University Classroom Committee

Report

To the Provost

2001-2002

Committee members

Linda Broadbelt, *Chemical Engineering, McCormick*
Ebo Dawson-Andoh, *Associated Student Government*
Stephen D. Fisher, *Office of the Provost*
Edward P. Kerros, *Law School*
Gregory Light, *Searle Center for Teaching Excellence*
Paul A. Loach, *Biochemistry, Molecular Biology and Cell Biology, WCAS*
Marvin Lofquist, *Chemistry*, *Assistant Dean for Physical Sciences*, *WCAS*
Franziska Lys, *German*, *WCAS*
Michael E. Maysilles, *Office of the Registrar*
Ronald Nayler, *Facilities Management* (co-chair)
Joseph L. Schofer, *Civil Engineering, McCormick*
Jean E. Shedd, *Office of the Provost* (co-chair)
Robert L. Taylor, *Academic Technologies, IT*
Paul B. Weller, *Planning, Facilities Management*
Lonnie R. Williams, *Operations, Facilities Management*

September 2002

CLASSROOM COMMITTEE REPORT FOR FY 2002

COMMITTEE CHARGE AND STRUCTURE

The Classroom Committee was established by the Provost in January 2000 and charged with evaluating classroom use and quality, and recommending to the Provost and the Deans policies on classroom utilization, scheduling, physical improvements and priorities for assignment. The Committee includes representatives from the faculty, deans' staff, the Searle Center for Teaching Excellence, Office of the Registrar, Information Technology, Associated Student Government, Facilities Management and the Office of the Provost.

Much of the work of the Classroom Committee is accomplished through the three subcommittees that focus on teaching methodology and technology; classroom quality; and classroom utilization. Additionally, the co-chairs work with faculty and staff from the Chicago campus to explore improvements in the quality and utilization of classrooms in Chicago. A recurring allocation of $500,000 has been established for the Classroom Committee to address priority needs.

FY 2002 BUDGET ALLOCATION

During FY02, the Classroom Committee allocated its $500,000 budget to address two issues identified through last year's survey of classroom users as high priority issues:

- Phase 2 of upgrading smart classrooms at a total cost of $242,000. The Committee provided $80,000, and Academic Technologies (AT) provided the remainder of the funding. This project brought all smart classrooms up to current standards. The Committee recommended that additional recurring funds in the amount of $112,000 be allocated to AT so that the smart classroom equipment can be repaired and replaced on a regular 3-4 year schedule. Central Administration approved the recurring funds; future capital infusions from the Committee to maintain current smart classrooms will not be required.

- Renovation work in over 40 of the University's 110 general-purpose classrooms, at a total cost of $420,000. Improvements were made in the areas of seating (upgraded ergonomic tablet-arm chairs, lighting, carpeting, painting, replacement of blinds, etc. at the University Library and Harris, Fisk, Kresge, Swift and Parkes Halls. See Appendix II.A. for a detailed listing of improvements made in each classroom.

INTRODUCTION OF NEW SCHEDULING GUIDELINES

In January 2002, the Provost, President and deans agreed to adopt a new class scheduling policy, as recommended by the Classroom Committee. The new policy, which regularizes class meeting times and spreads them out over the day, will increase the number of classes available to students (by decreasing overlap of courses), and promote more efficient scheduling of University classrooms. (The policy can be found in Appendices III.A. and III.B. of this report; they also appear on the Office of the Registrar Web page, at http://www.registrar.northwestern.edu/classrooms/2002schedguid.pdf.)

The scheduling policy was implemented beginning with the scheduling of Fall quarter 2002 classes, and is proving to be successful: cooperation from the schools and units has been good. The Office of the Registrar was able to complete scheduling of classes earlier than in the past and with less conflict; and there are more classes scheduled before 9AM and after 2PM (see report from Office of the Registrar in Appendix III.C.).

More efficient scheduling of classes will permit conversion of classrooms identified as underutilized to offices, lab space, etc., to help address space needs in the schools. The deans, who support the new scheduling model and indicate it is helpful to their units, were asked by the Provost to recommend which classrooms they thought might be targeted for conversion; to date, no requests have been received.

In addition, the Provost asked the schools to consider carefully how they schedule departmentally controlled seminar rooms, conference rooms and classrooms. More effective use of these rooms will also help take the pressure off general-purpose (University-controlled) classrooms.

Scheduling Policy for Rooms in New Buildings

The Provost and President have affirmed that classrooms in new buildings will be treated as a University resource, not solely under the control of an individual unit. For example, the scheduling of classrooms in the McCormick Tribune building will be handled by Medill. However, Medill will be required to provide the Office of the Registrar with information on the classes scheduled in these rooms, on a quarterly basis. Thus, in practice, they will have first priority in scheduling the classrooms in the new building, but the Office of the Registrar will be able to monitor use of these classrooms, and, if they are not fully used, have the opportunity to schedule other classes into them.

