

# Bachelor's Certificate Degree Program in Urban-Regional Planning and Urban Design.

Pima College; Tucson AZ

CONAHEC

Carlos Graizbord

# INTERRELATIONSHIPS OF DISCIPLINES. SOCIAL SCIENCES. INTEGRATED PLANNING. ENGINEERING. ENVIRONMENTAL PLANNING

SOCIAL SCIENCES	PLANNING AND DESIGN	NATURAL SCIENCES AND ENGINEERING
<ul style="list-style-type: none"> <li>• Economics</li> <li>• Ecological economics</li> <li>• Geography</li> <li>• Sociology</li> <li>• Demography</li> <li>• Anthropology</li> </ul>	REGIONAL PLANNING (SPATIAL ECONOMICS) <ul style="list-style-type: none"> <li>• Regional structure</li> <li>• Interregional trade</li> <li>• Location and market area analyses</li> </ul>	
<ul style="list-style-type: none"> <li>• Natural resource economics</li> <li>• Geography</li> <li>• Environmental law</li> </ul>	REGIONAL LAND USE PLANNING <ul style="list-style-type: none"> <li>• Environmental regional land use planning (Ian McHarg)</li> </ul>	<ul style="list-style-type: none"> <li>• Landscape architecture</li> <li>• Civil engineering</li> <li>• Hydraulic engineering</li> <li>• Engineering</li> <li>• Transportation planning</li> <li>• Biology</li> <li>• Geology</li> <li>• Oceanology</li> <li>• Ecology</li> </ul>
<ul style="list-style-type: none"> <li>• Demography</li> <li>• Urban sociology</li> <li>• Urban economics</li> <li>• Urban law</li> <li>• Anthropology</li> <li>• Social psychology</li> <li>• Urban geography</li> <li>• Public administration</li> <li>• Business administration</li> </ul>	URBAN LAND USE-ENVIRONMENTAL-TRANSPORTATION PLANNING Chapin, Steinitz etc.	<ul style="list-style-type: none"> <li>• Landscape architecture</li> <li>• Civil engineering</li> <li>• Engineering</li> <li>• Transportation planning</li> <li>• Traffic engineering</li> <li>• Biology</li> <li>• Geology</li> <li>• Oceanology</li> <li>• Ecology</li> </ul>
<ul style="list-style-type: none"> <li>• Urban sociology</li> <li>• Proxemics</li> <li>• Urban economics</li> <li>• Urban law</li> <li>• Social psychology</li> <li>• Urban geography</li> <li>• Public administration</li> </ul>	URBAN DESIGN	<ul style="list-style-type: none"> <li>• Landscape architecture</li> <li>• Ecology</li> <li>• Civil engineering</li> <li>• Engineering</li> <li>• Transportation planning</li> <li>• Traffic engineering</li> </ul>
	DESIGN Architectural, Environmental, Industrial, Graphic	<ul style="list-style-type: none"> <li>• Landscape architecture</li> <li>• Civil engineering</li> <li>• Engineering</li> </ul>

