

METHODS OF PHYSICAL ANALYSIS

23PLAN705 3 G credits Winter Quarter 2012

TU TH 6:40 – 8:10 pm – Room # DAAP 5114

School Of Planning, College Of Design, Architecture, Art And Planning, University Of Cincinnati

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Introduction

Planning is one of the basic functions of local government (city, town, village, township, or county). It involves systematically thinking about how local government can accommodate the needs of residents for public services (infrastructure, housing, schools, parks, social services, and roads), how to attain a viable economic base, how to preserve and protect environmentally sensitive areas; and how to accommodate growth, regulate private property, and other policy implementation.

Physical planning is a key component of the different types of planning such as comprehensive planning, transportation planning, economic development planning, community development planning, neighborhood planning, historic preservation planning, environmental planning, and ecological planning. The interests and objectives of physical planning have to do with the spatial arrangement of specific human activities on the land, as well as the evaluation of the consequences from development on the social and natural environments.

Physical analysis is a key function of the traditional planning process and it takes place concurrently with other types of analysis such as demographic analysis, housing analysis, employment patterns analysis, real estate market analysis, etc.. Based on the rational model, the planning process spans the spectrum problem identification, data documentation, data analysis and evaluation, formulation of alternatives, selection of the preferred alternative, preparation of the final plan, and formulation of the plan implementation strategy. This course is interested in the methods used for physical analysis. Because there are a large number of methods that relate to specific types of planning, the course focuses on selected methods that are useful in general physical planning projects.

The concern for the deterioration of the physical environment caused by ongoing urbanization is a theme that has been at the core of the planning profession for a long time. In the more recent years 'smart growth', 'growth management', 'sustainable development', and 'new urbanism' among others are emerging themes that define the agenda for informed planning and urban design. Physical planning has been expanding in order to accommodate new approaches and attitudes towards land use and zoning, viable city centers, accessible public spaces, and environmentally sensitive development.

Approach

This course is intended as an introduction to various methods and techniques for analyzing the physical city and its metro area. The city and metro area is a broad matrix, very complex, and in continuous change, and can only be known as an abstraction of various physical parts. Sometimes these are used together, for example the understanding of land use and transportation is linked, but usually a planner will take only one or two particular methodologies for analysis without considering the others. This is

necessary because physical analysis is time consuming and not all techniques are relevant to a given problem.

This is a hands-on course aimed at mastering few key methods and techniques. The course is organized around a set of exercises, each aimed at teaching the student the method that can be applied in order to map, analyze, and discuss particular conditions in the urban environment. Unlike other courses that teach how to access data and prepare maps and graphic presentations through the use of software, this course asks that the students also learn to ask critical questions and discuss the findings of their analysis by explaining the mapped physical patterns, their relationships, and the statistics that describe them. In addition, learning how to prepare professional quality graphic and written documents is an important mission of the course.

For each class, we will discuss relevant information about a particular method. Through lecture/presentations the instructor will explain why a particular method is necessary as well as how the method is used. Periodically, readings will also be required to expand on the methodology and also to emphasize the physical dimensions and factors that require a particular analysis in order to understand the city and metro area. Assigned readings will be available on Blackboard.

The structure of each class will be:

1. During the Tuesday sessions, students will present the exercise that is due for the week and we will discuss the results and the usefulness of each method of analysis; the factors that contribute to effective planning graphics; and other issues.
2. During the Thursday sessions, we will introduce, discuss, and demonstrate the method for the week and discuss the readings. Following this, the new assignment will be presented along with examples showing how to use the method and/or samples from student work performed during previous years.

Objectives

The goal of the course is to familiarize students with physical analysis methods as they relate to the physical environment. Specifically, the objectives are:

1. To give a framework for understanding physical analysis of the built and natural environment.
2. To introduce a variety of key methods and techniques of analyzing the physical city.
3. To learn how and why various methods and techniques are used and to determine the appropriate methods for the analysis of specific planning issues.
4. To learn how to interpret the results of physical analysis and the issues they pose.
5. To practice planning skills needed to document and communicate physical planning data and analysis (such as mapping, photography, desk top publishing, and presentations).

Assignments

At the beginning of the quarter, the class will form two-member student teams. Each team will be responsible for completing the required assignments, including the final assignment. The grade that each team receives for each assignment will be recorded for each student. It is important that each team works effectively and achieves quality in the assignments. Coordination and working dynamics among the members of each team is the responsibility of the two students. The instructor will be available to meet and assist the teams at office hours and via email.

Assigned Readings

The weekly readings are the focus of the discussion classes and can be found on the course documents folder on Blackboard. Students are required to read all assigned readings and come to class prepared to discuss the content of each reading. Notes are highly recommended. Questions, comments, criticisms, and observations from students will enrich the discussion and facilitate the understanding of the methods. Please, note that participation counts for a high percentage of your final grade.

Deliverables

Besides the weekly readings, two types of assignments will be required:

1. Weekly presentation: PDF presentation which contains the results of the team's analysis of the selected area according to the methodology established by the instructor. Instructions for each assignment will be given separately.
2. Final Assignment: electronic portfolio which contains an introduction, the methods applied, and the summary of the relevant findings based on the group's weekly presentations.