Flexi-Classrooms

During FY00 and FY01, the Committee developed and refined a concept for a high-tech, wireless, flexible classroom to incorporate active and cooperative learning. Although funding was not available for this project in the form it was originally conceived, Academic Technologies and Facilities Management worked with the Classroom Committee to upgrade and equip a computer lab, Tech MG51, to serve as a flexible classroom, using PC's rather than laptops with wireless connections.

Under the direction of Paul Loach, a faculty member in BMBCB (and member of the Classroom Committee), a beginning course in Biochemistry was taught to the sophomore ISP class during Winter 2001/02 using Tech MG51. Loach noted that teaching this course provided valuable insight into both the use of high-tech, flexible classrooms and the use of project-oriented methodology. Loach reported that the amount of material covered was about the same as for a standard lecture format, however, it permitted many areas to be covered in greater depth. He also noted that student evaluations, solicited after grades were posted and via CTEC, indicated that over 90% enjoyed the format and room more than that of standard presentations. Although the Committee's request for funding in FY03 was not successful, the Committee and Academic Technologies continue to discuss ways in which this concept could attract external funding and ways in which this concept could be implemented using existing resources. (See Appendices I.A. and I.B.)

Conversion of Large Lecture Halls into Smart Classrooms

The Committee requested funding for FY03 to upgrade the projection and sound capabilities in three auditoria (Ryan Auditorium, Fisk 217, and Owen Coon Forum); this was an issue raised by department chairs in a meeting with the President and Provost in May 2001, and one that continues to be raised by faculty users. The total capital cost for these conversions is estimated at > $400,000, with a recurring annual cost of approximately $25,000. Although the Committee's request for funding in FY03 was not successful, upgrading these classrooms remains of interest to faculty users and should be considered if a source of funding can be identified.

CLASSROOM CONDITION SURVEY

Low-tech, Smart Classrooms

The Committee reviewed the option of providing additional smart classrooms at a lower cost by installing a networked computer connection and a ceiling mounted projector in classrooms. In the scenario, faculty would have to bring a laptop computer to the classroom in order to make it "smart". This avoids the central capital and maintenance costs for the podium, computer, VCR, etc. The consensus of the Committee was to establish the low-tech smart classroom as a new standard to implement when funds are limited.

Facilities Management completed a detailed assessment of the physical condition of general-purpose classrooms and identified the annual recurring cost of repair and renewal as ~$410,000. Significant information was gathered on the condition and cost of furniture, flooring, lighting, window treatments and painting. Information was also gathered on the condition and cost of chalk/marker boards, projection screens, overhead projectors, speakers, TVs and HVAC systems; additional analyses are required in these areas. The repair and renewal cost of items in the two worst (of five) condition categories totals ~$1,250,000 and consists of items that should be undertaken as soon as possible. Accessibility is an issue in Harris and Lunt; provision of elevators in those buildings could cost in excess of $1,000,000. Harris, Lunt and Kresge have no central air conditioning; approximately 15% of the space in each building is used for classrooms. Air conditioning these buildings could cost in excess of $5,000,000.

CHICAGO

The Feinberg School of Medicine will meet its classroom and auditoria needs through the renovation of the first and third floors of the Olson Building and the construction of the Lurie Research Center. The Kellogg School has met all its classroom needs. The Law School continues to develop its long-term plan with Facilities Management and is reviewing its current and future classroom needs. The Law School is considering the potential for the upgrading and cooperative scheduling of the Wieboldt classrooms used by the School of Continuing Studies (SCS). The quality of those classrooms continues to be an issue. The new dean of SCS is reviewing the utilization, quality, and scheduling of the SCS classrooms. The co-chairs and Facilities Management will continue to work on the Law School and SCS issues.

FUTURE EFFORTS

The efforts of the Classroom Committee in FY03 and beyond will be focused on:

- Develop and present a compelling case for smart classroom/auditoria funding
    1. Develop outline of strategic approach/data needs
    2. Undertake surveys/studies/analyses in Fall 2002
    3. Develop priority list for conversion to smart classrooms and define potential costs
    4. Complete final analysis and recommendations
    5. Present funding request

- Develop priorities for FY03 funding for general improvements
- Complete analysis of classroom conditions (HVAC, chalk/marker boards, screens, etc.)
- Review and refine (if needed) new scheduling policies
- Review classrooms for overcrowded conditions, recommend alternatives, and define impacts
- Review opportunities for resizing/conversion of Kresge 153 and Harris 205
- Develop priority list for conversion to flexible classrooms and define impacts
- Review/analyze use of classrooms scheduled through Schools/Depts
- Wieboldt classrooms: Continue to work with SCS and the Law School
- Seek external funding for priority projects
- Develop and implement mechanisms that encourage and aid faculty in using innovative pedagogies to improve student learning; provide the flexible, physical environments that optimize student learning.
- Develop a long-term plan for the Committee that would place NU in the forefront of classroom education.

