

City & Regional Planning

Course title	Programming Environments for Human Use
Course number	CRP 735 (0553-0) and C&RP 735 D (05054-5)
Course description	This course seeks to give students an understanding of and competence in programming and evaluating environments for human use. Facility programming is used to develop specific criteria that a design solution should embody. For an existing or planned setting, the programmer tries to identify the characteristics needed to support desired behaviors of users. The results become program inputs for use by designers, planners, users or the client in developing, selecting and evaluating design and design products. Students will be exposed to concepts and methods of facility programming and evaluation, including generic problem solving, systematic methods (Alexander, Newman, behavioral programming-- goals, activity circuits, behavior setting, setting characteristics, setting diagrams, adjacency analysis, models). They will apply the appropriate methods to develop a facility program or post-occupancy evaluation.
Course date	Tuesday, March 27, 2007 through Tues. May 29, 2007
Location	On line (and for local students, if needed, possibly in KN 176 once or twice)
Meeting day(s)	Tuesday
Meeting time(s)	11:30-1:18 p.m.
Prerequisite(s)	None

Instructor Information

Name	Jack L. Nasar
Email	nasar.1@osu.edu
Office location	231 KH
Office hours	Tues. 2:00-4:00 or by appointment
Phone	292-1457
Biography	Visit http://facweb.knowlton.ohio-state.edu/jnasar/crpinfo/

Course Goals

Course Goals	Upon completion of the course, the student should be able to: 1. Describe the background and philosophy behind the use of behavioral programming and post-occupancy evaluation, 2. Describe and evaluate various programming and post occupancy evaluation methods, and 3. Select appropriate methods, design and carry out a program or facility evaluation, analyze the results, derive design/policy criteria and effectively communicate the results.
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Textbooks

Required book	Duerk, D. (1993). <i>Architectural Programming: Information Management Design</i> . John Wiley and Sons, NY. (available in paper back)
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The following required readings are available free on Carmen as pdf files.

Required reading Hershberger, R. G. (1999) Ch. 6, Work Sessions. In *Architectural Programming and Pre-design manager* (pp. 321-365). NY: McGraw Hill.

Required reading *Building and Place Assessments: Expert advice . . .* Augustin, S. and Cackowski, JM.

Required reading *Visual Quality Programming AND Designing the Competition* In Nasar, J. L. *Design by Competition: Making Design Competition Work*

Policies

Introduction After the first session, where we meet in person for on-campus people, the class will be run on-line class. For distance education, all classes will be on-line. It will have on-line lectures, discussion, projects, and activities devoted to developing and conducting a program or evaluation. I expect students to do the assigned readings, take part in discussion, complete assignments, and play an active role in planning and conducting the building evaluation.

Additional information

Evaluations:

PROJECTS: 3--10 points each (30 Points).

- 1) Programming Exchange with fellow student (DUE Lesson 3)
- 2) Values Expressed (DUE Lesson 4)
- 3) Behavior mapping (DUE Lesson 5)

MIDTERM EXAM (30 points) (DUE Lesson 5).

FINAL PROJECT (which includes picking group, submitting POE data on excel sheets, analyzed and graphed POE data (10 points for first three), Powerpoint Presentation and Final Report (20) for a total of 30 points on-line discussion, participation, extra effort (10 points). DUE Final's Weel

Deadlines: Work must be handed in at the **START OF CLASS**. Late submissions will be penalized as follows: If late by up to 24 hours, you lose 1 grade (i.e. A to B); if late by 24 to 48 hours, you lose 2 grades (i.e. A to C), if late by more than 48 hours, you lose three grades (A to D).

Academic Misconduct: All students must follow departmental and university rules on plagiarism and academic misconduct. Plagiarism involves passing of as your own ideas, words, writings, etc. another person's work. Do not copy the work of another and turn it in as your own, even if you have the other person's permission. Any instances of academic misconduct will be reported to the Committee on Academic Misconduct (University Rule 3335-5-487).

ADA Policy Statement: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Office of Disability Services at (614) 292-3307. Additionally, contact the instructor as early as possible in the quarter, so your disability can be properly accommodated.

