ARCH 4010 (6010) - 4011 (6011) - ARCHITECTURAL DESIGN III & IV (G)

FACULTY

Autumn Semester:  J. Bermudez, K. Matsubayashi, P. McDonough, K. Schank Smith
Spring Semester:  K. Matsubayashi, P. McDonough, K. Schank Smith

PROGRAM GUIDELINES

The faculty teaching Arch 4010 (6010) & 4011 (6011) consider these courses to be fundamental to architectural education. As a result, we believe we must cover the basic material comprehensively and thoroughly. Students should complete these courses with a certain grasp of what is involved in architectural design, with a knowledge that they can apply, and skills that are practiced. Organizing project programs to accomplish these objectives is complex. We share understandings which will be used as guidelines in organizing our studio programs. They include:

1. Several problems should be given during a semester. Craft and cognitive skills must be exercised to be developed. Within the limits defined by quality execution of the processes involved, the more iterations the better. A semester including both major problems and several minor exercises seems generally effective in our circumstances.

2. The content of the problems given should be varied to span the range of concerns, use types, and degrees of constraint experienced in architectural design situations.

3. The problem contexts should be varied to expose students to the range of rural, suburban, and urban conditions.

4. Given that no problem can be thoroughly and fully executed in all process phases, general process emphasis should be varied to permit exposure to and detailed experience of the gross process phases: situation definition and statement, identification and testing of responses, response refinement.

5. Reading assignments will be made in conjunction with studio projects to expose students to the formal knowledge base in our field and encourage application of reference material. Seminars and faculty presentations may also be used for this purpose within the individual sections.

STUDIO PHILOSOPHY

Our goal for the year is to generate in our students enthusiasm for architectural design, a questioning and inquisitive attitude, and the self-confidence which comes from the development of progressively higher degrees of mastery. Since this is a fundamental course, we will focus on and particularly stress the following:

1. The generation of architectural concepts, and the relation between concept and design development.
2. The nurturing of craft skills, particularly as they relate to architectural detailing.
3. The development of communications skills, both graphic and verbal.
5. The cultivation of critical insight by seeking and offering positive criticism.

As instructors we will not promote any particular architectural paradigm or style. We believe that architecture is both an intuitive and a rational activity, and that each designer must seek, in the course of his/her professional maturation, to discover the unique balance of the intuitive and the rational which, with application, may result in a personal architectural philosophy and aesthetic.

We expect intense involvement. We must have extensive, open, and honest discussion and debate among all of us. We will have no patience for those who seek only minimum competence. We will encourage those who pursue excellence even when they cannot accomplish it.

STUDIO ORGANIZATION

Studio attendance is expected for all students. Students will be expected to do the majority of the design work in the studio, both in and out of class hours.

Instructors will critique all students during each project. Formal review will be held at the end of each major project with guest jurors invited from the Architecture faculty and professional community. Informal reviews will be held for the shorter problems as is necessary. Students will be required to work in the studio space assigned and be responsible for meeting all deadlines and requirements. Students will make site visits as necessitated by the projects given, and all students in this course will be expected to participate in any field trips during the year.

Required Journal: All students are required to purchase a sketch and writing journal to keep for documentation of sketches, design ideas, lecture notes, and other commentary which apply to the design studio. For ease of use, sketch/journals need not be larger than 8"x10". These books will be periodically reviewed during the semester and collected at the end of each semester for grading.

STUDIO ELECTRONIC FACILITY

The studio will make full use of the school network environment. Students should work using their own electronic systems. Digital and analog resources should available at all times in each student’s workstation. School electronic infrastructure will provide necessary support for networking, printing, scanning, video-taping, AV production, etc. Students will have to digitally back-up their work in their own removable hard-disks, computers, or disks (cost may range, at least $60 to $200). During the year we will be using cross-platform software covering advanced 3D modeling, imaging, video editing, high-end printing, and web publishing.

