

## SCHOOL OF ARCHITECTURE AND PLANNING

### **Baccalaureate Study in Architecture and Planning Assessment Findings and Curricular Improvements**

#### **Bachelor of Science in Architecture Program**

##### **Assessment Measures**

1. NAAB Accreditation: The fundamental assessment measure of our graduate program in architecture, as a professionally accredited program in architecture, is the results of our National Architectural Accreditation Board (NAAB) accreditation process. That process rigorously and exhaustively examines the school regarding 13 conditions of accreditation and 34 specific student performance criteria.
2. Results of Comprehensive Capstone Project
3. Grading by faculty in courses
4. Student evaluations in all courses
5. Graduating Student Survey
6. Alumni Survey
7. Other Measures: Student Enrollment Trends

##### **Assessment Findings**

1. NAAB Accreditation

WE note that while the B.S.Arch degree is not independently accredited by NAAB, it is a part of the overall six-year M.Arch track, and thus its coursework and curriculum is reviewed extensively by NAAB.

The normal NAAB cycle of accreditation is six years. Our school currently is nearing the completion of a full term of six years of accreditation, resulting from a site visit in Spring of 2003, and will be visited again by NAAB in February of 2009. The school is well along in preparation for that upcoming visit.

The process requires the school to file an Architectural Program Report (APR) in the fall semester prior to the spring visit. The APR is a comprehensive report, often running to hundreds of pages (our recently filed version for CUA was over 500 pages). A copy of the recently submitted Report and a copy of the prior Report (dated 2002) are on file at the architecture program, and could be provided to Middle States upon request. Those two reports together cover the entire period since the previous Middle States visit. Each APR must cover the school's efforts toward all of the conditions and criteria relevant to a professionally accredited architectural program. These are, from NAAB's website:

## **1. Introduction to the Program**

The *APR* must include the sections described below.

### **1.1 History and Description of the Institution**

This section should include a brief history and description of the institution.

### **1.2 Institutional Mission**

This section should include the institution's mission statement and the date of its adoption or last revision.

### **1.3 Program History**

This section should contain a brief history of the existing accredited degree program or, in the case of a candidacy visit, a history of the planning for the proposed program.

### **1.4 Program Mission**

This section should include the accredited degree program's mission statement, the date of its adoption or revision, and the date of its endorsement by the institution.

### **1.5 Program Self-Assessment**

This section should briefly outline the program's strengths and challenges and include a plan to address those challenges. Candor in conducting and reporting the selfassessment increases its value to the accredited degree program and to the NAAB and, if well done, will largely anticipate the *VTR*.

## **2. Progress Since the Previous Site Visit**

Continuing accreditation is contingent on the Board's determination that deficiencies are being systematically addressed. The following two subsections explain what the *APR* must include.

### **2.1 Summary of Responses to the Team Findings**

This section must include the school's response to the previous *Visiting Team Report (VTR)* for conditions "not met" and to the "causes of concern."

### **2.2 Summary of Responses to Changes in the NAAB Conditions**

If applicable, summarize the school's response to changes in the *NAAB Conditions for Accreditation* adopted since the previous visit.

## **3. The Thirteen Conditions of Accreditation**

### **3.1 Program Response to the NAAB Perspectives**

Schools must respond to the interests of the collateral organizations that make up the NAAB as set forth by this edition of the *NAAB Conditions for Accreditation*. Each school is expected to address these interests consistent with its scholastic identity and mission. The following subsections address what the *APR* must include.

#### **3.1.1 Architectural Education and the Academic Context**

The accredited degree program must demonstrate that it benefits from and contributes to its institution. In the *APR*, the accredited degree program may explain its academic and professional standards for faculty and students; its interaction with other programs in the institution; the contribution of the students, faculty, and administrators to the governance and the intellectual and social lives of the institution; and the contribution of the institution to the accredited degree program in terms of intellectual resources and personnel.

#### **3.1.2 Architectural Education and the Students**

The accredited degree program must demonstrate that it provides support and encouragement for students to assume leadership roles in school and later in the profession and that it provides an environment that embraces cultural differences. Given the program's mission, the *APR* may explain how students participate in setting their individual and collective learning agendas; how they are encouraged to cooperate with, assist, share decision making with, and respect students who may be different from themselves; their access to the information needed to shape their future; their exposure to the national and international context of practice and the work of the allied design disciplines; and how students' diversity, distinctiveness, self-worth, and dignity are nurtured.

#### **3.1.3 Architectural Education and Registration**

The accredited degree program must demonstrate that it provides students with a sound preparation for the transition to internship and licensure. The school may choose to explain in the *APR* the accredited degree program's relationship with the state registration boards, the exposure of students to internship requirements including knowledge of the national Intern Development Program (IDP) and continuing education beyond graduation, the students' understanding of their responsibility for professional conduct, and the proportion of graduates who have sought and achieved licensure since the previous visit.

#### **3.1.4 Architectural Education and the Profession**

The accredited degree program must demonstrate how it prepares students to practice and assume new roles and responsibilities in a context of increasing cultural diversity, changing client and regulatory demands, and an expanding knowledge base. Given the program's particular mission, the *APR* may include an explanation of how the accredited degree program is engaged with the professional community in the life of the school; how students gain an awareness of the need to advance their knowledge of

architecture through a lifetime of practice and research; how they develop an appreciation of the diverse and collaborative roles assumed by architects in practice; how they develop an understanding of and respect for the roles and responsibilities of the associated disciplines; how they learn to reconcile the conflicts between architects' obligations to their clients and the public and the demands of the creative enterprise; and how students acquire the ethics for upholding the integrity of the profession.

### **3.1.5 Architectural Education and Society**

The program must demonstrate that it equips students with an informed understanding of social and environmental problems and develops their capacity to address these problems with sound architecture and urban design decisions. In the *APR*, the accredited degree program may cover such issues as how students gain an understanding of architecture as a social art, including the complex processes carried out by the multiple stakeholders who shape built environments; the emphasis given to generating the knowledge that can mitigate social and environmental problems; how students gain an understanding of the ethical implications of decisions involving the built environment; and how a climate of civic engagement is nurtured, including a commitment to professional and public services.

## **3.2 Program Self-Assessment Procedures**

The accredited degree program must show how it is making progress in achieving the *NAAB Perspectives* and how it assesses the extent to which it is fulfilling its mission. The assessment procedures must include solicitation of the faculty's, students', and graduates' views on the program's curriculum and learning. Individual course evaluations are not sufficient to provide insight into the program's focus and pedagogy.