APPENDICES

I. Report from the Subcommittee on Teaching Methodology and Technology

I.A. Comments on use of a pseudo-high-tech, pseudo-flexible classroom for teaching a project-oriented science course
I.B. Teaching biochemistry using project-oriented methodology in a flexible high-tech classroom
I.C. Report on upgrade of smart classrooms

II. Report from the Subcommittee on Classroom Quality

II.A. Classroom Improvements Report

III. Report from the Subcommittee on Classroom Utilization

III.A. General purpose classroom scheduling guidelines
III.B. Plan of scheduling times
III.C. Report on implementation of new scheduling guidelines

Appendix I

Report of the Subcommittee on Teaching Methodology and Technology (2002)

Subcommittee members: Gregory Light (Chair), Paul Loach, Franziska Lys, Bob Taylor

Summary

The Teaching Methodology/Technology Subcommittee met twice during the academic year. It continued where it had left off the previous year. It started by addressing the long-range issues raised in the FY01 sub-Committee report. These included a "push for the creation of Flexi-Classrooms to widen the interactive uses of technology … (and) interactive and flexible 'non-electronic' classrooms (as well as) … helping to develop faculty approaches to teaching that can utilize such technology and classrooms in ways best suited to promote 'smart' students and deep learning." In this undertaking the sub-Committee:

1. Identified and described a range of pedagogically and technologically enriched classrooms for the providing the best learning environment possible for Northwestern students.
2. Provided comprehensive specifications for those classrooms
3. Recommended a strategy for the development of those classrooms on campus which included:
    - A time frame for implementing the strategy in both the short and medium terms
    - Possible campus locations for a number of those classrooms
4. Recommended that the University take advantage of wireless technology to extend the pedagogical and technological capabilities of its classrooms.
5. Recommended the development of appropriate programs/courses to support the development of faculty skills for teaching in such enhanced classrooms.

Four Categories of pedagogically and technologically enriched classrooms

1. *Smart classrooms*: providing faculty the opportunity to bring electronic and web-based materials into the classroom. Minimum specification:
    - Networked computer with projection system and appropriate screen for room size (room should be appropriately wired for sound with additional soundproofing);

- Overhead projector;
- Additional white-boards (especially if projection screen covers most of the white-board in the front).

2. *Flexible classrooms*: providing students and faculty the opportunity to engage in active and interactive learning and teaching activities in the classroom. Minimum specification:
    - Flexible furniture - lightweight, durable moveable tables (for approx. 2-6 students each) with moveable chairs;
    - Moveable instructor table;
    - Overhead projector;
    - Additional white-boards on the side for group work;
    - Space for ease of movement between tables.

3. *Smart flexible classrooms*: providing students and faculty with the opportunity to engage in active and interactive learning with electronic and web-based materials into the classroom. Minimum specification:
    - Networked (one socket for 2-4 students or wireless technology);
    - Computer projection system/screen (room should be appropriately wired for sound with additional soundproofing);
    - Flexible furniture (tables and chairs as above);
    - Access to appropriate number of computers (1 per 2-4 students);
    - Appropriate software for classroom interaction/communication;
    - Overhead projector;
    - Additional white-boards (especially if projection screen covers most of the white-board in the front);
    - Space for ease of movement between tables.

4. *Smart semi-flexible classrooms*: providing students and faculty with the opportunity to engage in active and interactive learning with electronic and web-based materials into the classroom. Minimum specification:

- Networked computer with projection system and appropriate screen for room size (room should be appropriately wired for sound with additional soundproofing);
- Computer projection system/screen (room should be appropriately wired for sound with additional soundproofing);
- Flexible furniture (tables and chairs as above);
- Appropriate software for classroom interaction/communication;
- Overhead projector;
- Additional white-boards (especially if projection screen covers most of the white-board in the front);
- Space for ease of movement between tables.

Pedagogy and Technology Based Classroom Strategy

With respect to the above categories of classroom, the Subcommittee recommended that Northwestern's classroom strategy achieve the following goals. In addition, it recommended that the University take advantage of wireless technology to extend the capabilities of its classrooms.

	Short term (Fiscal Year 2003)	**Medium Term (three years)**
1. Wireless technology	Two classroom locations be identified for the installation of wireless technology permitting access to web via laptops. (Kresge and Tech.)	That a realistic target be set for a substantial proportion of the University's classroom to be able to access wireless technology.
2. Smart Classrooms	Five new *smart classrooms* are developed: the specific location to be decided in consultation with the utilization and the teaching Subcommittees.	That a realistic target be set for a substantial proportion of the University's classroom to be 'smart':
3. Flexible Classrooms	Two conventional classrooms are converted into *low-tech flexible classrooms.*	That a realistic target be set for the conversion of traditional classrooms to a 'flexible' configuration.
4. Smart Flexible Classrooms	Two *smart flexible classrooms* are developed.*	That a realistic target be set for developing smart, flexible (wireless) classrooms and learning environments.

