

Introducing ITS in the Los Angeles Community College Region



Overview

- Role of TWI in ITS Implementation
- Impact of ITS on Pathway Strategy at LATTC
- Best practice: Partnership with SWTWC in Developing a K-16 Pathway in GIS

Transportation Workforce Institute (TWI)

- Established in 2015 through FTA *Innovative Workforce Development* grant funding
 - Focus on addressing workforce needs of frontline occupations in transportation
 - Regional convener of education and training partners; national reach
 - Development and dissemination of programs, materials, and best practices
- TWI role in ITS Implementation
 - LA County regional lead in Transportation for CA Community College Chancellor's Office Strong Workforce Initiative
 - Work with community colleges in various districts on transportation curricular and program updates
 - Lead curriculum and program developer for LA Metro's WIN-LA Initiative
 - ITS intro built into some incumbent worker training modules

Impact of ITS on Pathway Strategy at LATTC

- ITS modules have been embedded into Automotive Technology, Truck and Bus Technologies, and Rail Vehicle Maintenance programs- these cover:
 - GPS
 - Variable Speed Limits
 - Autonomous Vehicle Technology
 - Automatic Vehicle Diagnostic Services
 - Traffic signal control
 - Automatic Number Plate Recognition

Best practice: GIS Demonstration Project in Partnership with SWTWC

- Multiple partners: University/Community College/Transportation Center
- Collaborative brought K-12, community college, and university students together
- Many Lessons learned



Bringing Transformational Technology Curriculum to Community Colleges

National Transportation Career Pathway Initiative
Tyler Reeb, Ph.D.

Transportation Planning: Priority Occupations

Initial Job Targets (20)

City & Regional Planning Aide
Transportation Tech, Engineer
Transportation Analyst, Planner
Land Use, Urban/Regional Planner
Enviro Analyst, Planner, Engineer
Cartographers & Photogrammetrists
Surveying & Mapping Technician
GIS Technician, Planner, Director
Modeling Tech, Planner, Manager
Civil Engineer & Technician

Final Priority List

Transportation Planner
Urban/Regional Planner
Land Use Planner
Environmental (Restoration) Planner
Cartographers & Photogrammetrists
GIS Analyst/Technician
Surveying & Mapping Technician

Career Ladder Designation

Primary career goal (ideal)
Primary career (specialization)
Primary career (specialization)
Primary career (specialization)
Entry level position
Entry level position
Entry level position

Transportation Planning: Occupational Competencies

COMPARISON OF COMPETENCIES IN JOB LISTINGS/DESCRIPTIONS - APA AND SCAG

Top Five Sought-After Competencies American Planning Association	Total Observations or Average Amount	Percentage n = 51
Written and Oral Communication	31	61%
Collect, Compile, and Analyze Data	24	47%
Principles of Planning and Development	24	47%
Presentations (Public Speaking)	22	43%
Professional Relationships/Interpersonal Skills	21	41%

Competencies/Requirements	Total Observations or Average Amount	Percentage n = 51
Analysis/Research/Report Methods	10	20%
Principles of Planning and Development	24	47%
ORG/MGMT/HR Practices	7	14%
Transportation Modeling	1	2%
Project Management Practices	6	12%
Market Research	1	2%
Funding/Grant Writing	2	4%
Regulation/Legislation Related to Area	16	31%
Business Language, Document Drafting	7	14%
Gov./City Structure (Boards, Councils, Commissions)	9	18%
Budgeting/Financial Analysis	4	8%
Foreign Language	2	4%

Competencies/Requirements	Total Observations or Average Amount	Percentage n = 51
GIS	19	37%
Standard Microsoft Applications	12	24%
Adobe Tools (Creative, Illustrator)	6	12%
CAD	2	4%
Prepare Reports	15	29%
Presentations (Public Speaking)	22	43%
Public Interaction	20	39%
Customer Service	2	4%
Collect, Compile, and Analyze Data	24	47%
Negotiation	2	4%
Plan and Coordinate Projects	17	33%
Teamwork	12	24%