Lesson 1

Lesson	Introduction
Date	Tuesday, March 27, 2007
Topics	On line: Introduction to me, the course (content, procedures, outline, requirements etc.) and to architectural programming (the need for methods, design failures, facility programming and evaluation). <u>Behavior Programming</u> : Systems approach, personal space, elemental level, goals, users, activity circuits.
Assignments	Get Duerk book, read Syllabus, explore Carmen website; and alert me to any problems. Participate in discussion question. Participate in on-line discussion (see Lesson 2)

Lesson 2

Lesson	Definition, approaches
Date	Tuesday, April 3, 2007
Topics	On line lecture: Definition, approaches--design-based, knowledge-based, agreement-based, and value-based programming. Values: Importance, enduring values, contemporary values, <u>HECTTEAS</u> , case studies
Readings	Durek Ch. 1 Definitions of Architectural Programming (pp. 5-21).
Assignments	Answer on-line discussion questions raised in lecture. 1) What do you hope to get out of the class? 2) Range of issues in environmental design should consider. 3) Design failures you have experienced. 4 List user activities/goals for a setting in your living space.

Lesson 3

Lesson	3. Issues Defined
Date	Tuesday, April 10, 2007
Topics	On-line discussion of HECTTEAS: Human, Environmental, Cultural, Technological, Temporal, Economic, Aesthetic, Safety. Preparing the program: pre-design services, architectural programming, discovering crucial issues, program planning. <u>Behavioral Programming (continued)</u> : Defining Behavior Settings and their characteristics
Readings	Duerk Ch. 2. Issue Based Programming (pp. 24-31) Duerk Ch. 3. Goals: The Promise for Quality (pp. 36-46) Duerk Ch. 10. Information Management (through Find the Data) (pp. 151-160)
Assignments	PROJECT DUE : With a classmate: Separately, take a few minutes to each write down the important issues and requirements for a personal space: study at home, studio, or other similar space. Trade issues and requirements and spend a few minutes making a preliminary design for the other person. Trade again and evaluate the design. DUE Start of Lesson 3: Hand in your discussion of which issues and

requirements were most clearly stated and how the designs either fulfilled or missed the user intent. Your discussion of which issues and requirements were most clearly stated by other person and how the design either fulfilled or missed your intent as the user.

Participate in on-line discussion questions. The puzzle. Example of place with value of economics, place with functional efficiency, social psychology.

Lesson 4

Lesson **Information Gathering**

Date Tuesday, April 17, 2007

Topics On line discussion of Literature search and review, diagnostic interviewing, diagnostic observation, questionnaires, surveys, site and climate analysis.
Behavioral Programming (continued): Creating site zones/settings.

Readings Duerk, Ch. 6 Scientific Method (pp. 79-88)
Duerk, Ch 7 Easy Research Methods (pp. 88-104)
Duerk, Ch. 8 Advanced Research Methods for Designers (pp. 109-118)
Duerk, Ch. 10 Analyze the Data through Summaries and Conclusions (pp. 160-162)
Review POE Instrument for your project.
MIDTERM EXAM Will be posted during the week for completion by end of next session. (**APA CONFERENCE, APRIL 14-18TH**.)

Assignments **PROJECT DUE:** In relation to building you know or occupy, examine what values are expressed in its design? Compare the outside with the inside. What values would you like to see more vividly expressed? Which ones should have lower priority? Which values should become design issues? Alternatively for the list of uses on the lecture define the design issue for each one, and explain.

Lesson 5

Lesson **Program Evaluation and MIDTERM Exam**

Date Tuesday, April 24, 2007

Topics On-line discussion of program evaluation, design evaluation (POE), body of knowledge, the next commission.
Behavior Programming (continued): What should go next to what. Adjacency analysis, matrix and bubble diagram.

Readings Duerk, Ch. 4. Performance Requirements (pp. 47-58)
Duerk, Ch. 13 Evaluation (pp. 209-218)
Cackowski *Design Research Connection* on POE (on line pdf file)

Assignments **PROJECT DUE:** Take a map of a well known public space and conduct a one-day session mapping the behavior of all users to see if it confirms the conclusions of other researchers. One page answer if your mapping confirms research conclusions
MIDTERM EXAM DUE

Pick POE or Programming teams. Start data gathering
Participate in on-line discussion questions if posted.