## **3.3 Public Information**

To ensure an understanding of the accredited professional degree by the public, all schools offering an accredited degree program or any candidacy program must include in their catalogs and promotional media the *exact language* found in the *NAAB Conditions for Accreditation*, Appendix A. To ensure an understanding of the body of knowledge and skills that constitute a professional education in architecture, the school must inform faculty and incoming students of how to access the *NAAB Conditions for Accreditation*.

## **3.4 Social Equity**

The accredited degree program must provide faculty, students, and staff—irrespective of race, ethnicity, creed, national origin, gender, age, physical ability, or sexual orientation—with an educational environment in which each person is equitably able to learn, teach, and work. The school must have a clear policy on diversity that is communicated to current and prospective faculty, students, and staff and that is reflected in the distribution of the program's human, physical, and financial resources. Faculty, staff, and students must also have equitable opportunities to participate in program governance.

## **3.5 Studio Culture**

The school is expected to demonstrate a positive and respectful learning environment through the encouragement of the fundamental values of optimism, respect, sharing, engagement, and innovation between and among the members of its faculty, student body, administration, and staff. The school should encourage students and faculty to appreciate these values as guiding principles of professional conduct throughout their careers.

The *APR* must demonstrate that the school has adopted a written studio culture policy with a plan for its implementation and maintenance and provide evidence of abiding by that policy. The plan should specifically address issues of time management on the part of both the faculty and students. The document on studio culture policy should be incorporated in the *APR* as Section 4.2.

## **3.6 Human Resources**

The accredited degree program must demonstrate that it provides adequate human resources for a professional degree program in architecture, including a sufficient faculty complement, an administrative head with enough time for effective administration, and adequate administrative, technical, and faculty support staff. Student enrollment in and scheduling of design studios must ensure adequate time for an effective tutorial exchange between the teacher and the student. The total teaching load should allow faculty members adequate time to pursue research, scholarship, and practice to enhance their professional development.

## **3.7 Human Resource Development**

Schools must have a clear policy outlining both individual and collective opportunities for faculty and student growth inside and outside the program.

## **3.8 Physical Resources**

The accredited degree program must provide the physical resources appropriate for a professional degree program in architecture, including design studio space for the exclusive use of each student in a studio class; lecture and seminar space to accommodate both didactic and interactive learning; office space for the exclusive use of each full-time faculty member; and related instructional support space. The facilities must also be in compliance with the Americans with Disabilities Act (ADA) and applicable building codes.

## **3.9 Information Resources**

Readily accessible library and visual resource collections are essential for architectural study, teaching, and research. Library collections must include at least 5,000 different cataloged titles, with an appropriate mix of Library of Congress NA, Dewey 720–29, and other related call numbers to serve the needs of individual programs. There must be adequate visual resources as well.

Access to other architectural collections may supplement, but not substitute for, adequate resources at the home institution. In addition to developing and managing collections, architectural librarians and visual resources professionals should provide information services that promote the research skills and critical thinking necessary for professional practice and lifelong learning.

### **3.10 Financial Resources**

An accredited degree program must have access to sufficient institutional support and financial resources to meet its needs and be comparable in scope to those available to meet the needs of other professional programs within the institution.

### **3.11 Administrative Structure**

The accredited degree program must be, or be part of, an institution accredited by one of the following regional institutional accrediting agencies for higher education: the Southern Association of Colleges and Schools (SACS); the Middle States Association of Colleges and Schools (MSACS); the New England Association of Schools and Colleges (NEASC); the North Central Association of Colleges and Schools (NCACS); the Northwest Commission on Colleges and Universities (NWCCU); and the Western Association of Schools and Colleges (WASC). The accredited degree program must have a measure of autonomy that is both comparable to that afforded other professional degree programs in the institution and sufficient to ensure conformance with the conditions for accreditation.

### **3.12 Professional Degrees and Curriculum**

The NAAB accredits the following professional degree programs: the Bachelor of Architecture (B. Arch.), the Master of Architecture (M. Arch.), and the Doctor of Architecture (D. Arch.). The curricular requirements for awarding these degrees must include professional studies, general studies, and electives. Schools offering the degrees B. Arch., M. Arch., and/or D. Arch. are strongly encouraged to use these degree titles exclusively with NAAB-accredited professional degree programs.

### **3.13 Student Performance Criteria**

The accredited degree program must ensure that each graduate possesses the knowledge and skills defined by the criteria set out below. The knowledge and skills are the minimum for meeting the demands of an internship leading to registration for practice.

The school must provide evidence that its graduates have satisfied each criterion through required coursework. If credits are granted for courses taken at other institutions, evidence must be provided that the courses are comparable to those offered in the accredited degree program. The criteria encompass two levels of accomplishment:

- **Understanding**—means the assimilation and comprehension of information without necessarily being able to see its full implication.
- **Ability**—means the skill in using specific information to accomplish a task, in correctly selecting the appropriate information, and in applying it to the solution of a specific problem.

The NAAB establishes performance criteria to help accredited degree programs prepare students for the profession while encouraging educational practices suited to the individual degree program. In addition to assessing whether student performance meets the professional criteria, the visiting team will assess performance in relation to the school's stated curricular goals and content. While the NAAB stipulates the student performance criteria that must be met, it specifies neither the educational format nor the form of student work that may serve as evidence of having met these criteria. Programs are encouraged to develop unique learning and teaching strategies, methods, and materials to satisfy these criteria. The NAAB will consider innovative methods for satisfying the criteria, provided the school has a formal evaluation process for assessing student achievement of these criteria and documents the results. The *APR* must include the following information:

- An overview of the school's curricular goals and content.
- A matrix cross-referencing each required course with the performance criteria it fulfills. For each criterion, the school must highlight the cell on the matrix that points to the greatest evidence of achievement.