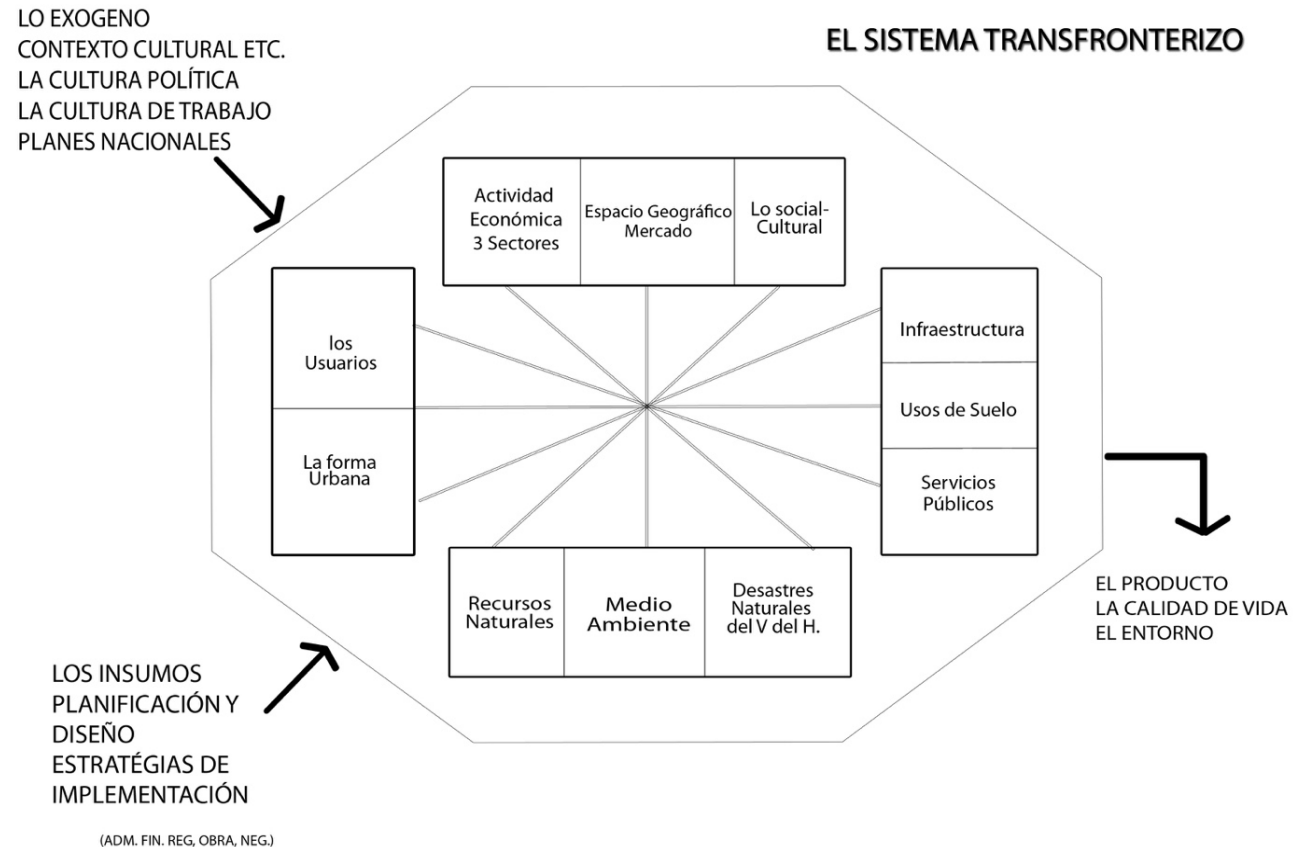
# PLANNING IN AN ORGANIZATION. **DECISION MAKING. PROCEDURE TO GET RESULTS.**



# THE BRITON HARRIS MATRIX AND THE SYSTEMS APPROACH

1)Normatiive Systems	1)Positive systems
1)Normative method	1)Positive method

# SYSTEMS APPROACH



# INNOVATION

- The system's approach allows the inclusion of innovation through new paradigms.
- Objectives include our world views and values

# PRODUCTS

- POLICIES
- PROGRAMS
- PLANS
- PROJECTS

# THE CURRICULA

- **GENERAL COURSES**

- Planning Theory
- Spatial Economics and Urban Economics. Location Theory

- **BASIC COURSES**

- Physical regional land use planning and GIS
- Urban land use planning
- Urban and Architectural design
- Sustainability
- Governance, administration, regulation



# THE CURRICULA

- **SPECIALIZED COURSES**
  - **Trans-border Planning**
  - Transportation and infrastructure
  - Landscape Architecture
  - Urban sociology

# URBAN PROBLEMS

- **Urban sprawl** has the following impacts on:
- **The environment**, deterioration of natural resources and open spaces, air and water pollution
- **Costs, high land costs, infrastructure costs for urban services**
- **Traffic**, planning, **low public transportation ridership**
- **Lower Quality of life** of citizens
- **Efficiency**, there is inefficiency when compared to more **compact cities**