5. Smart semi-flexible Classrooms	Four conventional classrooms are converted into *smart, semi-flexible classrooms*	That a realistic target be set for developing smart semi-flexible (wireless) classrooms.

* One of these two classrooms should be in the north of the campus and one at the south end. The former could be in Tech. The latter could be achieved through the innovative use of wireless technology in Kresge and related to at least one (or more) of the classroom converted to *semi-smart* status in recommended 5.

Programs/Courses Supporting Appropriate Faculty Development

The sub-Committee also proposed that appropriate means for supporting faculty in the effective use of these enhanced classrooms for teaching be developed and promoted. In this respect he Searle Center for teaching Excellence in conjunction with Academic Technologies initiated:

- *Teaching with New Technology* workshop for faculty (3 hours: February 20, 2002)
- *Learning with New Technology* institute for faculty (5 day intensive program –Sept 9-13th, 2002.

Appendix I.A.

Comments on use of a pseudo-high-tech, pseudo-flexible classroom for teaching a project-oriented science course

Paul Loach
Professor of Biochemistry, Molecular Biology and Cell Biology, and of Chemistry
May 2002

The Course

A beginning course in Biochemistry was taught to the Sophomore ISP class this past winter quarter using Tech MG51 for more than half the class meetings. An attempt was made to follow several principles in presenting this course. One of the first goals was to enable all class members to use graphics software (Rasmol and Chime) and access useful data banks for macromolecular structures and DNA and protein sequence information. Also initiated early were student projects to locate Web information on each topic covered in the curriculum for the purpose of enhancing knowledge on the subject and to present such information to the rest of the class using PowerPoint and netmeeting.

A special emphasis was placed on searching for the Biochemical Basis of Problems Experience By Living Organisms (BBPEBLO) as each topic in the curriculum was covered. A final research project was required on a BBPEBLO of the students choice.

Many projects were pursued during class time and referred to as "Multiple Simultaneous Inquiry" projects to pull together a broad spectrum of information and more depth than is usually covered by textbook presentations. These results were presented by the students during class. Some of these projects were assigned as "homework" to be reported on at the next class meeting. The instructor provided an overall framework and background of topics and integrated student reports as appropriate.

The general goals for the course tried to optimize as much as possible the "Seven Principles for Good Practice in Undergraduate Education" (Chickering and Gamson, AAHE Bulletin, March, 1987.): [from a document by Ken Bain]

1. Good Practice Encourages Student-Faculty Contact
*2. Good Practice Encourages Cooperation Among Students
*3. Good Practice Encourages Active Learning
4. Good Practice Gives Prompt Feedback
*5. Good Practice Emphasizes Time on Task
6. Good Practice Communicates High Expectations
*7. Good Practice Respects Diverse Talents and Ways of Learning

* Weak aspects of traditional lecture format

Evaluation

Teaching this course provided valuable insight into both the use of high-tech, flexible classrooms and the use of project-oriented methodology. The goals listed as 1,2,3 and 7 were particularly well met and represent a clear improvement over the standard lecture format. The other goals were satisfactorily achieved and would presumably be improved in teaching the course a second time. The amount of material covered was about the same as for a standard lecture format, however, there were many areas of greater depth. Student evaluations solicited after grades were posted and via CTEC indicated that over 90% enjoyed the format and room more than that of standard presentations. After presenting a seminar to the BMBCB faculty, there was much excitement about using such a classroom for a variety of classes. Overall, it is my feeling that this is a far superior way to enable student learning.

Concern

It is essential that several real "high-tech, flexible" classrooms be created on campus in order for NU faculty to gain experience and insight into the benefits of their use. This does not seem to be happening.

Appendix IB.

Teaching biochemistry using project-oriented methodology in a flexible high-tech classroom

Paul Loach
Professor of Biochemistry, Molecular Biology and Cell Biology and of Chemistry
May 2002

General Goal:

To optimize as much as possible the "Seven Principles for Good Practice in Undergraduate Education" (Chickering and Gamson, AAHE Bulletin, March, 1987.):

1. Good Practice Encourages Student-Faculty Contact
*2. Good Practice Encourages Cooperation Among Students
*3. Good Practice Encourages Active Learning
4. Good Practice Gives Prompt Feedback
*5. Good Practice Emphasizes Time on Task
6. Good Practice Communicates High Expectations
*7. Good Practice Respects Diverse Talents and Ways of Learning

* Weak aspects of traditional lecture format

Education Studies indicate:

(1) Multi-media (visual-based) presentations will not, by themselves, produce significantly deeper or more extensive learning than will teaching without out such electronic media. There seems to be little reason to believe that a PowerPoint presentation, for example, will produce deeper or more extensive learning than will the same presentation by the same professor using an overhead projector or even a blackboard.