The school and faculty take a position that supports the concepts of diversity, experimentation and openness toward electronic media. For hardware configurations, please review material posted on the school’s web site. Regarding software, students will be using programs for: Imaging (e.g., Photoshop, Corel), Video and multimedia editing (e.g., Premiere, IMovie), 3D modeling/2D drafting (e.g., Form•Z, AutoCAD—MiniCAD, ArchiCAD, Microstation, etc.), Rendering/Animation: (e.g., Form•Z RenderZone, 3D Studio Max, REALS), Presentation (e.g., PowerPoint, Corel), Web (e.g., Netscape, FrontPage), and high-end printing (e.g., PageMaker, Quark, Corel).
PROJECT REVIEWS

Effective use of time does not permit formal review of each project. A certain number of student projects will be selected for each formal review of the major assignments. We will attempt to formally review every student at least once during the semester. For the short duration assignments we will select several projects for an informal class review.

Students whose work is to be reviewed will be informed in advance and should prepare a five-minute verbal presentation addressing the underlying concepts of the project. Each student will be allotted about 20 minutes for the review. Since situations may arise in which not every student will be able to make a verbal presentation, the project’s graphic communication should adequately describe the design.

All students are expected to attend all formal and informal review sessions. Review sessions often occur outside regular class time when faculty and students are available.

MEDICAL/PERSONAL PROBLEMS

Students with medical or personal problems which will keep them from studio or cause a project to be submitted late are expected to notify the instructors as soon as possible (preferably before the project is due). Verification of illness may be required (i.e., a physician's statement).

INSTRUCTOR’S ABSENCE

As faculty are involved in research, teaching other courses, professional practice, university service, and speaking engagements, they may be absent from time to time during the semester. Every effort will be made to make up any time missed by the faculty. Students will be informed, whenever possible, of expected absence from studio.

GENERAL COURSE OBJECTIVES AND GOALS

1. Further development of cognitive skills (the act of knowing through awareness and ability to make critical judgment) introduced in the Basic Design studios.
2. Further development of visual thinking skills as an integral part of the design process.
3. Introduction and development of the design process as a synthesis of its supporting components (history/theory, aesthetics, technology, environmental conditions, etc.).
4. Acquisition and development of communicative skills and technologies.

AREAS OF EMPHASIS

1. Language/methodology/theory Knowledge of:
   — basic geometric elements: lines, planes, volumes, etc.
   — basic place-making architectural elements and strategies: wall, skeleton, excavation, roof
   — quantifying elements/measuring systems, modularity, etc.
   — spatial organizing principles: axially, hierarchy, progression, grouping strategies, etc.
— integration of spatial processes: planimetric, sectional and elevational relationships in the design methodology
— information gathering strategies: methods/sources of obtaining, handling, and organizing data*
— data processing: program definition, proximity analysis, zoning, diagramming, spatial organization, circulation, etc.*
— introduction to past theories: typology/precedents, etc.
— contemporary/future theories, further investigations (semiology, structuralism, post-structuralism, etc.)
— computer integration within studio design processes

* These are based on Problem Seeking by William Pena:
   — establishment of goals: what wishes to be achieved?
   — the collection and analysis of facts: what is it all about?
   — determination of needs: quantifiable monetary, spatial, qualitative requirements?
   — statement of the problem: significant conditions and directions the building’s design should take?
   — uncovering and testing concepts: how to achieve the above?

2. Environment/Context:**
   — physical constraints impacting site analysis (natural and technological forces affecting site and context)
   — urban constraints/context impacting site analysis
   — site analysis processes and documentation
   — urban design issues/theories impacting design

** These are based in part on Site Planning by Lynch and Hack:
   a. Personal reconnaissance strategies: personal site images, notes, sketches, etc., that reflect character, problems, possibilities, etc.
   b. Collection of existing data: contour maps, aerial photos, soil surveys, climatological records, ecological records, social, market, traffic studies, et al.
   c. Contextual site data: based on geology, water conditions, topography, climate, ecology, existing man-made structures, and sensuous qualities (e.g., character, viewpoints, visual sequences, tectonic aspects)
   d. Cultural data: use population, behavioral settings, site values, site history, traces, political jurisdictions, et al.
   e. Infrastructural data: support systems, including utilities (water, gas, sewer, electricity, etc.)