For the purpose of accreditation, graduating students must demonstrate *understanding or ability* in the following areas:

#### **1. Speaking and Writing Skills**

*Ability to read, write, listen, and speak effectively*

#### **2. Critical Thinking Skills**

*Ability to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test them against relevant criteria and standards*

**3. Graphics Skills**

*Ability to use appropriate representational media, including freehand drawing and computer technology, to convey essential formal elements at each stage of the programming and design process*

**4. Research Skills**

*Ability to gather, assess, record, and apply relevant information in architectural coursework.*

**5. Formal Ordering Systems**

*Understanding of the fundamentals of visual perception and the principles and systems of order that inform two- and three-dimensional design, architectural composition, and urban design*

**6. Fundamental Design Skills**

*Ability to use basic architectural principles in the design of buildings, interior spaces, and sites*

**7. Collaborative Skills**

*Ability to recognize the varied talent found in interdisciplinary design project teams in professional practice and work in collaboration with other students as members of a design team*

**8. Western Traditions**

*Understanding of the Western architectural canons and traditions in architecture, landscape and urban design, as well as the climatic, technological, socioeconomic, and other cultural factors that have shaped and sustained them*

**9. Non-Western Traditions**

*Understanding of parallel and divergent canons and traditions of architecture and urban design in the non-Western world*

**10. National and Regional Traditions**

*Understanding of national traditions and the local regional heritage in architecture, landscape design and urban design, including the vernacular tradition*

**11. Use of Precedents**

*Ability to incorporate relevant precedents into architecture and urban design Projects*

**12. Human Behavior**

*Understanding of the theories and methods of inquiry that seek to clarify the relationship between human behavior and the physical environment*

**13. Human Diversity**

*Understanding of the diverse needs, values, behavioral norms, physical ability, and social and spatial patterns that characterize different cultures and individuals and the implication of this diversity for the societal roles and responsibilities of architects*

**14. Accessibility**

*Ability to design both site and building to accommodate individuals with varying physical abilities*

**15. Sustainable Design**

*Understanding of the principles of sustainability in making architecture and urban design decisions that conserve natural and built resources, including culturally important buildings and sites, and in the creation of healthful buildings and communities*

**16. Program Preparation**

*Ability to prepare a comprehensive program for an architectural project, including assessment of client and user needs, a critical review of appropriate precedents, an inventory of space and equipment requirements, an analysis of site conditions, a review of the relevant laws and standards and assessment of their implication for the project, and a definition of site selection and design assessment criteria*

**17. Site Conditions**

*Ability to respond to natural and built site characteristics in the development of a program and the design of a project*

**18. Structural Systems**

*Understanding of principles of structural behavior in withstanding gravity and lateral forces and the evolution, range, and appropriate application of contemporary structural systems*

**19. Environmental Systems**

*Understanding of the basic principles and appropriate application and performance of environmental systems, including acoustical, lighting, and climate modification systems, and energy use, integrated with the building envelope*

**20. Life Safety**

*Understanding of the basic principles of life-safety systems with an emphasis on egress*

**21. Building Envelope Systems**

*Understanding of the basic principles and appropriate application and performance of building envelope materials and assemblies*

**22. Building Service Systems**

*Understanding of* the basic principles and appropriate application and performance of plumbing, electrical, vertical transportation, communication, security, and fire protection systems

**23. Building Systems Integration**

*Ability to* assess, select, and conceptually integrate structural systems, building envelope systems, environmental systems, life-safety systems, and building service systems into building design

**24. Building Materials and Assemblies**

*Understanding of* the basic principles and appropriate application and performance of construction materials, products, components, and assemblies, including their environmental impact and reuse

**25. Construction Cost Control**

*Understanding of* the fundamentals of building cost, life-cycle cost, and construction estimating

**26. Technical Documentation**

*Ability to* make technically precise drawings and write outline specifications for a proposed design

**27. Client Role in Architecture**

*Understanding of* the responsibility of the architect to elicit, understand, and resolve the needs of the client, owner, and user

**28. Comprehensive Design**

*Ability to* produce a comprehensive architectural project based on a building program and site that includes development of programmed spaces demonstrating an understanding of structural and environmental systems, building envelope systems, life-safety provisions, wall sections and building assemblies and the principles of sustainability

**29. Architect's Administrative Roles**

*Understanding of* obtaining commissions and negotiating contracts, managing personnel and selecting consultants, recommending project delivery methods, and forms of service contracts

**30. Architectural Practice**

*Understanding of* the basic principles and legal aspects of practice organization, financial management, business planning, time and project management, risk mitigation, and mediation and arbitration as well as an understanding of trends that affect practice, such as globalization, outsourcing, project delivery, expanding practice settings, diversity, and others

**31. Professional Development**

*Understanding of* the role of internship in obtaining licensure and registration and the mutual rights and responsibilities of interns and employers

**32. Leadership**

*Understanding of* the need for architects to provide leadership in the building design and construction process and on issues of growth, development, and aesthetics in their communities

**33. Legal Responsibilities**

*Understanding of* the architect's responsibility as determined by registration law, building codes and regulations, professional service contracts, zoning and subdivision ordinances, environmental regulation, historic preservation laws, and accessibility laws

**34. Ethics and Professional Judgment**

*Understanding of* the ethical issues involved in the formation of professional judgment in architectural design and practice.

**4. Supplemental Information**

The following sections explain material that must be included at the end of each *APR*.

**4.1 Student Progress Evaluation Procedures**

A description of the procedures for evaluating student transfer credits and advanced placement. A description of the procedures for evaluating student progress, including the institutional and program policies and standards for evaluation, advancement, graduation, and remediation.

**4.2 Studio Culture Policy**

Supplemental information to the *APR* must include the school's current studio culture policy.

**4.3 Course Descriptions**

Supplemental information to the *APR* must include for each required and elective course in the accredited degree program a one-page description with an overview, learning objectives, course requirements, prerequisites, date(s) offered, and faculty member teaching it.

**4.4 Faculty Résumés**

Supplemental information to the *APR* must include a maximum two-page résumé for each faculty member teaching in the accredited degree program.

#### **4.5 Visiting Team Report from the Previous Visit**

Supplemental information to the *APR* must include a complete copy of the previous VTR.

#### **4.6 Annual Reports**

Copies of all *Annual Reports* submitted to the NAAB since the previous site visit. The NAAB responses to the *Annual Reports*.

#### **4.7 School Catalog**

Supplemental information to the *APR* must include a current school catalog.

The most relevant of these sections for our assessment findings in architecture are *Section 3.2 Program Self-Assessment Procedures* and *Section 3.13 Student Performance Criteria*, the latter of which includes the 34 specific performance measures. Once an *APR* is received by NAAB, a team is assigned, a four-day visit occurs, a recommendation is filed by the team as a visiting team report, and the NAAB board votes upon that recommendation and relays the result to the school. Subsequent to the visit, the school files an *Annual Report* with NAAB each year, in which the school discusses its progress toward resolving any concerns identified by the team, and also discusses any other relevant changes in the accredited program. These *Annual Reports* tend to focus heavily on curricular issues and revisions, but also may address new faculty hires, financial issues, facility issues, etc. NAAB responds in writing to each *Annual Report*, indicating if NAAB feels the issue is now resolved or whether the issue requires further reporting in subsequent years.