# PROBLEMS. URBAN **PHYSICAL** **CONFIGURATION**

- In turn **the physical configuration of cities** is affected as follows:
- There are no clear **physical limits**.
- **No sense of place, no clear visual orientation or variety**, chaotic landscape, poor urban design (plazas, avenues, landmarks, parks). The buildings are similar in all modern cities under the influence of the international architecture of the 20th century adding to this visual chaos.
- **Social networks** of citizens are often interregional or international and do not correspond to projects that try to create spaces for local social interaction.
- The high **mobility of cars and other modern transportation modes has created an environment without pedestrians**. Modern transportation modes have **fragmented the city**, leaving no spaces for pedestrians or bicycles.
- The urban environment should be appreciated by pedestrians and at present it is not designed to be appreciated when riding in cars or other high speed vehicles.
- Many **residual spaces** are created without design treatment. Mega structures and big parking spaces are predominant in the urban environment.
- **Irregular and illegal neighborhoods** are a common visual element in many underdeveloped cities.

# GOALS OF PLANNING

- **TO IMPROVE the planning process and methods** in order to reinforce organizations in our region **on both sides of the border.**
- *“Plans are nothing; planning is everything.”*
- *Dwight D. Eisenhower*
- **TO IMPLEMENT specific projects that benefit communities.**
- *“By far the greatest and most admirable form of wisdom is that needed to plan and beautify cities and human communities.”*
- — [Socrates](#)
- **TO PROMOTE COLLABORATION AND CREATE ALLIANCES.** Support collaboration among interest groups creating alliances on a project by project basis.
- *“The strength of the team is each individual member. The strength of each member is the team.”*
- *Phil Jackson*
- **TO PLAN FOR THE FUTURE**
- **As planners and designers we must plan for future generations, and represent future citizens.**

# OBJECTIVES OF PLANNING

- According to Stuart Chapin, "Urban Land Use Planning", the **multiple objectives** of physical planning are:
- **health and safety,**
- **convenience and functionality,**
- **efficiency and energy conservation,**
- **environmental quality,**
- **social equity,**
- **amenity and aesthetics.**

# OBJECTIVES URBAN DESIGN

- **Orientation and variety**, no monotony
- Well defined **contained urban spaces** and routes
- **Pedestrian** orientation
- **Identity**, memorability
- Natural Landscape treatment
- **Organization of urban space with:**
  - Districts and sub-districts
  - Plazas
  - Parks and open spaces, nodes-transitions
  - Routes
  - Landmarks
  - Borders
- REVITALIZATION INVOLVES LOCAL ECONOMIC DEVELOPMENT
  - Market analysis and identification of local economic activities
- REVITALIZATION ALSO INVOLVES SAFETY, DEFENSIBLE SPACES