Lesson 6

Lesson	Work Sessions
Date	Tuesday, May 1, 2007
Topics	Midterm reviewed. Client/user work sessions, executive work sessions, work session setting, matrix development, presentation methods, & requirement sheets. Behavior <u>Behavior Programming (continued)</u> : What should go next to what? Adjacency decision criteria, Adjacency Matrix, and bubble diagrams. Analyzing the POE data.
Readings	Hershberger, Ch. 6, Work Sessions (321-365), pdf on line
Assignments	Start POE or Programming data gathering Participate in discussion questions if posted.

Lesson 7

Lesson	Visual Quality Programming, and Adjacency diagram
Date	Tuesday, May 8, 2007
Topics	Pulling together behavioral program from user goals, to settings, to setting and site characteristics, to adjacencies to adjacency matrices to adjacency diagram to design to visual quality. <u>Behavior Programming (continued)</u> Continued discussion of analysis and presentation of data results.
Readings	Nasar, J. Visual Quality Programming (pdf file on-line) from <i>The Evaluative Image of the City</i>
Assignments	Complete data gathering and submit data (POE or Programming Excel sheets)

Lesson 8

Lesson	Program preparation
Date	Tuesday, May 15, 2007
Topics	Program form, content, preliminaries, executive summary, values and goals, design considerations, project requirements, space identification and allocation, relationship matrices and diagrams, space program sheets, budget and cost analysis, project schedule, design analysis. Preparing the Final Report for POE or Program.
Readings	Duerk, Ch. 11 Formats: Structuring a Program Document (pp. 167-184)
Assignments	Submit your analyzed and graphed POE or Program data.

Lesson 9

Lesson	Sample Programs
Date	Tuesday, May 22, 2007
Topics	On-line discussion of case studies of Architectural Programs, Post-occupancy evaluations. Discussion of designer selection process.
Readings	Duerk, Ch. 5 Concepts: Turning Ideas into Reality (pp. 59-76)

Duerk, Ch. 12 Case Studies: Program Examples (pp. 184-207).
Nasar, J. *Designing the Competition* (from Nasar, J. L. 1999. *Design by Competition*.
NY: Cambridge) on-line in pdf form.

Lesson 10

Lesson Presenting the results to Client

Date Tuesday, May 29, 2007

Topics Student Powerpoint presentations of their results.

Assignments Student (group) Powerpoint presentations of the results of the POE. Complete Student Evaluation of Teaching form. Participate in discussion.

Final's Week

Lesson Submit Final Report

Date Tuesday, June 5, 2007

Assignments Final Report Document due at 11:30 a.m.

Additional Readings (not required but of related interest)

Alexander, C. (1963). *Notes on the Synthesis of Form*. Cambridge: Harvard Univ. Press.

Alexander, C. (1977). *A Pattern Language*. NY: Oxford University Press.

Alexander, C. (1979). *A Timeless Way of Building*. NY: Oxford University Press.

Broadbent, G. (1981). *Design Architecture: Architecture and the Human Sciences*. London: Taylor & Francis Books Ltd

Broadbent, G. and A. Ward (eds.) (1969). *Design Methods in Architecture*. London: Lund Humphries.

de Chiara, J. (1975). *Urban Planning Design Criteria*. NY: Van Nostrand.

Duerk, D. (1997). *Architectural Programming: Information Management Design*. John Wiley and Sons, NY.

Hershberger, R. G. (1999). *Architectural Programming and Pre-design manager*. NY: McGraw Hill

Jones, J. C. (1980). *Design Methods: Seeds of Human Futures*. John Wiley and Sons, NY

Kira, A. (1976). *The Bathroom*. NY, Viking.

Kohberg, D & J. Bagnall (1976). *The Universal Traveler: A soft-systems guide to creativity, problem solving and the process of reaching goals*. Los Altos, CA: William Kaufmann, Inc.

Moore, G. (ed.) (1973). *Emerging Methods in Environmental Design and Planning*. Cambridge, MIT Press.

Nasar, J. L. (1999). *Design by Competition: Making Design Competition Work*. Cambridge, NY.

Nasar, J. L. & de Nivia (1987). A post-occupancy evaluation for the design of a light pre-fabricated housing system for low income groups in Columbus. *Journal of Architectural and Planning Research*, 4, 199-211.

Palmer, M. A (1981). *The Architect's Guide to Facility Programming*. DC: A.I.A. & Arch. Records Books.

Pena, W. (1977). *Problem Seeking*. Boston: CBI Publishing Co., Inc.