Competencies/Requirements	Total Observations or Average Amount	Percentage n = 51
Walk Independently	10	20%
Professional Relationships/Interpersonal Skills	21	41%
Written and Oral Communication	31	61%
Leadership	11	22%
Management/Supervision	12	24%
Prepare/Administer Budgets	4	8%
Multitasking	13	25%
Strategic Mindset	2	4%
Time Management/Organizational	3	6%
Logical Thinking/Problem Solving	6	12%

Competencies/Requirements	Total Observations or Average Amount	Percentage n = 51
Bachelor's Degree	39	76%
Master's Degree	3	6%
Certification	24	47%
PE	3	6%
Work Experience (Average Years)	3.45	N/A
Salary (Average Lower Limit)	\$ 46,653.86	N/A
Salary (Average Upper Limit)	\$ 61,757.87	N/A

Top Five Sought-After Competencies Southern California Association of Governments	Total Observations or Average Amount	Percentage n = 32
Regulation/Legislation	23	72%
Principles of Urb./Reg./Trans. Planning	22	69%
Prepare Reports/Presentations	22	69%
Collect, Compile, Analyze Data	21	66%
Complex Problem Solving	19	59%

Competencies/Requirements	Total Observations or Average Amount	Percentage n = 32
Analysis/Research/Report Methods	18	56%
Statistical Theory/Methods	13	41%
Principles of Urb./Reg./Trans. Planning	22	69%
PR Techniques	4	13%
Air Quality Planning	5	16%
ORG/MGMT/HR Practices	9	28%
Transportation Modeling	10	31%
Project Management Practices	18	56%
Regulation/Legislation	23	72%
Economic Forecasting	4	13%
Env./Sust. Practices	4	13%
Gov./City Structure (Boards, Councils, Commissions)	3	9%
Transportation Development Act	2	6%
Budgeting	11	34%
Principles in Transportation Demand Mgmt.	3	9%

Competencies/Requirements	Total Observations or Average Amount	Percentage n = 32
GIS	8	25%
SAS	3	9%
Standard Office Applications	3	9%
Other Software Requirements	4	13%
Prepare Reports/Presentations	22	69%
Public Interaction	13	41%
Collect, Compile, Analyze Data	21	66%
Plan/Coordinate Projects	10	31%
Teamwork	8	25%

Competencies/Requirements	Total Observations or Average Amount	Percentage n = 32
Walk Independently	14	44%
Gain Coop./Consensus Thr. Disc. and Persuasion	9	28%
Written and Oral Communication	8	25%
Leadership	11	34%
Management	10	31%
Prepare/Administer Budgets	8	25%
Complex Problem Solving	19	59%
Bachelor's Degree	30	94%
Master's Degree	2	6%
Work Experience (Average Years)	4.45	N/A
Salary (Average Lower Limit)	\$ 99,018.40	N/A
Salary (Average Upper Limit)	\$ 157,865.37	N/A

Legend
Green cells represent the top five most commonly found knowledges and skills/abilities, and the top two technology competencies mentioned. Yellow cells represent the overall top five competencies for the respective scans (presented on top of the page).

Data sources
APA: Nationwide job listings posted at www.planning.org using the key word 'Transportation' as selection criteria
SCAG: Regional (CA) job descriptions found at www.scag.ca.gov using transportation/planning education requirements as