# SPATIAL ECONOMICS

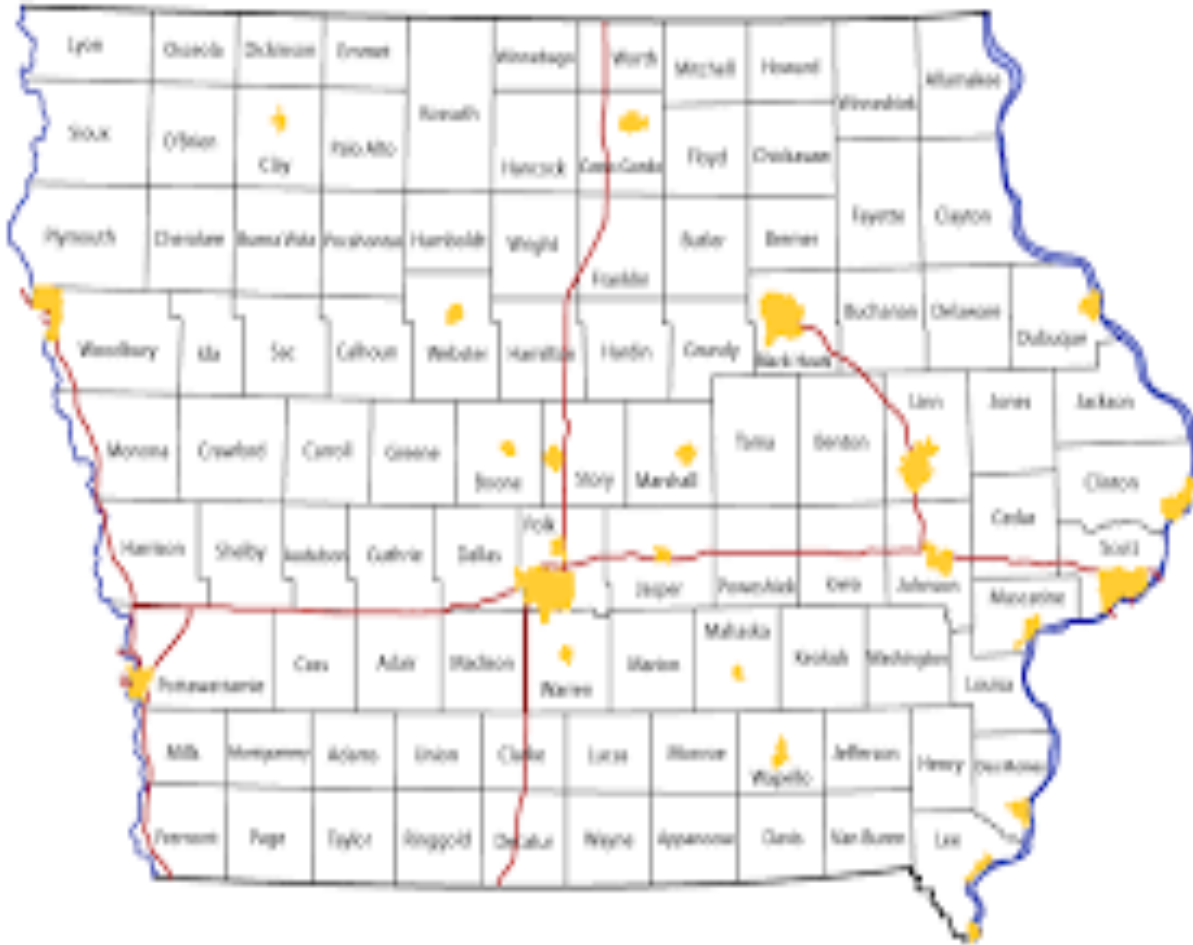
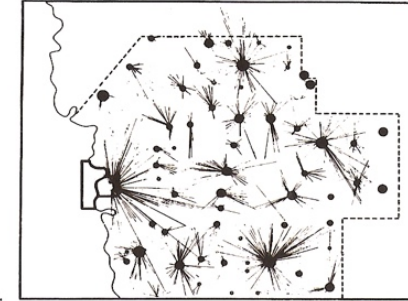
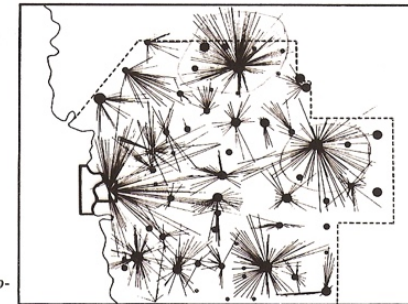


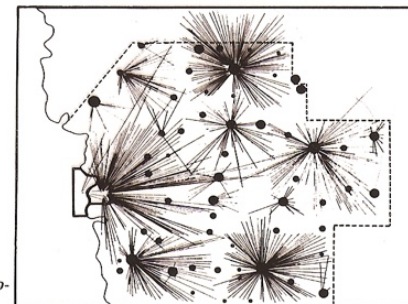
Fig. 1.9 (cont.).



(b) Grocery shopping.



(c) Physician's office location.



(d) Lawyer's office location.

