planning group in FP&M takes the lead during this phase in close partnership with the space occupants. The goal is to collect sufficient information about the programmatic needs of the occupants/users, the ability of the current space to meet those needs and the options/alternatives to solving the problem. A report that identifies a limited set of options is prepared and submitted by the department through the dean/director to the provost/vice president who presents it to the CPC with a recommendation about whether to proceed with further study. The CPC may decide that the project is not a high enough priority to warrant expending more resources and will return it to the provost/vice president to be returned to the dean/director. The CPC may also approve the project for further feasibility studies - architectural, preliminary funding or both. At that time, the CPC may limit the number of options that will continue to be investigated. The results of the CPC discussion are reported to the requestor and dean (for academic projects) by the provost or vice president.

Phase 3 - Feasibility Studies

Phase 3 has two components: architectural feasibility and preliminary funding feasibility. The architectural feasibility study is led by FP&M in close partnership with the space occupants and often the dean or director's office and sometimes the Office of the Provost or a vice-presidential representative. External consultants or internal staff may conduct the feasibility study, depending on the size and scope of the proposed project and the time and availability of internal staff. The goal of the architectural feasibility study is to establish the scope of the project and estimate a cost range.

Concurrently with the architectural feasibility study, a preliminary funding feasibility may be done. The purpose of this process is to determine probable funding sources for the project from the range of possibilities: state capital appropriations, donor gifts, general university funds, treasurer's temporary investments, grants, departmental funds, etc. If donor gifts are a possibility, the ISU Foundation will conduct a preliminary fundraising feasibility. The dean or director leads other aspects of the preliminary funding feasibility with assistance from others as needed.

Ideally there is significant interplay among the individuals involved in the architectural and preliminary funding feasibility studies with the goal of continuing to inform both groups about the evolving scope and cost of the project and the likelihood of identifying sufficient funding. The results of the analyses are brought together and a report is developed by the dean/director with

assistance from others as needed. The report recommends a specific course of action with rationale and is presented to the provost/vice president for review. Of particular concern at this point is the alignment of resources and scope. The provost or vice president makes a recommendation to the CPC, which may select one of three options. The project may be removed from further consideration for planning and funding and returned to the provost/vice president to be returned to the dean/director. The CPC may decide more study is needed and direct that the project go back through some of the earlier steps in the planning process. The CPC may approve the project scope and the cost range estimates and move it to the next phase. The results of the CPC discussion are reported to the requestor and dean (for academic projects) by the provost or vice president.

Phase 4 -- Funding Feasibility Study

The purpose of this phase is to gain confidence regarding the potential funding sources identified in phase 3 and determine possible timing for the project. If state capital appropriations will be requested, the project is directed through that process. The ISU Foundation will conduct a fundraising feasibility study if donor gifts are to support the project. The availability of internal funds at the department or central level will be determined by the department chair, dean/director, provost/vice president and the CPC itself for institutional funds. The provost/vice president brings the results of that work together and a single report is prepared for the CPC on the feasibility of funding the project. The CPC may select one of three options. The project may be removed from further consideration for planning and funding and returned to the provost/vice president to be returned to the dean/director. The CPC may decide more study is needed and direct that the project go back through some of the earlier steps in the planning process. The CPC may approve the project to proceed and work continues to secure funding and approval at the Board of Regents, State of Iowa. The results of the CPC discussion are reported to the requestor and dean (for academic projects) by the provost or vice president.

Appendix H
Space Inventory Definitions and Room Types
(*Postsecondary Education Facilities Inventory and Classification Manual*,1992 edition)

<u>Definitions</u>

The amount of space that can be used by an entity is known as the **net assignable area**. The total net assignable area of a building or buildings equals the sum of the ten major room types: classrooms, laboratories, offices, study areas, special use space, general use areas, support rooms, health care, residential and unclassified space (room types are detailed on the next page.)

There are areas within a building that are known as **non-assignable areas.** There are three types of non-assignable area:

- Circulation Area - sum of all areas required for access throughout a building (corridors, staircases, lobbies etc.);

- Building Service - sum of all areas required for cleaning and public hygiene functions; and

- Mechanical Area - sum of all areas required to house mechanical equipment or utility services, lift shafts etc.

The **net usable area** is the sum of **the assignable area + the non-assignable area**.

The **gross area** of a building is the floor area of the structure within the outside face of the external walls. This can be physically measured, scaled from as-built drawings or automatically calculated from Computer Aided Design drawings.