Technology	Relevance (survey)	KSA's	Knowledges, Skills, Opportunities
CAV	77.42%	Transit route/supply chain system optimization	Understanding system optimization as practiced by transit route designers and supply chain managers.
	77.42%	AV/CV infrastructure construction needs	Knowledge and understanding of the specific construction needs of AV/CV infrastructure including design standards
	77.42%	Building and zoning codes to accommodate AV/CV	Knowledge to amend building and zoning codes to accommodate AV/CV systems and to develop standards for assessing impacts
Energy	66.94%	Fuel technologies, incl. Operating characteristics	Understanding of fuel technologies and their operating characteristics: maximum payload, range for refueling, etc
	66.94%	Interagency collaboration skills	Interagency collaboration skills.
Shared Mobility	62.90%	Updated data management competencies	More opportunities (and more skills needed) for planners in the area of data management.
	62.90%	Transportation economics	Enhanced understanding of transport economics to both predict and gauge the impacts of different mobility options
ITS	59.68%	Updated data management competencies	Competencies in data management (acquiring, mining, analyzing data) that could be different for planners traditionally trained
	59.68%	Eliminate institutional data sharing barriers	Skill sets in eliminating institutional barriers to data sharing (as ITS creates incentives to plan along transportation corridors)
Big Data/Data Analytics	58.87%	Data interpretation	Better interpret data handed to them
	58.87%	Data evaluation	The ability to "read" good vs bad data
Intelligent Tracking/Navigation	49.19%	GIS, GPS, RFID	Familiarize themselves with GPS, GIS and RFID tag data in the analysis of transport data
	49.19%	Updated EOBR knowledge	Additional background knowledge of freight systems (d/t new requirements for Electronic On-Board Readers (EOBR) in trucking)
Artificial Intelligence	49.19%	Data security regulations compliance	Understand data security and to demonstrate compliance with restrictions on data use
	36.29%	Predictive analytics usage and understanding	Understanding and usage of predictive analytics
UAS	36.29%	Vehicle design, VR/AR user behavior management	Demand for transportation planners who design vehicles and manage user behavior instead of focusing on the infrastructure.
	33.06%	UAS related land use regulations	Increased/updated knowledge on land use regulations dictating where UAS can operate
UAS	33.06%	Federal aviation regulations	Knowledge on federal aviation regulations that may supersede local controls.
	33.06%	UAS capabilities and risks	Knowledge of UAS capabilities and risks.
	33.06%	Management of airspace	Planners familiar with VMT and Level of Service: Training in management of airspace
VR/AR	33.06%	Environmental impact metrics for UAS	Environmental assessment planners: Develop metrics for UAS use that impact the environment including noise and congestion impacts
	16.94%	AR/VR graphics, scenario development	Skills in the graphics and scenario development components of AR and VR
3D Printing	16.94%	Cross-disciplinary skills planning, engineering, CECS	Making sure that the scenarios are data driven will also require a combination of skills across the planning, engineering and CECS disciplines.
	16.94%	Updated data management competencies	Gather and assess new kinds of data (d/t the changing patterns of trade resulting from additive manufacturing)
Other	N/A	Construction design	Bridge technologies like HSR req. expertise in construction design and management that differ from more traditional transport system design

Transportation Planning: Academic Program of Study

Program of Study: Transportation Planner



AICP – Certified Planner

Transportation planners can apply for a certificate with the American Institute of Certified Planners (AICP). Exams can be taken twice a year by planners fulfilling educational and work-related prerequisites. Certified planners reportedly make \$16,000 more annually on average (www.planning.org/certification).

Year 5-6

Master of Planning – Transportation & Infrastructure

Year 5: Student chooses electives either from their degree, or other, concentration. Electives can also be taken from a certificate program, for example "Certificate in Transportation Systems".

Year 6: During the first year, students take core courses. They can also choose a planning concentration for their studies, within which they choose from a selection of concentration courses.

Core Courses:
 Intersectoral Leadership
 Economics for Policy & Planning
 Planning Theory
 Statistics & Arguing from Data
 Comparative Land Development
 The Social Context of Planning
 The Legal Environment of Planning
 Planning History & Urban Form

Concentration Courses:
 Modeling & Operations Research
 Intro Transportation Planning Lear
 Port Engineering, Planning & Ops
 Environmental Impact
 Urban Economic Analysis
 GIS for Policy & Planning
 Transportation Systems Analysis
 Transportation & Environment

Experiential Learning: includes planning studies / lab, internship, and fieldwork

Year 3-4

Bachelor's Degree in Urban & Regional Planning

Year 4: Students take senior-level courses and fulfill internship and fieldwork requirements. Programs not requiring an internship recommended enrolling a career exploration counselor to find an internship.