# SPATIAL ECONOMICS

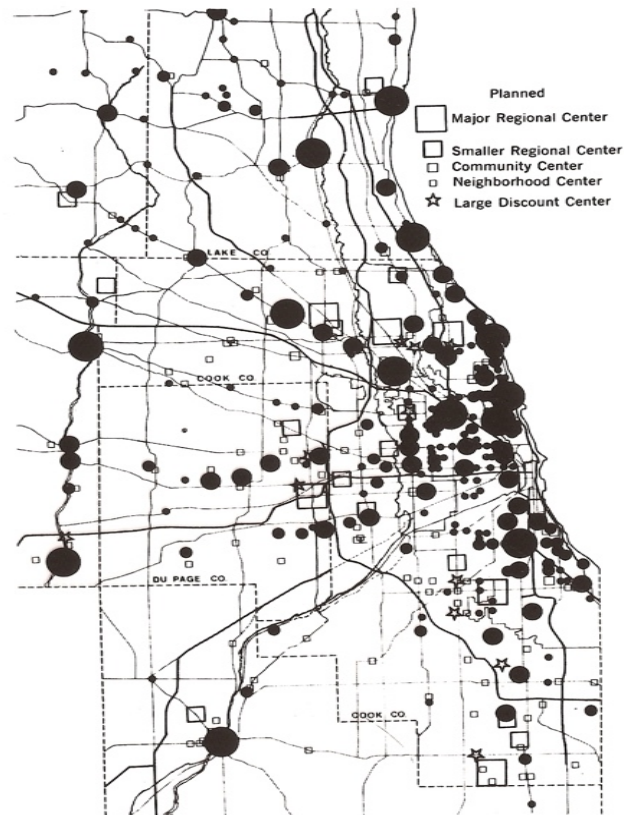


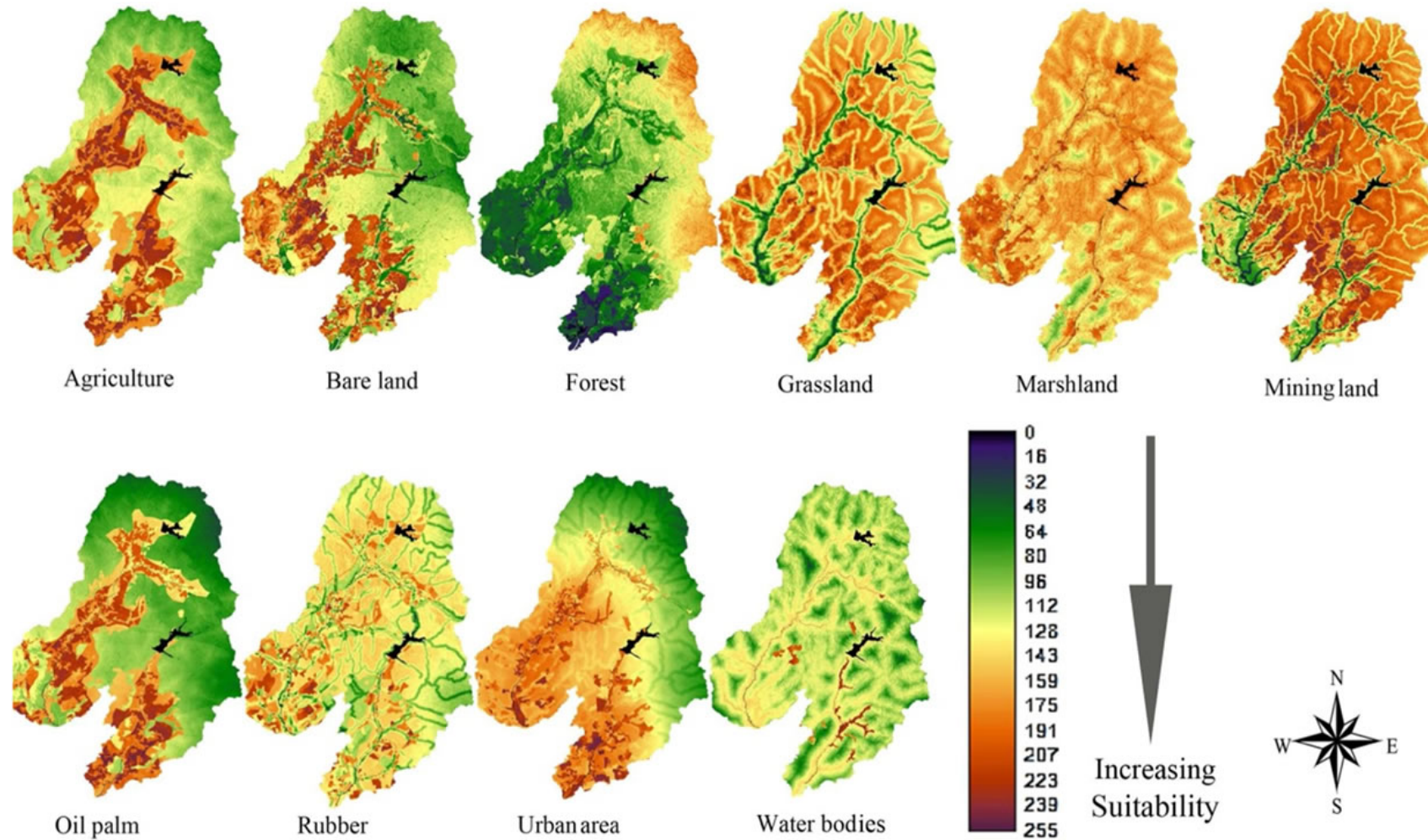
Fig. 2.24. All business centers: Chicago region.