The actual visit focuses heavily on curricular matters and assessments, with a particular stress on actual student achievements in satisfying the 34 performance criteria, the content of *Section 3.13* of the conditions. The school produces a large matrix, identifying which specific courses have relevance to which criteria. A criteria may be covered to some degree in a variety of courses. Conformance to the criteria is directly illustrated to the team through two major mechanisms: the 'Course Binders' and the 'Team Room'. The Course Binders consist of a set of three-ring 8-1/2 x 11 binders, one binder dedicated to each course we offer -- both required and elective (our current set of binders are 84 in number). Each binder comprehensively compiles the course description, sample syllabi, sample assignments, and extensive samples of actual student work (homework, quizzes, tests, written papers, exam bluebooks, and small format graphic materials such as sketches, diagrams, etc.). Many of these binders run to several hundred pages of information. Each binder is exhaustively reviewed by NAAB. The binders have the greatest relevance for courses that are lectures or seminars; actual examples of student work from those types of courses often conform well to the 8-1/2 x 11 format. A full set of these binders is being prepared as of this writing at the school, and would be available for review by Middle States. The Team Room specifically handles large-scale graphic or modeled products that cannot reasonably be placed within an 8-1/2 x 11 binder. Typically, the course materials placed in this room come from our studio design courses (though larger materials from construction documents courses and freehand drawing course might also be included there). The Team Room is one of the most distinctive components of architectural accreditation in comparison with other disciplinary accreditation processes. A three-ring binder is still made for each studio course, containing syllabi, handouts, etc., but the actual large format project results cannot easily be placed there. NAAB insists that such large scale graphic products be exhibited to the team at their original size -- they cannot be realistically Xeroxed down to 8-1/2 x 11 format and still shown the intended information. The team room is a lockable area of approximately 3,000 sq. ft., in which actual student graphic projects (architectural plans, sections, elevations, site plans, technical diagrams, physical models of wood and cardboard, and so forth) are exhibited to the team. We are required to show several examples relevant to each studio course, explicitly labeling whether the project was a 'high pass' or 'low pass'. In this way, NAAB can assess the best work in the school but also the work that the school feels is at the minimum acceptable level for conformance to the criteria. The Team

Room exhibits are typically demounted once the visit is completed, but photographs of the exhibits will be retained for examination if need be by Middle States.

Largely based on the Course Binders and the Team Room, NAAB directly assesses whether or not the school is meeting the 34 student performance criteria. NAAB decides that each individual criteria is either is 'Met' or 'Not Met'; it can also, if the strength of the work warrants, list a criteria as 'Well Met', meaning that the course information and student results indicate truly excellent work, standing far above the norm.

The review of the student performance criteria at CUA in the Spring 2003 visit by NAAB was successful, in that the school received the full term of accreditation. At that time, NAAB conditions actually included 37 different student performance criteria (the detailed criteria change approximately every five years due to ongoing review by NAAB -- a new and shortened list of criteria was issued in 2004). For the 2003 visit, the school was listed as 'Well Met' regarding 4 criteria, 'Met' regarding 26 criteria, and 'Not Met' regarding 7 criteria. This proportion of results is not unusual nationally. The student performance criteria listed as 'Not Met' were:

- Research Skills
- Human Behavior
- Non-Western Traditions
- Accessibility (handicapped access requirements)
- Site Conditions
- Building Economics and Cost Control
- Detailed Design Development

In that NAAB is simultaneously assessing both our two-year and three-year tracks, various of these criteria were deficient in one track only or deficient in both tracks. The school duly began reporting on various initiatives for improvements regarding these seven criteria in all of its subsequent Annual Reports. Examples of how NAAB's findings help us with curricular improvements in architecture will be given in the 'Curricular Improvements' section of this document.

NAAB also reports its findings on all of the other Conditions, including *Section 3.2 Program Self-Assessment Procedures*. In their 2003 Visiting Team Report, the team regarded our self-assessment procedures as 'Met'. Satisfying this measure necessitates illustrating that the school has a strategic plan, that the school is indeed implementing that plan, that the school's university is operating under an appropriate regional accrediting body (such as Middle States), that the school has an appropriate level of curricular review, that the school utilizes course evaluations, that the school conducts appropriate surveys, and so forth. Since this condition was regarded by NAAB as 'Met', we have not been required to report on it specifically in our Annual Reports to NAAB over the past six years.

## 2. Results of Comprehensive Capstone Project

In the undergraduate program, this experience happens in *ARCH 402 Comprehensive Building Studio* (this directly parallels *ARCH 503 Comprehensive Building Studio* in the three-year purely graduate level M.Arch track). As a result of our curricular changes in this studio, we have seen a major transformation in grading practices, indicating that a substantially more difficult pedagogy has been put in place. Assessment in this studio has become much sharper and decisive, and many more students are being challenged to increase the level of their work.

As shown in the "Average Grade" chart of **Attachment #1**, a noticeable change in grading occurred between Spring 2005 and Spring of 2006. For many years the grading in this course had been fairly

consistent, and fairly high -- averaging somewhat above a B+. In the Spring of 2006 this dipped. The average grade went to approximately a B. The number of student receiving a grade of C increased considerably.

The greater level of intensity of our comprehensive studio experience shows up immediately in the more aggressive grading of *ARCH 402* in Spring 2006. That toughness of grading extends further in the marks for Spring 2007, showing that this initiative is continuing. Our intent was to make this studio a capstone - or rite of passage -- experience that insures the quality of our teaching of the general parameters of architecture. In Spring 2007, 3 students received a grade of D, and one student received an F. This is quite unusual in design studios nationally.

It is also interesting to observe the "Course Evaluation Results" chart in the same attachment. This shows that students' ratings of the course moved down in Spring 2006 and moved down further in Spring 2007. We do not interpret this as a negative -- quite the opposite. What it reflects is that the course had become much, much tougher and more rigorous, and many student were somewhat stunned by that transformation, and suddenly had to struggle much harder to achieve proficiency in the course. Also, a number of students received very low grades, which no doubt took a toll on the course rating numbers.

### 3. Grading by faculty in courses

As indicated in the prior measure related to our comprehensive design course, we use course grading statistics to track the performance of our students in all of our coursework. Similar analyses are done of many of our courses. Major changes in grading results (such as seen in *ARCH 402*) have to be explained by the faculty involved and our studied by our curriculum committee.