Year 3: Students take specialized courses such as graphic communication tools, introductory GIS, quantitative/qualitative urban research, methods planning and zoning.

GE Courses:
 Science & Technology Synthesis
 Social Sciences Synthesis
 Humanities & Synthesis

Planning-Related Courses:
 Quantitative Urban Research Methods
 Qualitative Urban Research Methods
 Planning Theory
 Maps, Graphics, & Lab

Planning-Related Courses:
 Planning in the Public Sector
 Legal Foundations of Planning
 Urban Transportation Planning
 Urban Problems Seminar
 Community-Based Urban Design
 Fieldwork
 Internship
 Intermediate GIS & Lab

Experiential Learning: includes planning studies / lab, internship, and fieldwork

Year 1-2

Associate's Degree / Pursuing Bachelor's Degree

Year 2: Students should continue to complete their GE courses and begin taking lower-division requirement courses. Pre-requisite courses provide students with basic understanding of theoretical and practical skills.

Year 1: Students are required to take general education courses, but it is also recommended they seek to fulfill their degree prerequisite requirements.

GE Courses:
 Analytical Reading, Expository Writing
 Critical Thinking
 Mathematics
 Oral Communication
 Public Policy & Design
 Basic Economics
 Political Science
 Sociology

Planning-Related Courses:
 Intro to Urban Planning Theory
 Sustainable Development of Cities

Lower-Division / Major Prerequisites:
 Intro to Graphic Communication
 Tools Used by Urban Studies & Planning Professionals
 Planning Theory
 Quantitative Urban Research Methods
 Qualitative Urban Research Methods
 General Plan & Zoning
 Urban Policy & Planning
 GIS & Planning Applications Economics

High School Diploma

Transportation related career academies.




*This academic program is supported by the Federal Highway Administration under the terms of the Intermodal Surface Transportation Efficiency Act of 2005. Any questions, comments, or concerns are to be directed to the program administrator at the address below.

Experiential & Innovative Learning: Planning



Experiential Learning Programs for Planning Students

In addition to academic and technical preparedness, on-the-job training and other work-based learning experiences are critical components of worker readiness programs. These non-traditional programs provide co-curricular value to student career preparedness.

Sierra Club

Students of the Angeles Chapter Transportation Committee have the opportunity to engage with other members, leaders of the organization, and community members to network and develop impactful campaigns and initiatives.

Association for Public Policy Analysis & Mgmt (APPAM)

APPAM provides graduate student members with an opportunity to attend regional conferences and participate in a mentor-matching program.

American Planning Association (APA)

Attending an APA-accredited university or obtaining membership connects students to a network of professional planners and an opportunity to obtain an American Institute of Certified Planners (AICP) certification, the only national independent verification of planner qualifications.

Global Planners Network (GPN)

Student APA members are able to connect with GPN's global network of planning associations, through APA regional conferences here in the United States.

The Urban Land Institute (ULI)

ULI offers scholarship and research competition opportunities hosted across the country, which support the development of member understanding on current urban planning challenges and how to address current trends in industry.

Southern California Association of Governments (SCAG)

SCAG offers college student-paid internships that provide practical work experience and an opportunity to develop meaningful relationships with experts in their program of study. SCAG also offers local scholarships to high school and community college students and a two-week internship with a local planning agency, council of governments, or SCAG.

San Diego Association of Governments (SANDAG)

SANDAG offers paid internships for students with graduate coursework in urban planning, public policy, or related fields focusing on transportation planning. The one-year position provides a hands-on learning experience with guidance and mentoring of senior staff.