Fig. 2.25. Market areas of business centers: Chicago region.



# REGIONAL LAND-USE PLANNING



# URBAN LAND-USE PLANNING AND URBAN DESIGN



# PLANNING METHODS

- Normative
- Rational Comprehensive
- Incremental
- Interactive
- Visioning
- Strategic

# DESIGN METHODS

- Idealism=Internalized
- Empirical=**Programming**
- Rational =Classicism

# GENERAL PLANNING METHOD

- **Diagnostic** or report on existing conditions. In physical land use planning a territorial analysis would include the capability, suitability and attractiveness analyses
- Population and land-use **projections** or **predictions**,
- Develop **objectives, policies, programs, and evaluation criteria**
- Develop a **plan**
- Develop specific **projects**
- Develop **scenarios** of the plans and projects
- **Impact Analysis:** Evaluate plan, project and scenarios (impact analysis)
- Negotiation and Integration of plan projects and their scenarios and **define a plan** and projects
- Create a GIS **data base**
- Propose **COMBINED implementation strategies** and general design guidelines for their plan as one of several sectorial appendices of a plan. (**negotiation, administration, financial, regulatory, P.R, PUBLIC WORKS , education**)
- Propose **urban design guidelines** for a sectorial project.



# RATIONAL COMPREHENSIVE METHOD. IMPACT ANALYSES OF SCENARIOS

	Existing	Plan Trend	Buildout	Township	Southern	Spine	Park
<b>Geologic Landscape</b>							
Surface Water Quality	●	●	●●	●	●	●	●●
Water Recharge Areas	●	●	●●	●	●	●	●●
Agricultural Soils	●	●	●●	●	●	●	●
<b>Biologic Landscape</b>							
Biodiversity	●●	●	●●	●	●	●	●●
Bear Habitat	●●	●●	●●	●	●	●	●●
Special Natural Areas	●	●●	●●	●	●	●	●●
<b>Visual Landscape</b>							
Scenic Elements	●●	●●	●●	●	●	●	●●
View Quality	●●	●●	●●	●	●	●	●●
<b>Demographics</b>							
Population Capability	97,000 ●	600,000 ●●	400,000 ●	300,000 ●	350,000 ●	350,000 ●	300,000 ●
<b>Economics (\$millions)</b>							
Cost of Public Action	20	20	20	1,733	1,854	1,996	2,072
Annual Cost If	0	1	1	104	120	106	135
20 yr/4% Bond	●	●	●	●	●	●	●●
<b>Politics</b>							
Private Roles	●●	●	●	●	●	●	●●
Township Roles	●●	●●	●●	●	●	●	●●
County Roles	●	●	●	●	●	●	●●