### 4. Student evaluations in all courses

As indicated in the measure related to our comprehensive design course, we use course evaluations to track the satisfaction of our students in all of our coursework. All courses offered in our program make use of the CUA standard course evaluation forms. This data is used in assessment of the quality of our courses, and is used in making faculty evaluations in our yearly reviews.

### 5. Graduating Student Survey

The program has recently begun to survey students to obtain objective as well as subjective data that may be beneficial in future strategic planning efforts. The results of this past year's exiting student surveys are available:

#### **2008 Undergraduate Student Survey Results:**

- Students were asked to rank their assessment of a series of statements on a scale from 1 to 4 (*1=poorly, 2=somewhat adequately, 3=adequately, 4=very well*)
  - 3.59 I have been prepared to think critically and logically
  - 3.44 I have attained the necessary oral communication and presentation skills
  - 3.16 I have been given the necessary instruction in my major
  - 3.36 I have been prepared for graduate study
  
- Students were asked to rank their assessment of a series of statements on a scale from 1 to 5 (*1=unsatisfied, 2=somewhat satisfied, 3=satisfied, 4=very satisfied, 5=extremely satisfied*)

- 3.19 I have been prepared to compete professionally in my discipline
  - 3.75 I have been prepared to gain employment after graduation
  - 3.63 I have been prepared to contribute to society
- Students were asked to respond to the following statements with a yes or no answer. CUA did all that it could to...
    - 50% ... provide me with sufficient access to alumni
    - 62.5% ... help me explore all of the career options open to me
    - 93.75% ... instill a sense of idealism about environmental design
    - 31.25% ... help me to understand practice in the “real world”
    - 75% ... help me to access other educational resources at Catholic
    - 93.75% ... facilitate my exploration of the educational opportunities within DC
    - 31.25% ... provide sufficient instruction in practice management\*
    - 93.75% ... provide sufficient instruction in design

\* Practice management is formally taught within the Master of Architecture program and not within the Bachelor of Science program

As seen in the table above, most students rated the program very highly. The only substantive issue that shows up in these results is the 'yes/no' question related to whether or not they feel prepared for professional practice. That material is not taught to them until they reach the graduate program, so that response is completely understandable.

## 6. Alumni Survey

Results of the alumni survey are not available yet, so we cannot report any findings from that instrument.

## 7. Other Measures: Student Enrollment Trends

Ultimately, a critical measure of the success of a program is its enrollment. We feel our recent enrollment trends clearly show that our school's curricular improvements have born fruit, and made our program more popular and competitive nationally with similar programs. This has been manifested in varying degrees at both the undergraduate and graduate level. We illustrate data from the graduate program below in addition to the undergraduate program because, as noted above, our graduate students in the three-year M.Arch track take a number of courses with the undergraduates, most specifically the Comprehensive Building Design Studio. We show data below from 2003 onward. Circa 2003 to 2005, the program faced several challenges in enrollment. Undergraduate growth had been steady but by no means impressive. We were seeing increases on the order of 2 to 4% annually. On the graduate side, we were actually seeing a series of decreases -- and these decreases were of a larger order, ranging around 6 to 7% annually. The curricular steps that we first introduced in 2005 both at the graduate and undergraduate level powerfully and immediately reversed those trends. Fundamentally, these changes were our revision and augmentation of our capstone experience for undergraduates (Comprehensive Building Design Studio) and our introduction of the five concentrations into the graduate program. Undergraduate enrollment gains picked up steam considerably, rising well over 8% per year for the next three years. Changes in graduate enrollment were even more impressive: in 2006 alone we had a 12% increase that fully reversed the previous several years of declines, and in 2007-2008 further gains similar to those of the undergraduate program appeared. These upward trends seem stable and bode very well for the future.

<b># of Undergraduate Students</b>	<b>% Change from prior year</b>	<b># of Graduate Students</b>	<b>% Change from prior year</b>
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2003	273	-----	113	-----
2004	290	+4%	106	-7%
2005	297	+2%	100	-6%
2006	329	+11%	112	+12%
2007	344	+8%	123	+10
2008	384	+11%	133	+8%

Over the past five years, our school's total enrollment has grown by nearly 34% (from a headcount of 386 to 517) -- a rather remarkable increase. We would like to note that these increases result from curricular improvements; there has not been any other major changes in our methods, such as an increase in marketing or increased visits to recruitment fairs. The increases have resulted from our ability to assess the problem and forge an appropriate curricular solution. We feel these increases represent the inherently greater quality and attractiveness of our program, not any other external factor.

### Curricular Improvements

Since NAAB's Student Performance Criteria cover virtually all of the curricular aspects of an architectural program, we can most easily and comprehensively show our attitude toward curricular revision by detailing how we have addressed the deficient criteria noted by NAAB. Seven criteria were noted for further work at the most recent accreditation visit, and we have made progress on all of them. By the time of our recent submission of an APR (Fall, 2008), NAAB had informed us that four of the seven criteria had been satisfied by our various annual reports over the past several years, and that further work remained on the other three. Here, we report the full information on how we satisfied the four, and the further steps we are taking now toward satisfying the remaining three. Our success with the remaining three will be assessed by NAAB as a normal part of our upcoming NAAB visit in February of 2009. We should be able to report to Middle States the results of that review by the time of Middle States own visit.

**12.3 Research Skills:** After our 2007 Annual Report, this deficiency was regarded by NAAB as *satisfied*. Our steps in resolving this deficiency were: 'Research Methodology' was created as a lecture course to give our curriculum greater rigor in research. That course was taught in this way for the first time in the Fall '06 semester. All students who receive the M.Arch degree must take 'Research Methodology', so every student receiving the professional degree goes through this experience. This required course introduces a critical and structural framework to independent thesis research for all students completing the professional degree program. This seminar helps students ask critical questions, develop a strategy of research, understand the precedents relating to the selected thesis, and articulate the research results. Ultimately, the student comes to understand the need to be an informed architect, fully familiar with the relevant research materials related to the task. When approaching any project, a designer is expected to be familiar with a greater context: historic, architectural, theoretical, urban and technical. In a sense, designers are expected to ask and answer questions of themselves and the project. They can be technical questions or theoretical questions, about building types or about ephemeral space. Regardless of the modality, it is the student's responsibility to address the thesis as a Masters student in an architecture and planning program and incorporate that questioning into an investigative process. The course is both a seminar and an independent research process guided by a student's advocate. The primary method of engaging in a research method is writing. The primary text for this course is *The Craft of Research* by Wayne Booth, Gregory Colomb and Joseph Williams (Chicago University Press). Additional texts include *Architectural Research Methods*, Groat and Wang; *The Dissertation: An Architecture Student's Handbook* (Iain Borden); *Programming for Design: From Theory to Practice* (Edith Cherry); and *A Manual for Writers of Term Papers, Theses, and Dissertations* (Turabian). Both students and faculty felt that the new course was successful. Students reported that they had a much better grasp of how to proceed with their thesis-related research tasks. Once a student completes this 3-credit-hour course, they perform their individual research for their project in 'Thesis Research' over the next semester (another 3-credit-hour effort), then complete the 'Thesis Design' over the subsequent semester (a 6-credit-hour studio). Therefore, the entire thesis process at the school is a total of three semesters and utilized 12 credits. Faculty felt that the resulting theses presented in their entirety in May of 2008 showed a quite startling increase in the proficiency of the research and its impact on the thesis designs. For more information, see syllabi of thesis process, and see comments on curriculum in section 3.13.