3. Technology--an integration process involving:
   — structural influences on building design (elementary systems)
   — materials/construction methodologies in building design (basic role of materials, their relationships and integration)
   — environmental control systems (introductory) in building design

4. Communications:
   — development of analog and digital graphic skills (including free-hand/hard line drawings)
   — development of analog and digital model making skills
   — development of dialogic and hybrid approaches for integrating manual and electronic media
   — representational methodologies: plan, section, elevation, etc.
   — development of oral, written, choreographic skills in presentations
   — development of alternative/choreographic media skills
5. *Behavioral/Psychological Aspects:*
   — space as an experiential environment (color, light, materials, details, sequence, time, etc.)
   — space planning investigations
   — understanding of issues associated with human scale

   — building codes regarding access, egress requirements
   — building codes regarding handicapped requirements
   — zoning requirements related to environmental issues
   — fire safety/environmental hazard issues

**SPECIFIC STUDIO OBJECTIVES AND PROGRAMMATIC SCOPE**

1. **Architecture 4010 (6010)** — Introduction to architectural design processes through studio design problems, lectures and seminars.

   **Objectives:**
   — further development of visual design thinking skills introduced in Basic Design studio through problem definition and resolution involving:
     visual acuity
     conceptual design processes
     spatial and elementary programmatic ordering principles
     holistic relationships
   — development of analytical processes (conceptual principles responding to function, context, and elementary structural systems)
   — development of an understanding and facility for organizing basic information data (zoning/diagramming/circulation principles, etc.)
   — development of architectural communication skills
   — sensitivity to environmental forces affecting architecture

   **Programmatic Scope:**
   Beginning with spatial relationship studies and ordering systems, the studio examines relatively small projects that address spatial qualities, sequences, and elementary programmatic requirements within the context of limited site constraints.

2. **Architecture 4011 (6011)** — Specificity of type (housing, for example) provides the basis for an investigation that addresses increasingly complex architectural situations involving functional/environmental/contextual issues pertaining to the notion of the individual versus the community.

   **Objectives:**
   — identification and development of alternative design strategies
   — development of elementary site analysis strategies
   — understanding distinctions between various kinds of social environments (i.e., public versus private/open versus closed, etc.)
   — understanding architectural statements that might respond to the above based on:
     behavioral requirements
     changing societal/lifestyle requirements
     economic, social, political constraints
— definition and integration of elementary urban design contextual issues impacting the design statement
— awareness of health, safety and welfare issues (building codes, etc.) affecting the design statement
— experimentation with alternative architectural communication systems (including computer generated images) in addition to readings and critical essays
— further development of architectural communication skills (including reading exercises)

Programmatic Scope:
Beginning with an investigation of the house type through either comparative analysis of historic examples or conceptual explorations addressing various spatial and programmatic elements, the studio focuses on specific urban or suburban environments as the contextual framework for a moderately dense housing community.

EVALUATION POLICY
Evaluation in a studio context is not principally grading as in the grading of oranges, apples, or other items. It is at its best a process which permits us to help you understand what you know, how you are learning, and how you might expand that learning. Evaluation is also a step in your development of critical ability and judgment. You are and you must be involved in evaluation. Evaluation is constantly being conducted. The best evaluation will come at your workstation, in group discussion, or in debate over merits of designs at review evaluations. It cannot be singular and unexplained. It should be constructive, diagnostic, and fully explained.

To make meaningful evaluation possible, we must open to one another completely. We must have constant and intense exchange. We must listen and not be second guessing or defensive. It should be clear that evaluation is not solely the instructor's responsibility. You must seek it constantly, be open to it, and employ it in your development.

Grades in our context are symbols and summaries of our evaluation. They punctuate and focus a continuous stream of evaluation. Many students do not view grades as symbols of an evaluation which they seek to understand and value. Grades are often seen as symbols of personal self worth. This psychological connection is perverse and destructive of learning. It inhibits risk-taking. Learning correlates strongly with trying. Most trying results in partial or complete failure. We learn because we understand why we fail or succeed and we try again. Grades are also seen as trophies or meal tickets. These interpretations are also destructive because these meanings have nothing to do with evaluation of growth or learning. A person who wishes to be a serious learner must divest himself/herself of these meanings for grades.

