CMP 6960-004 /PEPEC 201
Scenario Planning
in Envision Tomorrow Plus (ET+)

2nd Session of Summer Semester (Jun 19 – Jul 17, 2014)
Thursdays 5:00 – 8:00 PM (1 credit hour/letter-graded)

Introduction

Although used in business management since the 1960s, scenario planning has been widely disseminated among urban planning practitioners primarily over the last decade. The promise of scenario planning is that it allows people and planners make decisions in a comprehensive way, considering a wide range of possible outcomes of specific actions. Envision Tomorrow Plus (ET+) is an innovative set of urban and regional planning tools that can be used to model development feasibility on a site-by-site basis as well as create and evaluate multiple land use scenarios, test and refine transportation plans, produce small-area concept plans, and model complex regional issues. This course focuses on providing theoretical backgrounds of scenario planning as and emerging trend in urban planning and understanding how to develop scenarios by using Envision Tomorrow Plus (ET+) – the most recent scenario planning tool developed so far.

Instructors

This training session will be led by a group of instructors as follows:

Dejan Eskic – Research Analyst, Metropolitan Research Center, University of Utah. dejan.eskic@utah.edu
Keuntae Kim – PhD Student, Department of City and Metropolitan Planning, University of Utah. u0816836@utah.edu

Office Hours: Tues 3:00 – 4:30pm/Thurs 2:00~4:30pm (Metropolitan Research Center, ARCH 227)

Classroom Location: Architecture Computer Lab (ARCH 130)

Course Objectives

This training session has three main course objectives which are:

- **Understanding**
  - ✓ the basic theory of scenario planning and the basic structure of the Envision Tomorrow Plus software as a computer-aided scenario planning tool.

- ✓ more detailed data structure of ET+ such as fitting existing land use data from various sources into ET+ land use categories, inputting numeric land uses, estimating developed/vacant acres, etc.

- **Learning**
  - ✓ how to build up building prototypes and manage the scenario spreadsheet assuming tohat all parcel-level data are secured.
  - ✓ detailed preliminary setup functions and cleaning up the existing condition data deriving from various data sources

- **Practicing**
  - ✓ painting multiple scenarios by using ET+ and interpreting the summarized outcomes of each scenario.
  - ✓ how to create a file geodatabase, define subareas, and use various app tools in painting scenarios at various scales

Teaching & Learning Methods

This course consists of lecture and lab components, but most part of the course will be concentrated on providing students and professionals with hand-on experience in GIS-based scenario planning by operating Envision Tomorrow Plus. The lecture components will focus on some theoretical aspects of scenario planning, its current practical issues, and managing the scenario planning process. Reading assignments will also be given to further students' understanding of scenario planning and Envision Tomorrow Plus. A final project assigned to both student and planning professionals will also provide students and professional participants with an opportunity to apply scenario planning and Envision Tomorrow Plus to their various planning practice. During the course, active discussion of scenario planning and ET+ will be highly recommended and encouraged to share understanding of scenario planning and ET+ in the long term.

Course Materials

- Textbooks:
  - ✓ Keuntae Kim. 2013. Envision Tomorrow Plus User Manual. Available from http://www.envisiontomorrow.org/user-guides/
  - ✓ Holway, J., C.J. Gabbe, Hebbert, F., Lally J., Matthews, R., and Quay, R. 2012. Opening Access to Scenario Planning Tools (Lincoln Institute of Land Policy Policy Focus Report. Available from http://www.lincolninst.edu/pubs/ 2027_Opening-Access-to-Scenario-Planning-Tools
  - ✓ If there are any reading materials that instructors think are useful, it will be delivered via email to all students and participants in the course.

- Other useful Internet links (optional)
  - ✓ Envision Tomorrow Website (provided by Fregonese Associates) http://www.envisiontomorrow.org/ Many useful technical information are included here.
  - ✓ Wasatch Choice for 2040 (provided by Wasatch Regional Council) http://envisionutah.org/wasatch-choice-2040 Basic information, online training video clips, and some county data layer templates are available for download.
  - ✓ Sonoran Institute. http://www.sonoraninstitute.org/ Some practices of scenario planning tools in urban planning and some useful reading materials for scenario planning and tools are available.

Grading & Certificate

Students (CMP 6960-004)

Grading is as follows:

Lab Assignments (3)	20 × 3 = 60 pts
Final Project	30 pts
Participation	10 pts
Total	100 pts

As a one-credit and five-week lab course, there will be no exams in the course. However, five lab assignments (20 pts per each lab assignment) will be given to students to further their understanding of ET+ functions and interpretation of results in each planning scenarios. Also, one final project (30 pts) should be submitted. All lab assignments and the final project report should be submitted via CANVAS assignment submission (For professionals, the final project should be submitted via email to instructors).

Also, for students, letter grades will be assigned following the University of Utah grading policies as follows (http://registrar.utah.edu/handbook/grading.php)

Grades	Points	Score
A	4.0	95+
A-	3.7	90~94
B+	3.3	85~89
B	3.0	80~84
B-	2.7	75~79
C+	2.3	70~74
C	2.0	65~69
C-	1.7	60~64
D	1.0	50~59
E	0.0	~49

- Lab assignments (20 pts each, 60 pts in total, applied only to students)
    - ✓ Three lab assignments will be given to students to further understanding of scenario planning and Envision Tomorrow Plus. Outcomes of each assignment will be used as components for students' final projects. Therefore, students should be well-prepared for each lab assignment.
    - ✓ Lab assignments must be submitted through Canvas.
    - ✓ To do your assignments effectively, saving your work and asking questions will be strongly recommended.
    - ✓ The deadline for each lab assignments is due midnight of the next class date.

