C&RP 734: Research and Analytic Methods for Urban Design **Jack L. Nasar**
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Meets: Thurs 10:30 a.m. – 12:18 p.m. Office hours: Tue. 10:30-12:30 p.m.

INTRODUCTION
This course aims to help students develop an understanding of and competence in behavioral research and evaluation as applied to studying the relationship between persons and their physical environment. Students will explore concepts, methods and skills. You will experience basic issues in environment and behavior, research design, validity, reliability, data gathering techniques, analysis, study evaluation, and report production.

COURSE OBJECTIVES
Upon completion of the course, the student should be able to:

1. Describe and evaluate, relative to a research goal:
   a) Research designs,
   b) Directed vs. undirected studies,
   c) Reliability,
   d) Threats to validity,
   e) Research setting (field or lab),
   f) Degree of control, and
   g) Data gathering (interviews, questionnaires, response to simulation, time budget, observation of behavior and its traces, and scaling techniques);
3. Critically evaluate empirical research products, and
4. Design, conduct, analyze and derive policy implications from, and describe in writing a study of a specific environment-behavior issue.

REQUIRED TEXT
Hoyle, R. H., Harris, M. J., & Judd, C. M. (2002). *Research Methods in Social Relations.* NY: Wadsworth.

CLASS PROCEDURE
Classes discuss readings and research methods. For those discussions, students are expected to read articles each week so they can take part in the lecture/discussions. During the quarter, students will conduct various small research projects, and complete one empirical study from initiation to writing up the results.

ACADEMIC MISCONDUCT
Plagiarism will not be tolerated in the classroom. Plagiarism is passing off as one's own ideas, words, writings, etc., which belong to another. You are committing plagiarism if you copy the work of another person and turn it in as your own, even with the permission of that person. 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.

GRADING

Grades are based on the student's performance in meeting the course objectives assessed as follows:

1 Each week you are to read and be prepared to discuss required readings

2. PROJECTS (due start of class)
   2nd Week, Beauty is Talent (10 percent), Due April 3
   3rd Week, Hypothesis (10 percent), Due April 10
   4th Week, Sampling plans (10 percent), Due April 17
   6th Week, Three scales (10 percent), Due May 1

3. Midterm Exam/Project (20 percent), Due May 8

4. FINAL PROJECT. You are to conduct and write up an empirical study. The write-up should include sections describing the background rationale (brief), the method, the results, and conclusions (in which you critically appraise the study, derive policy, research, and design implications (40 % of grade). DUE: FINALS WEEK, Start of class, Thursday, June 5, 10:30 a.m.

Instructor will grade each of your efforts as follows:

Excellent performance; equal or above & beyond assignment requirements	Fair to good performance; from doing minimal work to striving for excellence	Poor performance; did less than minimal work	Reject: inadmissible evidence
A 94-100	B+ 87-89.9	C+ 77-79.9	D+ 67-69.9
A- 90-93.9	B 83-86.9	C 73-76.9	D 60-66.9
	B- 80-82.9	C- 70-72.9	E < 60

All assignments are due at the START of the class period when due. Late work will lose one grade point for each day late:

A goes to B if late by up to 24 hours.
A goes to C if late between 24 and 48 hours.
A goes to D if late by more than 48 hours.

Instructor reserves the right to reward bonus points to students for class participation or exceptional work.

COURSE OUTLINE

First Class (Thurs., March 27)

DISCUSSION: Introduction - What is this class about? How will it operate? Introduction to behavioral research and its rationale for environmental design. Some environment - behavior issues. Discussion of possible research projects: 1. Student develop and do their own research project during the quarter; 2. Study Infill oversize houses, archival data on number, location, survey of people's reactions to define compatibility. 3. Study stress (helping) behavior in relation to Big Box stores—pick pairs; select behavior, and survey instrument; run test in each place (pre-post).

Beauty is Talent assignment distributed to students.

Second Class (Thurs., April 3)

DISCUSSION: Research Design - directed vs. undirected; reliability, validity; research setting (laboratory, field); control (experimental, naturalistic), threats to validity, applied vs. basic research.

DUE (Start of class)

Read Hoyle et al. Ch. 1. Ways of Knowing (pp. 3-21)
Ch. 2. Evaluating Social Science Theories and Research (pp. 23-44)
Ch. 4. Fundamentals of Measurement (pp. 75-95)

Submit write-up of Beauty is Talent study (1 page).

Third Class (Thurs., April 10: reschedule, conflicts with conference)

DISCUSSION: Observing environmental behavior, obtrusive and unobtrusive approaches - photography, participant observation, physiological measures, ecological approaches, physical traces, archives, content analysis, and non-verbal communications (facial, voice, hands, etc.). Sampling, probability, non probability and experience sampling; stratified, cluster, multi-stage. Plan/select a behavior to observe.