GRADING POLICY
The final grade for the semester will be obtained by compounding the grades of assigned design exercises. Studio work and participation as well as the student's evolution over the session/semester will be taken into account. The course follows the official University Grading Policy, that is:

A, A– : represents excellent performance, superior achievement (outstanding work)
B+, B, B– : represents good performance, substantial achievement (work that is above average)
C+, C, C– : represents standard performance and achievement (passing grade; work that meets the studio requirements in all aspects)
D+, D, D− : represents substandard performance and achievement (not passing; work that meets the requirements in some aspects)
E : represents unsatisfactory performance and achievement (failed; work insufficient to merit any credit)

PROJECT EVALUATIONS

Projects and exercise results will be evaluated using standards which will point to excellence in our field. We will define these standards and attempt to explain them. (Each result will be evaluated in pre-announced categories which relate to the overall course objectives and the specific project objectives.) Projects which are incomplete or substantially unrelated to the problem statement will not be accepted. Late submissions will be down-graded a full letter grade for every 24-hour period after the due date.

DESIGN, GRAPHIC & PRESENTATION EXPECTATIONS

Design - The following are expectations that will relate to all projects this year:
1. All spaces and elements will conform to program demands (sizes, square footages, relationships, etc.)
2. All spaces, rooms, and elements will be appropriately shaped, proportioned and defined in plan as well as volumetrics.
3. All required furnishings and elements must be shown in plan and, if appropriate, in section and/or elevation.

Presentation - The following are expectations regarding presentations this year:
1. All presentations will be complete, having all requirements executed, and using the designated media.
2. All views of your design will be properly drawn (or modeled, as required), using correct graphic nomenclature.
   — Stairs will have proper tread/riser ratios and dimensions, landings and widths, and up arrows.
   — Sections will be taken through major spaces, but not cut through secondary elements (columns, trusses, crossbeams, etc.).
   — All site plans will show the roof plan of the building, entire context, all designed elements and features, and shade and shadow.
   — All elevations and/or volumetric representations (axonometrics, perspectives, etc.) will include context and shade and shadow.
   — Context will be represented on all drawings (architecture doesn't exist in a void or in hyperspace).
   — All architecture is made of specific material(s), thus the corporeal nature of your designs will always be expressed in all drawings.

Graphics - The following conventions should govern your graphics from now on:
1. Furniture and fixtures will be included in all plans (and sections) as appropriate.
2. Changes in overhead plane and overhangs will be dotted on the floor plans.
3. Openings (windows, doors, etc.) will be properly drawn in plan, section, and elevation.
4. All plan drawings (site and floor) will be of the same orientation.
5. No broken sections lines taken through building.
BIBLIOGRAPHY

C. Alexander, et al; A Pattern Language
R. Arnheim; The Dynamics of Form
G. Bachelard; The Poetics of Space
K. Bloomer & C. Moore; Body, Memory and Architecture
G. Z. Brown; Sun, Wind and Light: Architectural Design Strategies
F. Ching; Architecture: Form, Space and Order
R. Clark & M. Pause; Precedents in Architecture
C. Jencks; Modern Movements in Architecture
C. Jencks; The Language of Post-Modern Architecture
K. Frampton; Modern Architecture: A Critical History
R. Krier; Elements of Architecture
K. Lynch; Image of the City
K. Lynch and G. Hack; Site Planning
E. Mazeria; The Passive Solar Energy Book
C. Moore, G. Allen & D. Lyndon; The Place of Houses
C. Moore & G. Allen; Dimensions: Space, Shape & Scale in Architecture
C. Norberg-Schulz; Existence, Space and Architecture
C. Norberg-Schulz; Meaning in Western Architecture
C. Norberg-Schulz; Genius Loci
C. Norberg-Schulz; Concept of Dwelling
V. Olgay; Design With Climate
W. Pena; Problem Seeking
C. Rowe; The Mathematics of the Ideal Villa and Other Essays
R. Sommers; Personal Space
T. Thiis-Evensen; Archetypes in Architecture
R. Venturi; Complexity and Contradiction in Architecture
B. Zevi; Architecture As Space.

EQUIPMENT AND SUPPLIES

Wood drawing board with resilient top, 3’ x 4’ minimum recommended size, vinyl or "borco" top covering

Parallel rule bar, 48" may at times be necessary. Adjustable triangle, 10" recommended, or 45 degree, 30/60 degree triangles

PC/Mac Computer with its appropriate hardware and software configurations as defined by the school and the faculty policy and pedagogic objectives.