**12.7 Human Behavior:** After our 2007 Annual Report, this deficiency is *still being reported on*.

It is also the opinion of the school's administration that this deficiency, as of 2007, still had not yet been addressed. On March 14<sup>th</sup>, 2007, the Dean specifically requested information from the curriculum committee on this criterion and how NAAB's concerns will be responded to here. The curriculum committee's proposal was to use a portion of ARCH 401, a design studio course, to address this criterion. Milton Shinberg, AIA, NCARB, of Shinberg/Levinas LLC of Rockville, MD, is a well-known expert on the relations of architecture and neuroscience. For many years, he has taught a 3-credit-hour elective course at our school entitled 'Beauty and Brains', which extensively studies how to create a sense of empathy in the designer for the role that human cognition plays in the built environment. He will begin offering a new, condensed version of that material in 8 one-hour lectures (plus one additional review lecture) in a required course, ARCH 401. A three-week studio project will be assigned (in the Fall '08 semester that project will be for a facility for the blind). Shinberg will oversee that portion of that studio directly, working with the studio critics. The emphasis will be on developing an 'architectural anthropology' -- considering issues of haptic vs. optic cognition, defensible space, human interactions in public spaces, etc. Our intent in handling this criterion within the context of a studio is to insure that students integrate theory and practice.

**12.11 Non-Western Traditions:** After our 2007 Annual Report, this deficiency is *still being reported on*. Non-Western traditions are now being covered in the basic history survey courses. For example, a number of non-Western themes are addressed in the history sequence from the early Medieval to Baroque and Rococo. Lectures this past year in that course covered: *Architecture of Byzantine East; Early Islamic architecture in the Middle East; Islamic architecture in North Africa; Pre-Islamic architecture in India; Medieval Chinese architecture; Mughal architecture in India; Pre-Columbian civilizations in South America; and Post-Columbian urbanization in South America*. In addition to these non-Western topics, this course de-emphasizes insular regional developments and chronological history (as if one stage neatly leads to another). Instead, the course makes students aware that architectural developments are results, sometimes, of cross-fertilization of ideas and cannot necessarily be categorized in chronological sequence. Similar approaches to non-western history are being introduced this next academic year into the earlier course, which covers architecture prior to the medieval period. After our 2007 Annual Report, NAAB has requested syllabi related to these courses, and they are provided in this APR.

**12.14 Accessibility:** After our 2007 Annual Report, this deficiency was regarded by NAAB as *satisfied*. The comprehensive design studio reformulation has addressed this concern (see syllabus). The comprehensive design studio has several professional ADA consultants who give lectures to the group, attend desk crits individually with students, and attend juries of the design work. The projects are multi-story, with extensive accessibility requirements. Comprehensive design studio concludes with an oral defense, which covers approximately 10 major topics - one of which is ADA issues. Thus, the students are directly tested on this. All projects were acceptable in ADA standards, and the faculty and consultants were generally satisfied. If any area of ADA study still requires more work in our studios, we feel it is in the area of site accessibility. In the most recent offering of comprehensive design studio, this was a consideration in several students not being passed forward out of the studio. They are being asked to repeat.

**12.15 Site Conditions:** After our 2007 Report, this deficiency was regarded by NAAB as *satisfied*. The comprehensive design studio reformulation addressed this concern (see syllabus). For the past several semesters, projects were assigned in the comprehensive design studio having a very particular site concerns - the construction of a multi-story building in relation to an existing structure. There were also quite complex urban issues involved in these site conditions. The results were strong. The comprehensive design studio had several licensed professional landscape consultants who give lectures to the group, attend desk crits individually with students, and attend juries of the design work. One of these recent consultants has taught at UVA in the landscape department. Community members came to discuss the conditions of the context of the neighborhood. The sites, of course, are toured. Each group does a site plan and site details, paving, retaining plans, parking drainage, etc. Code consultants talk about the zoning process, including site setbacks, parking requirements, sustainability issues in terms of solar orientation, etc. The faculty and consultants thought the work was quite strong regarding site issues.

**12.26 Building Economics and Cost Control:** After our 2007 Annual Report, this deficiency is *still being reported on*. The comprehensive design studio reformulation has addressed this concern (see syllabus). The studio includes a consultant who was a cost estimator for a construction company. This consultant meets with all individual teams; the consultant does not, however, sit on actual juries of the results. Students are given a detailed budget for the building and had to choose systems that would conform to that budget. Much study was done through precedents -- looking at buildings in that budget range and seeing what systems those building used. In the opinion of the school's current

administration, this criterion has been addressed to some degree but more work remains to be done. More material related to this criterion has now been incorporated into ARCH 315, 'Pre-Design'. This now includes several lectures of study and exercises on cost estimating. See syllabi.

**12.27 Detailed Design Development:** After our 2007 Report, this deficiency was regarded by NAAB as *satisfied*. The comprehensive design studio reformulation has addressed this concern. Detailed physical construction models are done at 1"=1'-0." These involve the study of environmental and structural systems, skin, materials, connections between materials, building and ground plane interface, etc. Construction document sets upward of 20 sheets (some with as many as 30 sheets) are done by each group. These include wall sections, foundation details, column grids and bubbles, dimensioning, notes, schedules (door, windows), reflected ceiling plan, interior and exterior elevations, roof and parapet details, fire-rated partition types, and stair details. Virtual modeling techniques are used extensively for the study of details as well. Animated details showing the sequence of assembly are made, various axonometric representation methods for 3d detailing are explored, and building information modeling (ArchiCAD) is used. Students become aware that this kind of information exists, and become aware of how it is used to coordinate the sets of construction of documents. A future goal for our program is to get BIM further integrated into this course. A new required course taught at the school, ARCH 261/661 Digital Construction Documentation, has made considerable strides in this regard, and the logical next step would be to make the interface between this course and comprehensive design studio more seamless.