(2) students will learn more deeply (in ways that have a sustained, substantial, and positive influence on how they think, act, or feel) if

(a) they are trying to solve problems (intellectual, physical, artistic, practical, abstract, etc.) that they find intriguing, beautiful, and/or important
(b) they are able to do so in a challenging yet supportive environment in which they can feel a sense of control over their own education
(c) they can work collaboratively with other learners to grapple with the problems
(d) they believe that their work will be considered fairly and honestly (e) they can try, fail, and receive feedback from expert learners in advance of and separate from any summative judgment of their efforts.

Elements of Biochemistry Course

Permeant Themes: structure-function relationships and energetics

Tools up front (Rasmol, Chime, Blast, Web resources)
- requires a high-tech classroom (computer & internet connection for each student)

"Active" project participation - requires flexible space and tools
- Retrieval of macromolecule coordinates and demonstration of structural features using Rasmol/Chime
- Multiple simultaneous inquiries (MSI) with disease/problem aspect
  7 projects, one in every other class meeting
- Final review

Paper on the Biochemical Basis of a Problem Experienced by Living Organisms (BBPEBLO) - taking responsibility

Tech MG51

Restricted server with individual and shared folders

One PC per person - Pentium III, 256 Mb Ram, Chime, Microsoft package, Internet connected

Four clusters of four work stations with center tables and moveable chairs

One projector interfaced with instructor's computer

Examples of use of Tech MG51

Web tutorials - e.g., www.worthpublishers.com/lehninger/
Oxygen binding proteins, movies 1-3, 12, 13 & 19, mouse control, control box

Web PowerPoint presentations - e.g., 8_glycolysis (RPI)

MSI projects - e.g., membtransproj
Instructions: membtransprojassign
Potassium channel

Benefits

Getting excited about biochemical topics

Learning by presenting

Locating resources - textbooks, Web sites, data banks, tutorials, PowerPoint presentations

Developing communicating and reporting skills - PowerPoint, chime, netmeeting, retrieving electronic journal articles, etc.

Growing in responsibility to others (group projects) and to society (BBPEBLO)

EVALUATION OF PROJECT-ORIENTED CLASS MEETINGS

Active involvement of students in course content

This is definitely a plus. Because of the small class size (14 students) and the use of many "multiple simultaneous inquiry" (MSI) projects, student participation in obtaining and presenting course content is greatly enhanced relative to a straight lecture course. It was possible to assign projects to individuals, groups of two and groups of four, all of which seemed to work well.

Students developed expertise with graphics programs, data manipulation, Web resources and PowerPoint presentations

This goal was achieved surprisingly quickly. The challenge seemed to be enjoyed by class members.

Students participate in reporting results, gain experience in giving talks under a non-threatening environment

Because there were many MSI projects the format became more routine, more efficient and less threatening.

Increased student-student and student-faculty dialog

A great deal of learning and communication seems to happen between students working on projects. As reflection of the shared responsibility, the attendance and participation was excellent throughout the quarter.

Intellectual content is covered in more depth and breadth

This aspect is dependent on the overall organization and support provided by the instructor - for some topics, these goals were nicely achieved; for other topics, a straight lecture format would probably have provided more depth. Offering the course a second time should definitely improve the consistency of this aspect.

Collective resources on topics are greater (synergism)

This was a nice benefit. Many Web sources of tutorials and structure presentations were found by the students that greatly shortened the time required to make nice presentations of various projects. They also provide excellent resource material for the next time this course is taught.

Evaluation of student efforts is facilitated

Because of the large number of projects and presentations, a much more extensive knowledge of the students, their interests and their ability is enabled - definitely a major plus. The course also makes use of a midterm exam and a final exam in order to ensure sufficient traditional information is available to assign grades, but the weighting of these toward the final grade is less.

Combines elements of challenge, active participation, multiple learning styles and shared responsibilities

Since different individuals exhibit different abilities and combinations of learning skills, providing several different opportunities (reading, listening, problem solving, games, use of techy aids, working in groups, working alone, etc.) should result in a higher level of achievement by a larger percentage of the class. Because of the emphasis on applying ones knowledge to understanding problems experienced by living organisms (BBPEBLO), a kind of shared responsibility is a product.

Time spent on task

Other institutions using studio-type approaches (e.g., RPI) report that the time spent on task is more efficient than that experienced by the standard lecture format. In this class, that seemed to be true sometimes and not in others. This undoubtedly depends on the preparation and organization provided by the instructor. There were also some short-comings of the classroom that definitely contributed to an inefficient use of time. From the perspective of having presented the topic of biochemistry in many other standard course settings, the extent of coverage for the time spent seems approximately the same, perhaps a little better.

Appendix I.C.

