SAN JOSÉ STATE UNIVERSITY

DEPARTMENT OF URBAN AND REGIONAL PLANNING

URBP 248/148 AND DSGN 248/148

SPATIAL VISUALIZATION TECHNOLOGIES IN URBAN PLANNING

FALL 2022

Instructor:	Shahzia Sarwar Shazi, M.Arch.
Office Location:	Zoom
Email:	shahzia.shazi@sjsu.edu
Office Hours:	Thursdays, 12:00 PM to 1:00 PM (By appointment)
Classroom:	WSQ 208 and Synchronous Class Meetings via Zoom
Class Days/Time:	Mondays, 4:30 PM to 7:15 PM
Prerequisites:	None
Units:	3

Course Catalog Description:

Lab-based course in digital visualization for urban spatial representation using industry standard software such as Adobe Illustrator, Adobe Photoshop, Adobe InDesign, Trimble Sketch-Up, Google Earth and Microsoft PowerPoint.

Course Description:

Planners rely on visualization tools to communicate complex spatial information to a diverse array of stakeholders. Although charts, graphs, sketches, and maps are important ways of visualizing places, quantitative data, and community member narratives, new digital visualization technologies provide planners and designers with a powerful set of tools to make their message clearer, engaging, and more inclusive.

This course focuses on digital visualization and its application to urban spatial representation and analysis. Through demonstrations and hands-on activities, the course will introduce a variety of methods for representing urban places and their users, simulating changes, presenting visions for the future, and engaging multiple actors in decision-making processes.
Students will identify a conceptual project and will prepare graphics that practicing planners would typically utilize for plans, reports, and presentations. Graphic assignments will be incorporated into a portfolio. The portfolio should mimic a real-life plan that would be presented to the public and used by planners to implement a project.

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Course Learning Objectives:

The course introduces students to spatial visualization and graphic communication software tools that include Illustrator, Photoshop, InDesign, SketchUp and PowerPoint. Incorporation with other software tools including Google Earth Pro will be addressed.

Upon successful completion of the course, students will be able to:

1. Identify project improvement goals, use basic mapping tools (e.g., *Google Earth*) and create presentation slides using ***Microsoft PowerPoint***.
2. Use basic skills in ***Adobe Illustrator*** to create plan view maps of existing conditions and a preferred improvement concept and a map series that illustrates relevant project components.
3. Use basic skills in ***Adobe Photoshop*** to create a photo simulation of a streetscape to conceptually illustrate a conceptual project and color render a site plan.
4. Use basic skills in ***Trimble SketchUp*** to carry out Shadow Analysis, create a 3D model, Animation, and 3D cross sections of existing and proposed conditions of the site.
5. Use basic skills in ***Adobe InDesign*** to create a document template as design portfolio and organize content in a logical and easy to understand format.

Course Format:

This is a hybrid course and will combine weekly in-person meeting with some synchronous instructional sessions via Zoom. Students are **required** to use the necessary software installed on the computers in the lab (WSQ 208).

This course is formatted to quickly get students familiar with the interface between **Google Earth**, **Microsoft PowerPoint**, **Adobe Illustrator, Adobe Photoshop, Trimble SketchUp** and **Adobe InDesign**. Students are **required** to complete the designated assignments using each of these programs.
This course relies less on reading and more on skill development through individual assignments and independent work on each student's final design portfolio. Students are expected to participate, share information, skills, and ideas in the instructional sessions to initiate a cooperative learning environment. The assignments, lectures, video tutorials and a detailed set of instructions will engage students into the techniques and methods involved in producing graphics that will clearly communicate ideas. Instructions, additional materials and video tutorials will be available on Canvas after each class session.

Students should have **3 copies** (backup files) of each assignment (Thumb drive, Server, Hard Drive, etc.). This will make them at most 1-2 hours behind if something happens to 1 of the copies.

Planning Accreditation Board (PAB) Knowledge Components:

This course partially covers the following PAB Knowledge Components: 1.e., 2.b., 2.c., 2.d., 2.e., and 3.b. A complete list of the PAB Knowledge Components can be found at: http://www.sjsu.edu/urbanplanning/courses/pabknowledge.html.