Legend

● Most Positive    ● Neutral    ● Negative  
 ● Positive    ● Most Negative

108. A COUNTY LEVEL COMPARATIVE SUMMARY

# INTERACTIVE METHOD. GIS OPERATIONAL MODES

## GIS MODES OF OPERATION - APPLICATIONS & FUNCTIONS/DATA MANIPULATION

<u>MODES OF OPERATION</u>	<u>APPLICATIONS</u>	<u>FUNCTIONS (example)</u>
DATA RETRIEVAL	QUERIES DEVELOPMENT MONITORING	
VALUATIONS	OPP./CONSTRAINTS CAPABILITY ANALYSIS SUITABILITY " ATTRACTIVENESS " SITE ANALYSIS	
LOCATIONAL ANALYSES	SITE SELECTION/ EVALUATION FACILITY LOCATION MARKET AREA ANALYSIS	
SIMULATION	LAND DEVELOPMENT SCENARIOS SIMULATION AND POLICY ANALYSIS GROWTH MANAGEMENT SIMULATION GAMES	
IMPACT ANALYSES	ENVIRONMENTAL EVALUATION MULTIPLE CRITERIA LAND VALUE ESTIMATION DEVELOPMENT REVIEW	OVERLAY ANALYSIS SEARCH (HORIZONTAL)
OPTIMIZATION	OPTIMIZATION PLANS THRESHOLD ANALYSIS	
MASTER PLANS	LAND USE PLANS INFRASTRUCTURE PLANS TRANSPORTATION PLANS TRAVEL DEMAND ZONING MAPS	

# PROFILE GRADUATING STUDENT. URBAN PLANNING

- Understand **planning theory** (methodological and substantive), and the various planning approaches and methods available to fit different political and decision situations.
- Familiarize themselves with **spatial economics**. Familiarize in **regional economic analyses** such as comparative cost advantages for location of economic activities. Understand the concepts of regional structure, and interregional trade. Make market area analyses.
- Make **regional land use plans** using sustainability principles.
- Develop the necessary **territorial analyses** for regions and urban areas applying valuations that include environmental, land use, land use attributes and socio-economic variables considering monetary and non-monetary values.
- Familiarize themselves with **natural resource management** concepts from Natural Resource Economics.
- **Identify all the disciplines involved in physical planning** and their products including natural resource economics, regional and urban design and their interdisciplinary linkages to the natural sciences, social sciences, and engineering.
- Understand the **normative and positive systems analyses** and methods.
- Be able to **define systems** for a sustainable development, at the regional and urban level, as well as sectorial plans (water, trash, land use and others.)



# PROFILE

- Use a systemic **proactive** approach to planning.
- Learn to apply various **principles and methods** such as, normative, rational comprehensive, interactive, incremental, strategic, advocacy, threshold analysis, to be applied in various decision situations.
- Understand basic concepts of **urban economics, urban politics and administration as well as urban sociology**.
- Be able to make **land use plans in urban areas**, the metropolitan area, the urban fringe and the surrounding natural environment. Make diagnostics, projections, (demographics, economic, land use and urban services), objectives, policies, programs, plans and projects, impact analyses as well as all **implementation strategies** such as administrative, regulatory, public works, negotiation, education, P.R., and evaluations.

# PROFILE

- Develop plans and **scenarios** considering land uses and infrastructure, Analyze impacts such as land use, costs, health, energy efficiency, aesthetics, environment. Apply growth management techniques including the use of GIS.
- Develop **Impact analyses and evaluations**, of normative and positive plans and scenarios (market forces) as well as optimization plans (based on water, infrastructure and others.)
  - Students will be able to develop **sectorial plans** such as those related to trans border planning, urban design, social policy and infrastructure.
  - Familiarize them with **transportation planning** specifically with travel demand models.
- Understand urban and regional **infrastructure**, to include this in optimization land-use scenarios for land use plans.
- Understand **urban economics, urban politics and urban sociology**. Learn about economic techniques for estimating urban economic growth; acquire notions of urbanization economies, the political and governance context of planning, as well as urban social change theories, as they affect urban land-use planning and design.
- Understand **trans border planning** to be able to participate in this unique local phenomenon in the future.
- Learn about all ordinances and procedures related to **permit processing**

# PROFILE URBAN DESIGN

- learn about Urban Design History and substantive and methodological theory
- be able to do urban complex designs, relating to basic components such as building masses and architectural and public spaces.
- be able to design **revitalization, rehabilitation, renovation projects**
- be able to design suburban renovation projects
- be able to design for blighted areas, low income housing, other urban complexes
- be able to develop projects in the **trans-border and international-global context**
- **be able to integrate architectural design with the public space**
- **be able to use several design methods and approaches.**
- **Learn about all ordinances and procedures related to permit processing.**