

## UEP Policy and Planning Competency Grid

**Course Name/Number:** UEP-174B

**Instructor:** Rusty Russell

**Semester:** summer

<b>a) Knowledge Competencies</b>	<b>Specific sub-competencies or examples as developed in this course</b>
1. History, structure, function of urban and metropolitan settlements	History of the development of water and air pollution control infrastructure, in the context of urban settlements
2. Economic influences on policy and planning (e.g. 'market' and 'polis' relationships)	
3. Environmental, social and cultural influences on policy and planning	Social and cultural changes and their relationship to the development of air and water policy
4. Understanding different roles in policy and planning	Consideration of the role of engineers in the development of water policy
i) Levels of government	
ii) Governance structures	
iii) Citizens and residents	
iv) NGOs	Consideration of the role of NGOs, including a presentation from members of a local water NGO
5. History, theory and processes of policymaking	Development of different policymaking strategies in the air and water area, including passage of major legislation in both areas
6. History, theory and process of planning	
7. Implementation of policy and planning	Implementation of the Clean Air and Water Acts

8. Evaluation of policy and planning	
9. Administrative and legal aspects of policy	Major focus on legal aspects of air and water policy
10. Administrative and legal aspects of planning	
11. Politics of policy and planning	Consideration of the political background to the development of air and water policy

<b>b) Skills Competencies</b>	<b>Specific sub-competencies or examples as developed in this course</b>
<b>1. Critical thinking</b>	
i) Defining problem	
ii) Documenting the extent of a problem	Relevant to discussion of the topic
iii) Documenting the political and social context	Same
iv) Documenting the environmental and spatial context	Same – with major focus on environmental impacts
v) Identifying possible analysis strategies and their implications	This is done through written assignments
vi) Identifying criteria for proposing solutions	This is done through written assignments and class discussion
vii) Identifying criteria for selecting solutions	Same
viii) Evaluating the development and results of policies and plans	Same

<b>2. Research skills</b>	
i) Understanding research design	
ii) Collecting relevant literature	Relevant in writing the paper assignments
iii) Analyzing relevant literature	Same
iv) Identifying and assessing data sources and limitations	Same
v) Developing data collection instruments and tools	
<b>3. Data Analysis skills</b>	
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	
<b>4. Qualitative Analysis skills</b>	
i) Direct observation	
ii) Analysis of primary qualitative data	
iii) Analysis of secondary qualitative data	

<b>5. Quantitative Analysis skills</b> i) Descriptive statistics	
ii) Inferential statistics	
iii) Basic forecasting	
iv) Use of spreadsheets and statistical software	
<b>6. Spatial Analysis skills</b> 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	
<b>7. Communication skills</b> i) Writing skills	Course requires three analytic papers
ii) Speaking skills	Course requires final oral presentation
iii) Graphic presentation skills	Final presentations often include graphic presentations
iv) Presentation strategies and methods	Same

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