Course requirements

1. Attendance and participation are required. Absence from class must be excused in advance.
2. Your understanding of the material and completion of the assignments will be measured by your participation in class.
3. Reading required material will be critical to participation in class discussions and preparation of required assignments.
4. All assignments are due at the beginning of class time on Tuesday. For late assignments there will be a reduction of 10% from the grade for the assignment. Assignments more than one week late will not be accepted.
5. Basic knowledge of GIS (at least one member in each team).

Grading Criteria

The success of this class depends on students' self-discipline, willingness to learn and actively participate in discussions, and of course, complete work that needs to be done outside the class time. Deadlines for the submission of required work will be announced and must be met. Attendance is a critical component of the final grade. The importance of in-class discussion and individual consultations with the instructor cannot be overstated. Missing class more than two times without being excused will result in the reduction of one whole letter grade. Missing class on due dates without being excused will diminish your final grade by one grade each time.

The application of the above criteria can be avoided as long as the student has very clear and complete communication with the Instructor about work completed and excused absences requested. To communicate outside of class the student should email the instructor directly and well in advance of class time.

Evaluation of your work involves both criticism and grades. Criticism should be understood by students and faculty as a positive means for learning. In all cases, criticism is directed at a project or a process, not at the student who has produced the project. Specific criteria for each project will be determined

independently, but may include completion of all assignment's requirements, quality of analytical work, quality of graphical presentation, and quality of oral presentation.

Letter grades should be interpreted as follows:

A: Exceptional work. Exceeds all criteria. Exhibits insights indicating that the experiences from one phase to the next are cumulative and transferable. Participates in class discussions. Demonstrates ability to connect and compare ideas and develop critical thinking. Constructively challenges issues brought forth during the quarter. Demonstrates exceptional enthusiasm and intensity for learning. Demonstrates capacity to be self-critical.

B: Above average work. Meets all criteria. Good understanding of concepts. Constructively challenges issues brought forth during the quarter. Shows ability in basic critical thinking. Participates in class discussions.

C: Average work. Meets minimum requirements. Indicates some difficulty in understanding the concepts. Exhibits need for improvement in work habits and critical thinking skills. Insufficient participation.

D: Below average work. Does not meet minimum requirements. Indicates serious difficulty in understanding concepts. Probable indication of a lack of commitment to the course.

F: Late, incomplete, failing, or work not submitted.

Grading Distribution

Weekly Presentations	60%
Participation in class discussions/Completion of readings.....	10%
Final Assignment (Portfolio).....	30%

List of Communities for Student Team Selection:

1. St. Bernard
2. Madeira
3. Montgomery
4. Lockland
5. Wyoming
6. Glendale
7. Evendale
8. Springdale
9. Blue Ash
10. Amberley Village
11. Woodlawn
12. Reading
13. Norwood
14. Forest Park

Tentative Schedule

Week		date	Activity
Week 1	Tue	3-Jan	Introduction Syllabus overview Make teams/choose study area
	Thu	5-Jan	Cognitive Mapping Assignment 1 issued: Image
Week 2	Tue	10-Jan	Assignment 1 due: Image Team presentations
	Thu	12-Jan	Demographics, Density, and Housing Assignment 2 issued: Demographics, Density, and Housing
Week 3	Tue	17-Jan	Assignment 2 due: Demographics, Density, and Housing Team Presentations
	Thu	19-Jan	Land Use and Zoning Assignment 3 issued: Land Use and Zoning
Week 4	Tue	24-Jan	Assignment 3 due: Land Use and Zoning Team Presentations
	Thu	26-Jan	Land Cover Assignment 4 issued
Week 5	Tue	31-Jan	Assignment 4 due: Land Cover Team Presentations
	Thu	2-Feb	Transportation Systems Assignment 5 issued
Week 6	Tue	7-Feb	Assignment 5 due: Transportation Systems Team Presentations
	Thu	9-Feb	Behavior Mapping Assignment 6 issued
Week 7	Tue	14-Feb	Assignment 6 due: Behavior Mapping Team Presentations
	Thu	16-Feb	Historical Evolution Assignment 7 issued
Week 8	Tue	21-Feb	Assignment 7 due: Historical Evolution Team Presentations
	Thu	23-Feb	Parcel and Building Data Assignment 8 issued
Week 9	Tue	28-Feb	Assignment 8 due: Parcel and Building Data Team Presentations
	Thu	1-Mar	Suitability Analysis Assignment 9 issued
Week 10	Tue	6-Mar	Assignment 9 due: Suitability Analysis Team Presentations
	Thu	8-Mar	Issue Final Assignment
Week 11	Tue	13-Mar	working day
	Thu	15-Mar	Final Assignment due

Cheating and Plagiarism

Academic dishonesty will not be tolerated and will be dealt with according to the UC Student Code of Conduct (http://www.uc.edu/conduct/Code_of_Conduct.html). The UC Student Code of Conduct defines plagiarism as:

Submitting another's published or unpublished work, in whole, in part, or in paraphrase, as one's own without fully and properly crediting the author with footnotes, citations or bibliographical reference. Submitting as one's own, original work, material obtained from an individual or agency without reference to the person or agency as the source of the material. Submitting as one's own, original work, material that has been produced through unacknowledged collaboration with others without release in writing from collaborators.

In any cases of cheating or plagiarism I WILL FOLLOW THE UNIVERSITY PROTOCOL.

The instructor reserves the right to make any necessary changes on the syllabus.