Required Course Texts:

There are no required course texts. A list of recommended resources for each program will be provided with the appropriate lecture and step by step video tutorials.

Should students wish to learn more, the following is a list of optional resources:

- Illustrator: https://helpx.adobe.com/support/illustrator.html
- Photoshop: https://helpx.adobe.com/support/photoshop.html
- SketchUp: https://www.sketchup.com/learn/resources
  https://www.youtube.com/c/SketchUp/videos
- InDesign: https://helpx.adobe.com/support/indesign.html

Course Workload:

URBP 248/148 is a 3-unit class. Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of forty-five hours over the length of the course (normally 3 hours per unit per week with 1 of the hours used for lecture) for instruction or preparation/studying or course related activities including but not limited to internships, labs, clinical practical. Other course structures will have equivalent workload expectations as described in the syllabus.

Submission Guidelines:

Students are **required** to upload the necessary files in the correct format for each assignment on Canvas on the **respective due date by the end of the day (11:59 P.M.)** It is recommended that assignments be turned in when they are finished in advance of the due date, especially since larger files take time to upload.
Students are going to lose points if they do not submit the assignment on the due date of each submission date. Late assignments will be accepted at a reduced grade.
Late assignments will receive a deduction of 5 points for each 24-hour period.

All assignments in this course will be evaluated based on the following criteria:
Correct, Complete and On time.

University Policies:

Per University Policy S16-9 (http://www.sjsu.edu/senate/docs/S16-9.pdf), relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g., learning assistance, counseling, and other resources) are listed on Syllabus Information web page: (https://www.sjsu.edu/curriculum/courses/syllabus-info.php). Make sure to visit this page to review and be aware of these university policies and resources.

Plagiarism and Citing Sources Properly:

Plagiarism is the use of someone else's language, images, data, or ideas without proper attribution. It is a very serious offense both in the university and in your professional work. Plagiarism will lead to grade penalties and a record filed with the Office of Student Conduct and Ethical Development. In severe cases, students may also fail the course or even be expelled from the university. If you are unsure what constitutes plagiarism, it is your responsibility to make sure you clarify the issues before you hand in draft or final work.

Learning when to cite a source is an art, not a science. However, here are some common examples of plagiarism that you should be careful to avoid:

- Using a sentence (or even a part of a sentence), that someone else wrote without identifying the language as a quote by putting the text in quote marks and referencing the source.
- Paraphrasing somebody else's theory or idea without referencing the source.
- Using a picture or table from a webpage or book without referencing the source.
- Using data some other person or organization has collected without referencing the source.

Citation style:

It is important to properly cite any references you use in your assignments. The Department of Urban and Regional Planning uses Kate Turabian's *A Manual for Writers of Research Papers, Theses, and Dissertations*, 8th edition (University of Chicago Press, 2013, ISBN 780226816388). Copies are available in the SJSU King Library. Additionally, the book is relatively inexpensive, and you may wish to purchase a copy. Please note that Turabian's book describes two systems for referencing materials: (1) "notes" (footnotes or endnotes), plus a corresponding bibliography, and (2) in-text parenthetical references, plus a corresponding reference list. In this class, students should may use any of the styles, as long as one is used consistently throughout the assignment.

Library Liaison:

The SJSU Library Liaison for the Urban and Regional Planning Department is Peggy Cabrera. If you have questions, you can contact her at peggy.cabrera@sjsu.edu or 408-808-2034.