Report on upgrade of smart classrooms

Bob Taylor, Director of Academic Technologies, IT
September 2002

In the Fall of 2001, the Classroom Committee authorized the final stage of upgrades to the existing suite of NU Smart Classrooms. The work in FY02 was to include upgrades to 13 Smart Classrooms at an estimated expense of $241,152. (The 13 classrooms are: Tech LR5, Tech M128, Tech 152, Tech 164, Tech 177, Tech L251, tech M345, Tech L361, Annenberg G15, Annenberg G21, Parkes 214, University Hall 102, University Hall 122.)

Completion of this upgrade work would bring all NU Smart Classrooms up to current technology standards. The Classroom Committee agreed to fund $80,000 of the renovation expenses, and IT agreed to fund the remaining estimated $161,152.

In addition to this contracted work, IT spent $34,533 in FY02 on Smart Classroom repairs, incidental improvements, maintenance, and replacement of some stolen classroom equipment.

The last three Smart Classroom upgrades weree completed on September 21, 2002, so now all 28 NU Smart Classrooms have been brought up to current standards.

In addition to the NU Smart Classroom work described above, NUIT made investments in 4 videoconferencing classrooms on the Evanston and Chicago campus in FY02. These investments totaled about $65,000. These rooms are seeing increasing use for NU classes and seminars, particularly by Speech, MEAS, NUMS and the Cross School program in Neuroscience. IT also invested in a videoconferencing bridge (called an MCU that is a networked hardware system that supports videoconferencing from desktop systems, conference rooms, and classrooms around Northwestern.

Appendix II

Report of the Subcommittee on Classroom Quality (2002)

Subcommittee members: Steve Fisher (Chair), Marv Lofquist, Joe Schofer, Lonnie Williams

After spending $375,000 to renovate completely Swift 107 during FY01, the Quality Subcommittee focused on a number of less costly renovations of classrooms in FY02. The spreadsheet in Appendix II.A summarizes what was done in each room and the cost. Other activities of at least some of the members of the Subcommittee included sit-down sessions trying out a variety of tablet-arm chairs.

Among the major issues that remain are laptop and wireless "smart" classrooms, the erratic heating and cooling in Parkes Hall, developing flexi-classrooms, and possible significant changes in the configuration of Harris 205 and Kresge 153.

Appendix II.A.

APPENDIX II.A.-CLASSROOM COMMITTEE IMPROVEMENTS FY02

FY 2002 PROJECTS	New furniture	Refinished or repaired Furniture	New Screen or Screen Fabric	New Lights	Paint, touch-up	New Flooring	Provide Central A/C or HVAC improve-ments	New Blinds	Cost
COMPLETED= 'X'; PLANNED= 'P'									
Annenberg G15	--	--	X	--	--	--	--	--	$1,524
Annenberg G22	--	--	X	--	--	--	--	--	$1,524
Fisk 114	--	--		X	X	--	--	X	$7,963
Fisk 201	--	--	--	--	X	--	--	X	$6,299
Fisk 211	--	--	--	--	--	--	--	X	$2,221
Harris Hall 203	X	--	--	X	X	X	--	X	$16,216
Harris Hall 307	X	--	--	X	X	X	--	X	$18,858
Harris Hall 308	--	--	--	X	X	X	--	X	$13,215
Harris Hall 310	X	--	--	X	X	X	--	X	$22,932
Harris Hall 313	X	--	--	X	X	X	--	X	$13,859
Harris Hall 315	X	--	--	X	X	X	--	X	$13,166
Kresge 102	--	--	--	X	X	X	--	X	$13,105
Kresge 103	X	--	--	X	X	X	--	--	$16,658
Kresge 104	--	--	--	X	X	X	--	--	$14,288
Kresge 272	X	--	--	--	--	--	--	--	$4,531
Kresge 302	--	--	--	--	X	X	--	X	$6,002
Kresge 303	--	--	--	X	X	X	--	--	$10,028
Kresge 304	--	--	--	X	X	X	--	--	$8,938
Kresge 306	X	--	--	--	--	--	--	--	$5,664
Kresge 307	X	--	--	X	X	X	--	--	$13,156
Kresge 329	P	--	--	X	X	X	--	--	$16,304
Kresge 330	--	--	--	X	X	X	--	--	$8,804
Kresge 331	--	--	--	X	X	X	--	--	$8,402
Library Seminar Rms: (10 of 12 rooms)	--	X	--	--	--	--	--	--	$18,745
Lunt a/c for registrar classrooms	--	--	--	--	--	--	P	--	$50,000
North Campus Flexible Classroom	P	--	--	--	--	--	--	--	$15,000
Parkes 212	--	--	--	X	X	--	--	X	$35,610
Parkes 213	--	--	--	--	X	--	--	X	$2,760
Parkes 214	--	--	--	--	X	--	--	X	$3,544
Parkes 215	--	--	--	--	X	--	--	X	$2,317
Parkes 222	--	--	--	--	X	--	--	X	$3,258
Parkes 224	--	--	--	X	X	--	--	X	$13,452
Swift 104	X	--	--	X	X	X	--	X	$27,283
University Hall 102	--	--	X	--	--	--	--	--	$2,674
University Hall 122	--	--	X	--	--	--	--	--	$2,674

Total	$420,974

Note 1:Kresge 329 will be converted to a flexible seating arrangement; exact count to be defined

Note 2: Lunt a/c: Partial funding for air conditioning Lunt 101-105, 107; remainder of funds to come from FY03 budget

Note 3: North campus flexible classroom to be selected by the Committee.