Innovative Learning Strategies for a Planning Program of Study

To establish curricular lessons and activities that incorporate the latest strategies for increasing student learning effectiveness and retention, a review of practices deployed by workforce and CIE practitioners reveals several approaches that would benefit students within a transportation planning program of study. These learning strategies include:

Competency-Based Curriculum

Curriculum that meets academic and quality standards that is designed and organized by competencies required for jobs and cross-walked with industry skill standards and certificate titles, where applicable. Job profiling and the use of "SMEs" should be considered to meet the competency needs of business.

Individualized Curriculum

Structure and sequence curriculum in modules tied to jobs with multiple entry/exit points, with multiple levels of industry recognized credentials built into the sequenced pathway.

Asynchronous Learning

Provide education and training for students and incumbent workers at times and local locations convenient to students and employers, rather than instructors or institutions. This may include evening or weekend, blended or "flipped" delivery models, and delivery at off-campus locations.

Problem-Based Learning

Problem-based learning helps students who seek hands-on learning and want to be media-makers foster team-building and solve real-life problems.

Experiential Learning

Incubate opportunities for "learning by doing", including internships, co-op work experience, simulations, and team class projects that are assignments from local employers.

Context-Based Learning

By interpreting new information in the context or place of where and when it occurs and relating it to what are already known, we come to understand its relevance and meaning. To design effective strategies for learning, requires an understanding of how context shapes learning.

Intentional Learning

Learning is a different and innovative learning environments reflect the various experiences and prior knowledge that each student brings to class. It's important that practices and processes help teachers engage each student where they are.




*This academic program is supported by the Federal Highway Administration under the terms of the Intermodal Surface Transportation Efficiency Act of 2005. Any questions, comments, or concerns are to be directed to the program administrator at the address below.

Planning Academic Programs

- CA Polytechnic Univ, Pomona (Cal Poly)
- CA State University, Northridge (CSUN)
- San Diego State University (SDSU)
- University of California, Irvine (UCI)
- University of California, LA (UCLA)
- University of Southern California (USC)

Experiential Learning Programs

- Sierra Club (L.A. Chapter)
- Assoc. for Public Policy Analysis & Mgmt
- American Planning Association
- Global Planners Network
- Urban Land Institute
- SCAG, SANDAG

Transportation Planning: The Career Pathway



Job Description: Transportation Planner

Alternative Job Titles
Assistant Planner, Associate Planner, Senior Planner

Job Description
A Transportation Planner is committed to taking on the role of urban freight researcher who studies the operation of transportation systems implemented by an organization. On a daily basis, the analysis and compilation of data is carried out to evaluate the effectiveness of implemented transportation models and simulations. A Transportation Planner therefore works to analyze the developmental tide of the infrastructure, and how current project models potentially can be developed to weigh against it local regulations. In that role, one therefore bears the responsibility of representing the administrative approval of transportation and land development projects carried out by an organization, to make sure that local regulations and jurisdictions on land use are being followed. Other duties include:

- Attend regular meetings and collaborate with engineers, public officials, and public stakeholders to resolve transportation design and environmental issues stemming from civic projects and public policies.
- Compose and submit technical reports on plans within regional and urban programs and policies.
- Monitor and assess regional/urban production.
- Supervise the work of hired consultants and interns; carry out public outreach to promote a consensual dialogue on the future development of civic projects.

Knowledge Requirements

- Analysis/Research/Report Methods
- Government/City Structure (Boards, Councils, Commissions)
- Regulation/Legislation related to Area
- Principles of Planning and Development
- Transportation Modeling
- Project Management Practices
- Budgeting/Financial Analysis
- Project Management Practices
- Document Drafting
- Statistical Theory/Methods
- Principles of Urban/Regional/Trans. Planning
- Budgeting
- Principles in Trans. Demand Management

Required Skills & Abilities

- Prepare Reports
- Presentations (Public Speaking)
- Plan and Coordinate Projects
- Public Interaction
- Teamwork
- Work Independently
- Written and Oral Communication
- Management/Supervision
- Prepare/Administer Budgets
- Multitasking
- Strategic Mindset
- Complex Problem Solving
- Leadership

Technical Skills Requirements

- GIS
- Adobe
- Microsoft Office Applications

Typical Salary
\$63,000

Education & Work Experience

- Master's degree preferred; bachelor's degree accepted for a majority of positions.
- For entry-level positions, between 1-2 years of work experience is commonly desired.
- A combination of education and work experience that fulfill the requirements is acceptable.