The **structural area** is floor area of the internal and external walls or columns and can be calculated by subtracting the **net usable area** from the **gross area.**

Room Types

Fed Code	Description	Fed Code	Description
100	**Classroom Facilities**	660	Merchandising
110	Classroom	665	Merchandising Service
115	Classroom Service	670	Recreation
200	**Laboratory Facilities**	675	Recreation Service
210	Class Laboratory	680	Meeting Room
215	Class Laboratory Service	685	Meeting Room Service
220	Open Laboratory	**700**	**Support Service**
225	Open Laboratory Service	710	Central Computer or Telecomm.
250	Research / Nonclass Laboratory	715	Central Comp. or Telecomm. Serv.
255	Research / Nonclass Lab. Service	720	Shop
300	**Office Facilities**	725	Shop Service
310	Office	730	Central Storage
315	Office Service	735	Central Storage Service
350	Conference Room	740	Vehicle Storage
355	Conference Room Service	745	Vehicle Storage Service
400	**Study Facilities**	750	Central Service
410	Study Room	755	Central Service Support
420	Library Stack	760	Hazardous Materials
430	Open-Stack Study Room	765	Hazardous Materials Service
440	Processing Room	**800**	**Health Care Facilities**
455	Study Service	810	Patient Bedroom
500	**Special Use Facilities**	815	Patient Bedroom Service
510	Armory	820	Patient Bath
515	Armory Service	830	Nurse Station
520	Athletic or Physical Education	835	Nurse Station Service
523	Athletic Facilities Spectator Seating	840	Surgery
525	Athletic or Phys Education Service	845	Surgery Service
530	Media Production	850	Treatment/Examination
535	Media Production Service	855	Treatment/Examination Service
540	Clinic	860	Diagnostic Service Lab
545	Clinic Service	865	Diagnostic Service Lab Support
550	Demonstration	870	Central Supplies
555	Demonstration Service	880	Public Waiting
560	Field Building	890	Staff On-Call Facility
570	Animal Quarters	895	Staff On-Call Facility Service
575	Animal Quarters Service	**900**	**Residential Facilities**
580	Greenhouse	910	Sleep/Study w/o Toilet or Bath
585	Greenhouse Service	919	Toilet or Bath
590	Other	920	Sleep/Study w/ Toilet or Bath
592	Support Laboratory Service	935	Sleep/Study Service
600	**General Use Facilities**	950	Apartment
610	Assembly	955	Apartment Service
615	Assembly Service	970	House
620	Exhibition	**000**	**Unclassified Service**
625	Exhibition Service	050	Inactive Area
630	Food Facility	060	Alteration or Conversion Area
635	Food Facility Service	070	Unfinished Area
640	Day Care		**Non-Assignable Areas**
645	Day Care Service	**www**	Circulation Area
650	Lounge	**xxx**	Building Service Area
655	Lounge Service	**yyy**	Mechanical Area

APPENDIX I
SUI DEPARTMENTAL SCHEDULING REGULATIONS & ALLOCATIONS
2003-2004 ACADEMIC YEAR

These regulations apply to the Colleges of Liberal Arts and Sciences, Education, Engineering, and The Tipple College of Business.

The scheduling regulations have been established to permit efficient use of available classroom space as well as to provide an orderly framework for instructional planning. Use of standard time blocks also allows students greater flexibility in scheduling classes offered by different departments or colleges. These regulations, in combination with the departmental class-period allocations, should ensure equitable distribution of classroom space among departments.

Preparation of Schedule Requests
> Be sure to visit our website for classroom information:
> http://spu.fscr.uiowa.edu

A. For courses that require a room that seats 100 or more, arrangements **must be made in advance** to add a course or alter the meeting time or place. Call 5-1 246 as soon as possible to make these arrangements. Priority in these rooms is retained by courses that are unchanged from the previous like semester (spring/spring; fall/fall), and by departments which make advance arrangements. (NOTE: any changes that took place during the session will have priority for space assignment but are not reflected on the enclosed copy. For example, if a course was canceled because faculty went on sabbatical, the room may have been reassigned to another course. If in doubt, please call.)

B. If a specific room **or** type **of facility is required note this on your copy.** Especially note the specific type of equipment required such as computer(MAC or PC),VCR or 35mm slide projector, etc. The general assignment classrooms that appear on the enclosed schedule copy should be viewed as a wish list only. Changes will be made as needed to meet overall curriculum requirements.

C. When requesting rooms for discussion sections, beginning language classes, etc., it is not necessary to specify a particular room and building. Indicate the size of room needed and that a general assignment classroom is required and one will be assigned.

D. Departments are reminded of the availability of evening and Saturday morning hours for scheduled instruction.

Course and Meeting Patterns

NOTES: "Contact-hour" refers to one 50-minute instructional period. EI "Class" is
used to designate a course or unit of a course (disc.,sec., lec., lab, etc.).
With the exception of split-period offerings, all courses are to begin on
the half hour.
Unless an ending time is noted, a 50 minute period is assumed.

A.   One contact-hour a week
Whenever possible utilize non-prime hours for once-a-week classes. During
prime hours, evenly distribute these classes both by time of day and day of
week.

B.   Two contact-hours a week
1.   Classes that meet for two consecutive hours on the same day will NOT
be scheduled on weekdays earlier than the 2:30 hour in general
assignment classrooms.
2.   Classes that meet for one hour on each of two days should be
scheduled on Tuesday and Thursday only.
3.   Exceptions to 1 & 2 above will be permitted only if they can be paired
with another course or courses in your department which will fully utilize
the room.