Appendix III

Report of the Subcommittee on Classroom Utilization (2002)

Subcommittee members: Linda Broadbelt, Ebo Dawson-Andoh, Paul Loach, Marv Lofquist, Michael Maysilles, Paul Weller (chair)

The subcommittee focused its efforts on development and implementation of the new scheduling guidelines, described in the body of the report, and in Appendices III.A., III.B., and III.C. (following).

Appendix III.A

General Purpose Classroom Scheduling Guidelines

Effective Fall Quarter 2002

The general principle of the Guidelines revolves around standard meeting patterns and are defined as such:

1. MWF classes meeting for 50-minutes, three times a week, beginning on the hour
2. TTh classes meeting for 80-minutes, two times a week, beginning at 8:00, 9:30, 11:00, 12:30, 2:00 and 3:30

These standard meeting patterns are graphically represented in Chart #1.

Classes conforming to Standard Meeting Patterns will be given priority in room scheduling. Non-conforming classes will be scheduled after conforming classes and run the risk of having no room available.

Guidelines Specific to MWF Classes:

1. MWF is the normal sequence for classes meeting three days a week for 50-minutes, beginning on the hour, Chart #1.

   Classes which meet for 50-minutes three days a week and cannot be scheduled MWF must be scheduled at 8:00 or after 3:00, Chart #3.

2. Classes of more than one hour that must meet two days a week and on MWF must be scheduled beginning at 8:00 or after 2:00, Chart #2.

3. One day a week classes meeting on Monday, Wednesday or Friday must be scheduled before 10:00 or after 2:00, Chart #2.

4. Classes meeting for four or more days a week may be scheduled beginning at 8:00, 10:00, 11:00, 1:00, 2:00 or after 4:00, Chart #4

Guidelines Specific to TTh Classes

1. TTh is the normal sequence for classes meeting two days a week for 80-minutes. TTh classes are scheduled to meet at 8:00, 9:30, 11:00, 12:30, 2:00 and 3:30, Chart #1.

2. Two-hour time blocks on TTh may be scheduled after 2:00.

3. One day a week classes meeting on Tuesday or Thursday must be scheduled before 9:30 or after 2:00, Chart #2.

4. Classes meeting for four or more days a week may be scheduled beginning at 8:00, 10:00, 11:00, 1:00, 2:00 or after 4:00, Chart #4

Additional Guidelines

1. The Office of the Registrar reserves the rights to ask departments to change times of classes as room scheduling difficulties warrant.

2. The most heavily used times of each day are between the hours of 10:00 and 2:00. When at all possible, departments should attempt to schedule during more lightly used times.
3. It is expected that a department's classes in any given quarter be balanced over the different time slots.
4. Discussion sections should be scheduled before 10:00 and after 2:00.
5. These guidelines apply to all classes that wish to use General Purpose Classrooms