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COURSE SCHEDULE

Date	Topic	Assignments Due
08/22/2022	Course introduction, Graphic communication in the urban design & planning practice, syllabus & assignments overview. Basic Goal Setting, Editing Google Earth Maps, and Selecting Sites, Basic PowerPoint skills	
08/29/2022	**Microsoft PowerPoint:** Project Area & Analysis PowerPoint Presentation	Assignment 1
09/05/2022	Labor Day (NO CLASS)	
09/12/2022	**Adobe Illustrator**- Interface introduction, Panels & Workspaces, Vector basics and Creating Plan View Maps	
09/19/2022	**Adobe Photoshop**- Interface introduction, panels and workspaces, raster image principles, layer management, common file types- Color Rendering techniques	Assignment 2
09/26/2022	**Adobe Photoshop**- Tools for Photo Simulation-image manipulation/enhancement, layer mask, clone stamp, layer styles, textures	Assignment 3
10/03/2022	**Adobe Photoshop**- Tools for Photo Simulation continued	
10/10/2022	**Trimble SketchUp**- Introduction to workspace, Geo-location and basic tools overview. Conceptual mass modeling, Shadow Study, Scenes	Assignment 4
10/17/2022	**Trimble SketchUp**- 3D modeling tools & techniques: Flatwork base modeling and building details, roof modeling, Paint bucket/materials/textures	Assignment 5
10/24/2022	**Trimble Sketchup**- 3D warehouse	
10/31/2022	**Trimble SketchUp**- Creating Scenes, adding ornamentation to the scenes, Exporting scenes, Animation	Assignment 6
11/07/2022	**Trimble SketchUp**- 3D Cross Sections	Assignment 7
11/14/2022	**Adobe InDesign**-Introduction to InDesign workspace, Document setup/layout, Master & Document pages	Assignment 8
11/21/2022	**Adobe InDesign**-Layout discussion and organization, past portfolio examples	
11/28/2022	**Adobe InDesign**- Additional InDesign Features- Draft submission, presentation & discussion	
12/05/2022	Submission of Final Design Portfolio & Presentation	Assignment 9

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COURSE REQUIREMENTS & ASSIGNMENTS

The grade for the course will be based on the following assignments:

Assignments	Due Dates	Percent of Course Grade	Course Learning Objectives Covered
Assignment 1: Project area & Analysis Students will select a site using Google Earth Pro to create and present ***Microsoft PowerPoint*** slides on the existing site conditions.	08/29/2022	10%	1
Assignment 2: Plan View Maps Students will create plan view maps using ***Adobe Illustrator***, illustrating land use, circulation, and project improvements.	09/19/2022	15%	2
Assignment 3: Color Rendering Students will use ***Adobe Photoshop*** to color render a site plan.	09/26/2022	10%	3
Assignment 4: Photo Simulation Students will enhance an image of existing conditions and create a photo simulation using ***Adobe Photoshop*** to reflect proposed corridor conditions.	10/10/2022	10%	3
Assignment 5: Shadow Analysis Using the tools & techniques in ***Trimble SketchUp***, students will create 3D mass models of both existing and proposed buildings. They will also carry out a shadow analysis to finalize the proposed design.	10/17/2022	5%	4
Assignment 6: 3D Model Students will add flatwork base and building details to their proposed design using ***Trimble SketchUp***. Add streetscape elements using 3D warehouse to complete your proposed design.	10/31/2022	15%	4
Assignment 7: Scene Animation Using ***Trimble SketchUp***, create scenes and an animated video of the proposed conditions.	11/07/2022	10%	4
Assignment 8: Cross Sections (3D) Students will create illustrative 3D cross sections of their proposed 3D model to explain the relationship between the internal spaces and public realm using ***Trimble SketchUp***.	11/14/2022	10%	4
Assignment 9: Design Portfolio Using ***Adobe InDesign***, students will make a compilation of all the assignments and organize them in a clear & creative format that clearly communicate ideas & concepts.	12/05/2022	15%	5

Grading Information:

The course grade consists of 9 assignments. The following table identifies the number of points for each assignment and the respective percentage of the course grade.

Assignment	Assignment Points	Percentage of Course Grade
Assignment 1: Project Area & Analysis	50	10%
Assignment 2: Plan View Maps	75	15%
Assignment 3: Color Rendering	50	10%
Assignment 4: Photo Simulation	75	10%
Assignment 5: Shadow Analysis	25	5%
Assignment 6: 3D Model	75	15%
Assignment 7: Scene Animation	50	10%
Assignment 8: Cross Sections (3D)	25	10%
Assignment 9: Design Portfolio	75	15%
Total	500	100%

Grading Scale: The following grading scale is used to translate final grades to letter grades:

Grade	Percentage	Grade	Percentage
A+	96-100%	C	73-75%
A	93-95%	C-	70-72%
A-	90-92%	D+	66-69%
B+	86-89%	D	63-65%
B	83-85%	D-	60-62%
B-	80-82%	F	59% and below
C+	76-79%		