DUE (Start of class)

Read Hoyle et al. Ch.15. Observational and Archival Research (pp. 361-393)
Ch. 8 Fundamentals of Sampling (pp. 181-196)
Ch. 9 Probability Sampling Methods (pp. 197-213)
Ch. 10 Experience Sampling (pp. 214-232)

Develop and write-up a hypothesis (1 page)**.** As individual or in small groups write up a one to two page summary of a hypothesis. 1) Select a human behavior, social event or life experience that you find especially interesting; 2) If possible, state our interest in this phenomenon in a one sentence question; 3) List the reasons for choosing and questioning this phenomenon; 4) consider and list the various social and cultural values that might have influenced your choice of topic and question; 5) describe how difficult do you think it will be to answer your question in a scientific manner; 6) list some of the challenges that might arise; and 7) project what the answer will be (this projection will be your hypothesis). Note: The hypothesis must be presented in operational terms – the constructs must be measurable; and the hypothesis must make a statement about the relationship between two social/behavioral or a social/behavioral and an environmental phenomena.

Fourth Class (Thurs., April 17)

DISCUSSION: Discuss, evaluate research proposals or instructor generated proposal (McMansions, big box stress, other)—construct, internal, external validity, how to maximize validity. Applied research. Self-employed photography, cognitive mapping. Qualitative research, focused interviews, content analysis.

DUE (Start of class)

Read Hoyle et al. Ch. 14: Applied Research (pp. 332-360)
Ch. 16: Qualitative Research (pp. 394-421)

Develop and write-up (1 page) three sampling plans for 24 people (accidental, quota, purposive,

simple random or variation on it, stratified, multi-stage cluster), or sampling plan for observations, days, times as in experience sampling (systematic, diary, at random, event contingent) relative to research question.

Fifth Class (Thurs., April 24)
DISCUSSION: Non-experimental designs: Survey research design, sampling. Data gathering continued: Q-sort scale types and their relation to analyses, written, in-person vs. telephone, wording, sequence, interviewing. Questionnaires, Thurstone, Likert, Guttman Scales, semantic differential, q-sort, response to simulation (trade off games, games, models), time budget, psycho-physiological measures.

DUE (Start of class)

Read Hoyle et al. Ch. 5: Models of measurement (pp. 96-120)
Ch. 6. Single-Item Measures in Questionnaires (pp. 121-151)
Ch. 7. Scaling and Multiple-Item Measures (pp. 162-178)

Sixth Class (Thurs., May 1)

DISCUSSION: Research projects (planning the study or studies and data gathering). Midterm exam/project distributed, discussed.

DUE (Start of class)

Read Hoyle et al. Ch. 11 Randomized experiments (pp. 237-267)
Ch. 12 The laboratory setting (pp. 270-305)
Ch. 13 Nonrandomized designs (pp. 307-330)

DEVELOP, write up and submit three scales--Gutman, Likert and Thurstone—with five items each to measure a construct, preferably one in your proposed study. You need NOT test or validate the scales.

Seventh Class (Thurs., May 8)

DISCUSSION: Ongoing work, data gathering.

DUE (Start of class)

Submit take home MIDTERM Exam/Project

Eighth Class (Thurs., May 15)

DISCUSSION: Coding, analysis

DUE (Start of class):

Read Hoyle et al. Ch. 17 Data Management and Exploration
Ch. 18 Estimates and tests of association

Ninth Class (Thurs., May 22)

DISCUSSION: Ongoing work

Tenth Class (Thurs., May 29)

DISCUSSION: Writing up the report

DUE (Start of class):

Read Hoyle et al. Ch. 20: Writing the research report (pp. 510-537).

Final's Week

(Thurs., June 5) **FINAL REPORTS DUE** (40% of grade)

ADDITIONAL REFERENCE FOR EACH WEEK

Zeisle, J. 2008. *Inquiry by Design. Environment-Behavior, Neuroscience in Architecture, Interiors, Landscape, and Planning*. New York: WW. Norton & Co.

Second Week

Ch. 1 Design images, presentations and tests
Ch. 2 Research: Concepts, hypotheses and tests (up through sampling 33-43).

Third Week

Ch. 8 Observing physical traces
Ch. 9 Observing environmental behavior
Ch. 13 Archives

Fourth Weeks

Ch. 10 Focused interviews

Fifth Week

Ch. 2 Research: Concepts, hypotheses and tests, section on sampling (pp. 43-46
Ch. 11 Standardized questionnaires
Ch. 12 Asking questions: Topic and format

Sixth Week

Ch. 5. Research methodology: approaches, designs and settings
Ch. 6. Research quality

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ADDITIONAL RESOURCES

Journals of Interest

Journal of Environmental Psychology
Environment & Behavior
Environment & Planning B
Journal of Planning Literature
Journal of Architecture and Planning Research
Landscape and Urban Planning
Journal of the American Planning Association
Journal of Social Issues
Journal of Urban Design
Human Factors

Other Information Sources

Dissertation Abstracts
Environmental Design Research Association Conference Proceedings
Lexis-Nexis
Psychology Abstracts
Sociology Abstracts
Social Science Citation Index