Appendix III.B

Plan of Scheduling Times

Chart 1 - Standard Meeting Patterns

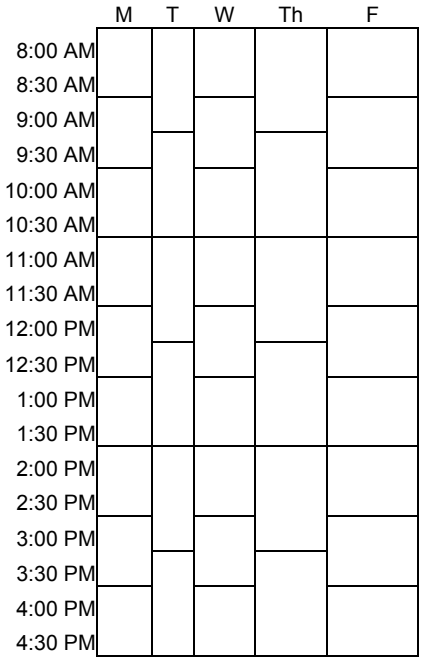


Chart 2 - One day a week or two days a week other than TTh

Shaded areas show acceptable scheduling times

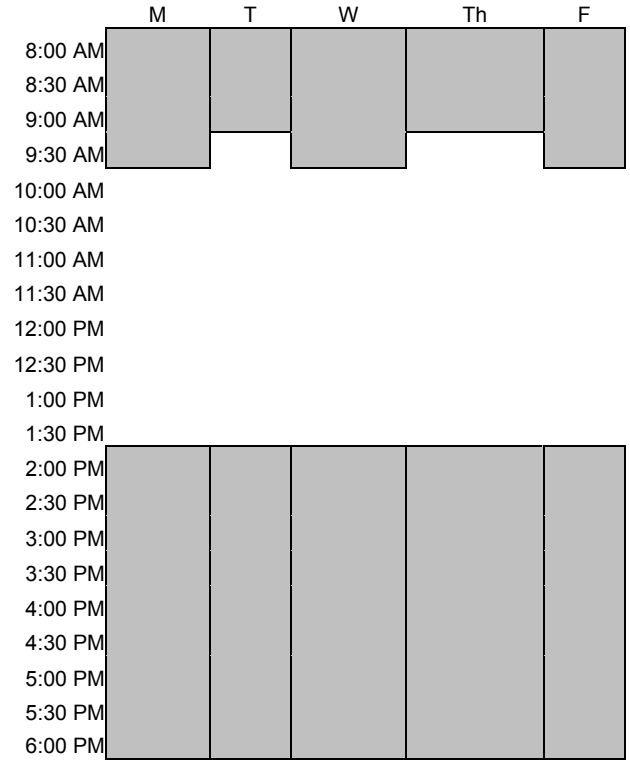


Chart 3 - Three days a week other than MWF

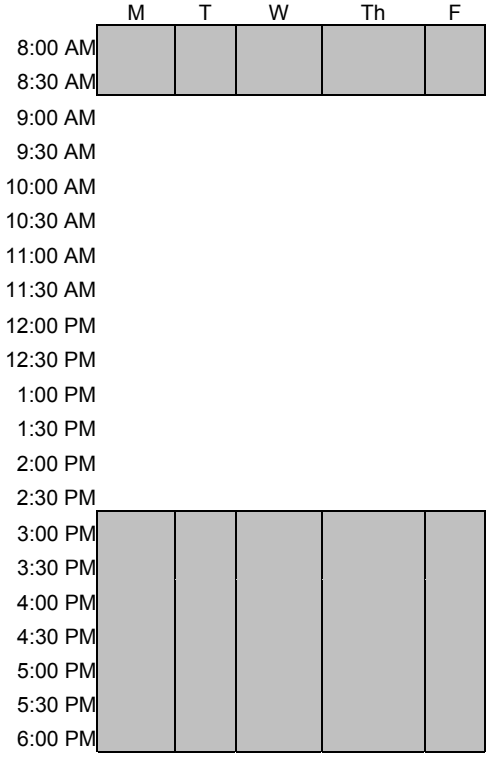
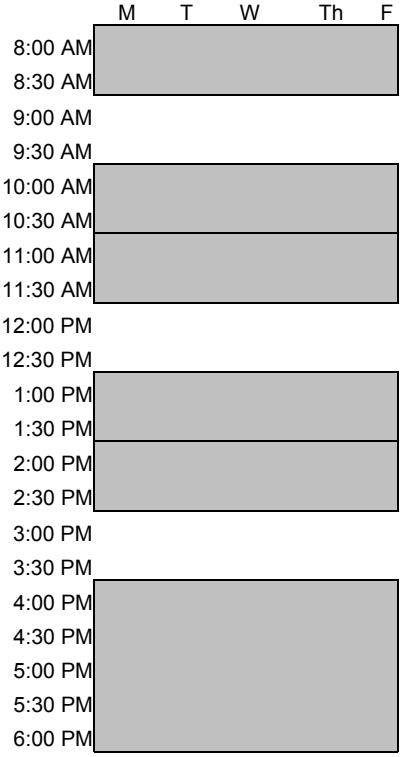


Chart 4 - Four or more days a week



Appendix III.C.

Report on implementation of new scheduling guidelines

Michael Maysilles, Associate Registrar
September 2002

The Office of the Registrar has completed the classroom scheduling for Fall Quarter 2002 using the new University Classroom Scheduling Guidelines. Success of the guidelines can be measured in many different ways. However, I believe that the following points are worthy of mention:

1. Cooperation from departments was very good. There were been only a few minor complaints, although nearly all classes complied.

2. All lecture and discussion sections for Fall Quarter 2002 were successfully scheduled as of May 23, 2002. This is much earlier than in previous years.

3. There are a few more classes meeting before 9 AM and after 2 PM for Fall 2002 than were meeting at those times in Fall 2001. The actual numbers are small. However, there are also more classes currently being offered in Fall 2002 than were offered in Fall 2001. I believe that the number of classes taught before 9 and after 2 can be increased if, and when we have specific rooms targeted for re-allocation. It would make scheduling classes at those hours more of a hard sell rather than a suggestion. Even with more classes being offered in Fall 2002, there are rooms available during peak hours of the day (MWF 10:00, TTH 11:00), unlike previous terms.