- Final project (30 pts)
    - ✓ In the final project, students will be required to build several different scenarios for the site given at the first day of the class, analyze the results of each scenario, and suggest one final preferred scenario.
    - ✓ Evaluation of the final project will be based on the quality of components used for scenarios, analytic ability of scenarios, and feasibility and rationales of one final preferred scenario they suggest. More information about the final project will be given in the class, and questions about the final project are always welcomed.
    - ✓ As with lab assignments, the final project works must be submitted via Canvas.
    - ✓ The deadline for the final project is due midnight, Aug 1, 2014.
- Important dates
    - ✓ Lab assignment submission due: **Midnight on the following Thursday** (for students)
    - ✓ Final report due: **Aug 1, 2014** (for both students and professionals)

Planning Professionals for Certification of ET+ (PEPEC 201)

The main purpose of the final group project for planning professionals is to strengthen understanding of operation of ET+, check ability of operating ET+ enough to receive the certification, and apply ET+ to their various planning practice right after the course. Those who register the course as a professional education course do not have lab assignments. Instead, as with students, they will be required to submit the final scenario planning projects for certification purpose. The final project can be done as a group project (up to a 2-person group), but the final project report should be submitted individually. Like students, the final individual project report should be less than a 10-page and single-spaced report, including scenario screenshots and graphs. Guidelines for the final project will be the same as students' final project guidelines. Without submission of the final group project, certification WILL NOT be provided.

Class Policies

- There will be no "make-up" lab assignments. However, there may be a "make-up" lecture if there is any demand for lab session.

- Except for extreme cases, an "incomplete" grade will not be given for students.
- All lab assignments and the final (group) project report should be submitted to the instructors via Canvas online submission. They must be also typed.
- Because this course is a one-credit and once-per-week course, full attendance is strongly recommended. If you miss any course, it may be somewhat difficult for you to catch up with the next session. However, every time the class starts, the instructors will briefly summarize the contents of the previous lecture. If you need any help or issues about missing class, please ask instructors how you like to cover the missing lecture and lab sessions.
- Any assignments, including the final project report, submitted to the instructor after its due date will be worth only half of the earned points.
- If you have any questions or issues, contacting instructors during the office hours may be recommended, but you can make appointments with instructors if you tell instructors in advance.
- Please turn off your cell phones or use vibrate/silence mode during class. If you have any urgent phone call, please go outside the classroom and do your phone call.

Student Responsibilities

- All students are expected to maintain professional behavior in the classroom setting, according to the Student Code, spelled out in the Student Handbook of the University of Utah(http://www.acs.utah.edu/sched/handbook/toc.htm). Students have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, plagiarism, and/or collusion, as well as fraud, theft, etc. Students should read the Code carefully and know they are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, beginning with verbal warnings and progressing to dismissal from class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee.
- Academic misconduct will not be tolerated. Penalties may include failure of an assignment, the entire course, and/or the filing of formal charges with appropriate university authorities. Academic misconduct includes, but is not limited to cheating, misrepresenting one's work, and plagiarism.
- The instructor may elect to use a plagiarism detection service in this course, in which case you will be required to submit your paper to such a service as part of your assignment.
- Liability warning: Students are responsible for all activities on their computer accounts. Keep your user name and password confidential.
- Equal access policy: The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice need to be given to the Center for Disability Services, 162 Olpin Union Building, 801-581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations.

Course Schedule

The schedule of the course and associated reading and lab assignments are listed in the table below. Please note that this schedule is subject to change in the event of extenuating circumstances.

Date	Topic	Lab Session	Readings
Jun 19	▪ Course introduction ▪ Brief Introduction of Scenario Planning ▪ Brief introduction of ET+ ▪ ET+ Prototype Builder **Lab assignment 1 distributed**	✓ ArcGIS 101 ✓ Setting up ET+ ✓ Producing a building prototype	✓ Holway et. al. Chap 1 & 2 ✓ User Manual p. 1 – 28/ p. 79-84
Jun 26	▪ ET+ Scenario Builder **Lab assignment 1 due** **Lab assignment 2 distributed**	✓ Producing a development type ✓ Inputting data into Scenario Builder	✓ Holway et. al. Chap 3 ✓ User Manual p. 29 – 42/p. 67-78
Jul 3	▪ ET+ filegeodatabase **Lab assignment 2 due**	✓ Preparing scenario shapefile layers ✓ Creating a filegeodatabase	✓ User Manual p. 43-46/ p. 61-66/p. 85-104
Jul 10	▪ Painting scenarios in ET+ ▪ Interpreting scenarios ▪ ET+ Analytic tools (I) **Lab assignment 3 distributed**	✓ Opening a filegeodatabase in ET+ ✓ Synchronizing data ✓ Painting scenarios ✓ Interpreting Summary New/Total tabs in Scenario Builder ✓ Attribute field manager ✓ Redevelopment candidate app ✓ Local jobs-housing balance	✓ User Manual p. 105-120/p. 129-131
Jul 17	▪ ET+ Analytic tools (II) ▪ Standalone ET+ spreadsheets **Lab assignment 3 due**	✓ Accessibility functions (7Ds, Proximity summary, etc.) ✓ Standalone ET+ spreadsheets (Travel Model, Fiscal Impact Tool, Balanced Housing Model) ✓ Future issues of scenario planning tools	✓ Holway et. al Chap 4 & 5 ✓ User Manual p. 132 – 146
Aug 1	**Final project report submission (Students & Professionals)**	No lab	No readings