In addition to citing whether or not a school has met the specific student performance criteria, NAAB can also cite 'causes of concern'. These are not deficiencies, they are areas where NAAB feels a school needs to focus greater attention. At the 2003 visit by NAAB, a concern was noted about 'studio coordination'. Our response to this concern shows how we address curricular issues of a more minor character.

An undergraduate studio coordinators committee was established. This group was charged with devising clearer statements of pedagogy for each of our undergraduate studio courses, and with insuring that there was greater conformance to those guidelines by all sections of the studio. Studios must be taken in sequence as each studio builds on the knowledge of the previous studio. This is quite different by intention from our graduate sequence of studios, which are taken as 'vertical' studios. Additionally, the studios at each year-level (and also our two three-credit-hour courses for freshmen) now have quite specific foci of study as outlined below.

#### **Arch 101a – Architectural Foundations I – Sketchbook based**

#### **Arch 102a – Architectural Foundations II – Laptop based with sketchbook support**

The emphasis in first year is on enculturation to both the profession of architecture and University Life. Required courses in Mathematics, Physics, English Literature and Composition, Theology and Classical and Modern Philosophy prepare the student for future years of university level research, writing and study. Two foundational courses in Architecture during the first year provide students with an overview of the profession of architecture and its allied disciplines while at the same time establishing essential skills in hard-line and freehand drawing, model making, Digital tools, spatial analysis, design thinking and documentation and facility with architectural ordering systems and grammar. The goal of the first year program is to successfully transition the student from their prior experience (which are varied given the demographics of our program) to University life and community and to professional life and community in the profession of architecture. ARCH 101a and 102a serve not only to prepare students for future courses and studios, but to offer opportunity of collaboration and an atmosphere conducive to the development of a productive and nurturing esprit de corps. ARCH 101a and 102a are the freshman level endeavors. While they are not full design studios, requiring dedicated individual desk-space, they do offer an integration of discussions about the profession, projects in different contexts, graphic skills and case studies. ARCH 101a balances studies about the architect in both national and international arenas, case studies of modern, and contemporary projects throughout N an S America, Europe, Asia, and Africa, lessons in scales, landscape, formal graphic exercises and ordering devises. ARCH 102a introduces ideas of sustainability, studies of space and depth, form and structure, and technical and speculative drawing. Additionally, by the end of the freshman year, students will have had exposure to, and mastered, the basics of manual and digital drawing and model making skills

#### **Arch 201 – Fundamentals I – Formal Ordering Systems, Use of Precedent**

### **Arch 202 – Fundamentals II – Structural/tectonic Systems, Detail Design, Use of Precedent**

Second and third-year courses include the majority of program requirements. A required first semester second year introduces the student to issues of sustainability and the architect's ethical role in this regard. Intensive studio work in architectural design is complemented by study in architectural history and theory, structures, technological systems, digital media and urban studies. In second year students are provided with the fundamentals of spatial composition and design thinking through intensive iterative design problems establishing the habit of rigorous design process. In the second year students are also introduced to the materials and methods of building construction and tectonics. This to prepare students for the third year where they undertake more complex design problems dealing with the subject of Sustainability with particular attention paid to site analysis and building orientation.

The sophomore studios, of ARCH 201 and 202, build on the freshman experience and focus on formal ordering systems through conceptual model studies. These 3D models are then developed through plans, sections, and elevation drawings. ARCH 201 uses these models to discuss human needs, i.e. program, and how design impacts use. Students learn to discuss sequence of elements, progression, circulation, and hierarchy. ARCH 201 Studio emphasize the importance of research and the use and application of precedent in the design process. Focus is made on the "process" of design more so than merely the product in order to foster the habit of critical consideration of various approaches to problem solving. Particular emphasis is made at this level on the syntax of architectural and spatial grammar. Simple spatial arrangement problems using "kits-of-parts" are used to allow students to develop sequences of Entry, Path and Arrival conditions while considering the perceptual and experiential variations created. Examinations of precedent (e.g. Ching – *Form, Space and Order*) are used to extend the abstract studio projects to an array of architecture application both historically and culturally diverse. The ARCH 201 Studio culminates with a project involving the design of a small chapel in a natural landscape. Actual building sites are given from the surrounding Washington metropolitan area. Students are required to visit and document the site and as a group (by section) produce a site analysis. Students then undertake the individual design of a non-denominational chapel for a small congregation. This project involves consideration of the earlier study of entry, path, arrival sequences not only in the development of the chapel itself, but by extension into the design of the approach to the chapel through the landscape. This project lends itself to the discussion of Sustainability and the Stewardship of the Natural and Built Environment by presenting an opportunity for consideration of the manner in which building impact a natural condition.

In ARCH 202 students can identify basic structural systems found in their projects. Designs are developed relative to the existing context of the given urban site. Design concepts are supported by examples or precedent studies. Building on the basic principles covered in ARCH 201 regarding the use of formal ordering systems and of space-making, students explore the extent to which structural systems serve as an ordering datum for the manipulation of architectural space. Projects involving the use of column/beam systems of various material types (wood, steel, masonry, concrete) are used to explore not only the tectonic implication of these building types but also to form a "material imagination" with regard to their appropriate application and relative size and proportion given the overall size of the structure being designed. The ARCH 201 studio culminates with a public use building (such as a school or a library) in an urban environment. Actual sites in the city of Washington DC are used, and as with ARCH 201, site analysis is carried out by groups. In addition to the organization of space within a structural frame or bearing wall condition, students are required to deal with issues of program, egress, natural light and sustainability.

### **Arch 301 – Design I – Sustainable Design, Site conditions**

### **Arch 302 – Design II – Urban Design, Social Human Behavior, Community Based Design**

The third year curriculum is an intensive year of using the tools gained in the first two years, and the introduction of new concepts of architecture and peripherally related fields. The ARCH 301 and 302 studios expand the student's horizons by offering foreign travel and study opportunities, expanding scales of learning into urban design, and reintroducing influence of human behavior into the studio.