C.   Three contact-hours a week
1.   These classes are to be offered on Monday-Wednesday-Friday, or
Tuesday-Thursday-Saturday unless they are scheduled on a
Tuesday/Thursday split-period.
2.   Split-period use enables a three-contact-hour class to be taught in two
days by using 75-minute time blocks. Split-period instruction may be
offered only in the time blocks listed below, and **only on Tuesday and
Thursday.**

Tuesday -	Thursday only
8:05 -	9:20
9:30 -	10:45
10:55 -	12:10
1:05 -	2:20
2:30 -	3:45
3:55 -	5:10

3. Classes that meet for three consecutive hours on the same day will NOT be scheduled on weekdays earlier than the 2:30 hour in general assignment classrooms unless they can be paired with another course or courses in your department which will fully utilize the same room.

4. Even distribution should occur between the MWF and TTh offerings.

D. <u>Four contact-hours a week</u>
These classes may be scheduled for two consecutive time periods on Tuesday and Thursday, or one hour on each of four days. Classes meeting for two hours are to be scheduled at the <u>beginning</u> of the regular class-period (9:30-11:20, not 9:00-11:00).

E. <u>Application</u>
These meeting pattern regulations will be in effect for general assignment classrooms during all stages of the scheduling process until the completion of the second week of classes.

III. <u>Allocations</u>

A. The attached table lists a class-period allocation for each department covered. Departments that make little or no use of general assignment classrooms are not included in the allocations. It is expected that these departments will make maximum use of their classrooms and schedule their instruction on the same basis as outlined in the regulations. All departments are expected to utilize their own classrooms 30 hours per week for scheduled instruction before requesting the use of general assignment classrooms.

B. <u>Determination of allocation</u>
1. The allocation is based on the number of contact-hours offered by each department in general assignment classrooms in the 2002 fall semester relative to total use, and on the number of general assignment classroom periods that will be available during the next academic year.

2. To measure past departmental room use and to calculate allocations, all cross-referenced courses are applied to the department designated as Administrative Home. These contact hours are counted toward only that department's allocation.

C. <u>Use of departmental allocation</u>
1. See B.2. for counting cross-referenced contact hours.
NOTE: Cross-referenced courses must be listed on the copy of all departments involved whether or not they are counted in the allocations.

2 All instruction scheduled on weekdays from 7:30 a.m. through 5:30 p.m. for which general assignment classroom space is requested is charged against the departmental allocation. A list of general assignment rooms is enclosed with this material.

3. Each department is restricted to scheduling no more than its class-period allocation at any one hour in general assignment rooms. Instruction scheduled during the evening (after 5:30) or on Saturday will ~ be counted against the allocation although room use at these times during the 2001 fall semester ~ included in determining the total departmental allocation.

4. Refer to column b to tabulate how split-period instruction is charged against the departmental class-period allocation.

a. Split-period Time Blocks	b. Charge Against Class-period Allocation
8:05 - 9:20	1 at 7:30 +2 at 8:30
9:30 - 10:45	2 at 9:30 +1 at 10:30
10:55 -	1 at 10:30+2 at 11:30
12:10	2 at 12:30+2 at 1:30
1:05- 2:20	2 at 2:30+1 at 3:30
2:30 — 3:45	1 at 3:30 +2 at 4:30
3:55- 5:10	

5. Example: The following illustration shows how classes are counted against an allocation of 8 class periods to the Religion Department.

COURSE	MEETING TIME		ALLOCATION TIME									
			10:30					11:30				
			M	T	W	Th	F	M	T	W	Th	F
32:54	10:55-12:10	TR		.5		.5			1		1	
32:10	10:30	TR		1		1						
32:4(7	11:30	W								1		
32:175 Same as 26.145	10:30	MWF	None (counted on Philosophy allocation; Philosophy is Administrative Home									
32:15(A	10:30	MW	1		1							
32:171 Same as 39.163	11:30	TR							1		1	
			Religion is Administrative home)									
32:250	10:30	MWF	1		1		1					
32:145 Same as 16A:118	11:30	MWF						1		1		1
			Religion is Administrative home)									
32:001(13	6:30	T	(evening hours not counted)									
			2	1.5	2	1.5	1	1	2	2	2	1

Total class hours toward allocation =   8   8

Since the entire allocation of 8 has been used at 9:30 and 10:30 in this example, Religion would not be allowed to schedule additional classes at those hours in general assignment classrooms.

SCHEDULE COPY FOR EACH DEPARTMENT WILL BE CHECKED FOR ADHERENCE TO THE ALLOCATION AND REGULATIONS. COPY WHICH DOES NOT COMPLY WILL BE RETURNED TO THE DEPARTMENT WITH INSTRUCTIONS TO MAKE ADJUSTMENTS. ASSIGNMENT OF THE CLASSROOMS TO THE DEPARTMENT WILL BE DELAYED UNTIL THE COPY IS RETURNED PROPERLY ALTERED. WE REALIZE THAT SCHEDULING PRESENTS REAL PROBLEMS. YOUR COOPERATION WILL BE VERY MUCH APPRECIATED.

Office of Space Planning & Utilization, 250 University Services Building, 335-1246

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10/28/03

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