

UEP Policy and Planning Competency Grid

**Course Name/Number: UEP 222
Biotechnology: Social & Environmental
Issues**

Instructor: Sheldon Krinsky

Semester: Spring 2009

a) Knowledge Competencies	Specific sub-competencies or examples as developed in this course
1. History, structure, function of urban and metropolitan settlements	
2. Economic influences on policy and planning (e.g. 'market' and 'polis' relationships)	<i>Explores economic factors impacting biotechnology policy: Stem cells; cloning; genetically modified food</i>
3. Environmental, social and cultural influences on policy and planning	<i>Explores cultural and social factors impacting biotechnology policy in transgenic animals, genetic screening, cloning, stem cells, GM food.</i>
4. Understanding different roles in policy and planning	
i) Levels of government	<i>Considers the roles and responsibilities of different government structures in regulating biotechnology products</i>
ii) Governance structures	
iii) Citizens and residents	
iv) NGOs	<i>Role of NGOs in debates over GM food and crops</i>
5. History, theory and processes of policymaking	<i>History of the Recombinant DNA debates in the 1970s, 1980s and 1990s</i>
6. History, theory and process of planning	

7. Implementation of policy and planning	
8. Evaluation of policy and planning	
9. Administrative and legal aspects of policy	
10. Administrative and legal aspects of planning	
11. Politics of policy and planning	

b) Skills Competencies	Specific sub-competencies or examples as developed in this course
1. Critical thinking	
i) Defining problem	<i>Research paper involves a discussion of method</i>
ii) Documenting the extent of a problem	<i>Research paper addresses framing of a problem</i>
iii) Documenting the political and social context	
iv) Documenting the environmental and spatial context	
v) Identifying possible analysis strategies and their implications	
vi) Identifying criteria for proposing solutions	
vii) Identifying criteria for selecting solutions	

viii) Evaluating the development and results of policies and plans	
2. Research skills	
i) Understanding research design	
ii) Collecting relevant literature	
iii) Analyzing relevant literature	
iv) Identifying and assessing data sources and limitations	
v) Developing data collection instruments and tools	
3. Data Analysis skills	
i) Interpreting and synthesizing data	
ii) Drawing inferences from specific observations to make	
iii) More generalizable findings	
iv) Comparative analysis	
v) Longitudinal analysis	
vi) Recognizing and accounting for limitations to findings	
4. Qualitative Analysis skills	
i) Direct observation	
ii) Analysis of primary qualitative data	

iii) Analysis of secondary qualitative data	
5. Quantitative Analysis skills	
i) Descriptive statistics	
ii) Inferential statistics	
iii) Basic forecasting	
iv) Use of spreadsheets and statistical software	
6. Spatial Analysis skills	
i) Understand how to identify spatial problems and frame spatial questions for analysis and research	
ii) Use Geographic Information System for basic spatial analysis and mapping	
7. Communication skills	<i>Semester research paper emphasized writing skills</i>
i) Writing skills	
ii) Speaking skills	<i>Frequent class presentations of core readings involve the honing of speaking skills; debate involves speaking and critical skills of argument</i>
iii) Graphic presentation skills	
iv) Presentation strategies and methods	<i>Debate presentation practice</i>

c) Policy and Planning in Practice Competencies	Specific sub-competencies or examples as developed in this course
1. Collaboration skills i) Negotiation	
ii) Group project management	
iii) Group problem solving	
iv) Perspective-taking	
v) Adaptability, flexibility	
vi) Networking	
2. Organizational management skills i) Decision making	
ii) Strategic problem solving and adapting to change	
iii) Human resource development	
iv) Financial management and resource development	
3. Political and economic power mapping skills i) Understanding political and economic power structures and dynamics	
ii) Modes of influencing their use	
4. Ethical and professional behavior skills i) Understanding and upholding the role of ethics and accountability in professional policy and planning processes, practices, and behavior	<p style="text-align: center;"><i>Value and ethical analysis of new technologies is a key part of the course.</i></p>