ARCH 301 projects cover housing programs, with existing site conditions to be dealt with. Designs are driven by programmatic needs and site constraints. Techniques in site analysis are covered in the beginning of this studio as an expansion of that undertaken at the second year level. Students study not only the

physical and environmental factors that effect building design but also the social factors that must be considered in order for the building to become a good citizen and neighbor in the city. Pre-design analysis is an important component of this studio. The needs of diverse client interests (the building owner, the tenants etc) are evaluated as well as that of the larger “stakeholder” contingent of those occupants of the neighborhood and the city and regional governments. The relative costs and construction time/impact variables of differ construction types are considered as a key element in beginning the design process. The culminating project for this studio is that of multifamily housing (4-8 story apartment building) providing an opportunity to study the nature and scales of public and private space. The designs are presented at a range of scales so as to show consideration of both the individual unit and the building as a whole. An important part of this studio project is the design of building façade and its relation to existing context.

ARCH 302 studios focus on urban design and the making of community. Students may elect to study with one of the semester long programs in Rome or Barcelona, or may focus on the culture and city design of Washington. These three different venues make up an intensive semester of non-traditional exposures and integrating these experiences into the design studio. This studio introduces the student to the implications of human behavior at the social (societal) level and its implications in the formation of the built (urban) environment. The goal of the 302 studio is to get the students out of the Crough Center and into “the city” in order to directly experience the nature of urban space. A critical aspect of this studio is the role of documentation and analysis. Students engage the city visually through freehand sketching, intellectually through diagramming and historical research and socially through eating, shopping and simply living in the place. Projects undertaken in this studio usually culminate in the design of a building and adjoining public space. Whether a piazza, a campo, an avenue or a river front, students are asked to design in a manner which illustrates an understanding of the history and taxonomy of the environment in which they work and an appreciation for the culture of making that has developed. An understanding of “critical regionalism” is an essential component of this discussion. In that 302’s focus is on Urban Design, which takes place either in DC, Barcelona, or Rome, the studio is highly specialized and no NAAB criteria, on the matrix, have been checked off.

#### **Arch 401 – Design III – Program Prep., Human Behavior Part II: Foreign Competition**

#### **Arch 402 – Design IV – Comprehensive Building Design Studio**

The fourth year curriculum involves advanced architectural design and a culminating comprehensive capstone studio. The goal of this studio level is to allow the student to explore areas of practice that they may consider pursuing at the graduate level while at the same time assuring that they have mastered those skills and abilities necessary for them to participate in meaningful and productive internship experiences.

ARCH 401 is the Graduate Foreign Studies Design Competition Studio. The studio sections are purposefully diverse in offerings so as to allow the student to pursue the area of study most suited to their interests. Studio project assignments are established by the instructor in conjunction with their particular research interests. The first portion of each elective studio section concentrates on the topic of Human Behavior with an intensive three-week project that is organized and coordinated by an instructor with expertise in this area of human cognition, behavior and perception. Each studio section undertakes the same project during the first three weeks and is evaluated by the coordinating instructor. Following this three-week concentration is a competition-style studio problem sponsored by the Graduate Foreign Studies Program. Instructors for the various studio sections are asked to build on the topics covered in the first three week portion concerning human factors and to use evaluation of such as a determinant for grading in the final project. Students are also able to take Liberal and Social Science electives at this level which is intended to allow for the exploration of potential graduate areas of concentration. A winner is selected from each studio section who receives a position in and stipend for, participation in the School’s Graduate Foreign Studies Program.

The final semester of the Bachelor of Science in Architecture program features a capstone Comprehensive Building Design Studio (CBDS). This six-credit studio (ARCH 402) and its three credit required co-requisite (ARCH 519) is structured so as to require peer collaboration. Students are divided into “firms” of approximately six students and are required to take a project from schematic through full design development. Students are advised by consultants throughout the semester and are evaluated both as a group and as individuals through a series of three oral defenses, which are carried out by local practitioners.

This team approach leads to exceptional depth and thoroughness of study with individual representation of student understanding and progress. The collaborative nature of this studio is axiomatic to the stated goal of the pedagogy, which is to prepare students for successful professional internship. The Arch 402 studio explores the conceptual and technical aspects of architectural form and integration of the various building assemblies and systems. During the CBDS, each student brings the knowledge, skills, and understanding gained from all previous coursework and experiences to the development of a conceptually coherent, comprehensive, integrative, and buildable architectural design proposal. Studio work include schematics: integrating major building systems and sustainable strategies with design at a conceptual level shown in conceptual drawings of structural, mechanical, passive environmental and lighting systems; design development: using large scale models and drawings to test initial ideas and the integration of these ideas; studying materials and details of assembly including vertical surfaces relative to framing systems, wall sections and details of assembly; and presentation: with final models and drawings of site plan, plans, sections, and elevations. The final evaluation of the individual student's work is assessed through oral defenses which test the students understanding of all elements of the project and their ability to think-on-their-feet in responding to questions about the presented design documents. Reviewers are selected from area firms involved in design, engineering and construction. Emphasis is placed on the role that the external reviewers play in assuring the quality of individuals graduating from the program. This review process also provides a sort of extended and intensive interview process for practitioners looking for knowledgeable and capable interns.

# Attachment 1

THE CATHOLIC UNIVERSITY OF AMERICA  
Outcomes Assessment

## COURSE SUMMARY DATA: SCHOOL OF ARCHITECTURE ARCH 402 Comprehensive Building Design Studio\*

Term	Course Enrollment	Course Grade		Course Grades							Course Evaluation Results					
		Avg.	StDev.	A+, A, A-	B+, B, B-	C+, C, C-	D	F	Other**	Course Eval. #	Course Eval. %	Instructor Rating Avg.	Instructor Rating StDev.	Course Rating Avg.	Course Rating StDev.	
Spring 2003	51	3.31	0.65	22	24	4	1				60	117.65%	8.85	1.25	8.85	0.97
Spring 2004	35	3.35	0.45	13	21	1					11	31.43%	8.91	1.70	8.45	1.51
Spring 2005	62	3.52	0.62	40	16	4	1			1	30	48.39%	8.70	1.15	8.73	1.05
Summer 2005	7	3.30	0.64	4	2	1										
Spring 2006	35	3.09	0.60	8	22	5					20	57.14%	9.15	0.99	8.30	1.49
Spring 2007	76	2.97	0.77	20	39	10	3	1	3		38	50.00%	7.24	2.52	6.54	2.19

\*In semesters where more than one section was offered, aggregate data is displayed.

\*\*The category titled "Other" includes grades of I, W, AU, and P.