Planning Career Pathway

- Highly vertical, hierarchal career path
- Strong academic/accredited POS
- Employment contingent upon degree
- No effective pre-employment training
- Lack of 4-year feeder programs

Job Spec Templates

- Useful for documenting all disciplinary priority occupations.
- Will make up an occupational guide for highway transportation sector.
- Part of deliverable package to FHWA.

The Planning Pathway Demonstration Pilot

ARC 341: GIS Metropolitan Access Planning Systems

- Hybrid Introduction to GIS/Planning
(launched Spring 2018: 15-weeks, 14 students)
- Launched Spring 2018 at L.A. Trade Tech College
(leveraging CA Strong Workforce Funds)
- Enrollment: 13 area high school students and 1 LATTC faculty
- In Partnership w/ Transp. Workforce Institute
(an FTA-funded Innovative Public Workforce Program)
- Connects K12 to 2-Year & 4-Year Programs
(Offers dual-enrollment & college credit articulation)
- Contextualized, Work-Based Learning
(GIS-Infused “Planning” activities & group projects)
- Promotes Transportation Career Pathways
(exposes students to career opportunities)



**LEARN ABOUT GIS AND
APPLY IT TO YOUR
FUTURE CAREER**

**ARC 341: GIS METROPOLITAN
ACCESS PLANNING SYSTEMS**

Course # 12532
**INTRO TO GEOGRAPHIC
INFORMATION SYSTEMS AND
LABORATORY**
Mon./Wed. 5:30 p.m. - 9:00 p.m.

- Develop one of the most highly sought after skillsets
- Careers with a median salary of \$65K
- Learn how to use the latest ArcGIS mapping technology
- Apply it to urban planning, transportation planning, and other related fields

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ARC 341: Student Learning Objectives

COURSE OUTLINE (Subject to Change)

Date/Week	Lecture Topic	Assignments
Week 1	Syllabus/Introduction to GIS	ArcGIS Online
Week 2	GIS Data	Chapter 1 <i>Who Uses GIS assignment due</i>
Week 3 Guest Speaker: Tom O'Brien (10-11)	Managing GIS Data Geodatabases	Chapter 2 Chapter 13 (pp. 379-384) <i>Chapter 1 assignments due (review)</i>
Week 4	Coordinate Systems	Chapter 3 <i>Chapter 2 assignments due (review)</i>
Week 5 Guest Speaker: Terry Bills (10-11)	Mapping GIS Data	Chapter 4 <i>Chapter 3 assignments due (review)</i>
Week 6 3/31 Spring Break	Campus Closed	
Week 7	Presenting GIS Data	Chapter 5 <i>Chapter 4 assignments due (review)</i>
Week 8	Attribute Data Midterm Exam	Chapter 6 <i>Chapter 5 assignments due (review)</i>

Week 9 Guest Speaker: Eric Shen (10-11)	Queries	Chapter 8 <i>Chapter 6 assignments due (review)</i>
Week 10	Collector App Group & Individual Projects Info	Field Data Collection Project Proposal Story Maps
Week 11	Spatial Joins	Chapter 9 <i>Chapter 8 assignments due (review)</i>
Week 12	Map Overlay and Geoprocessing Geocoding	Chapter 10 <i>Chapter 9 assignments due (review)</i> Mapping Mobility Project (Individual)
Week 13	Group Project	Group Project <i>Chapter 10 assignments due (review)</i>
Week 14	Group Project	Group Project
Final Exam	Additional Information will be provided	

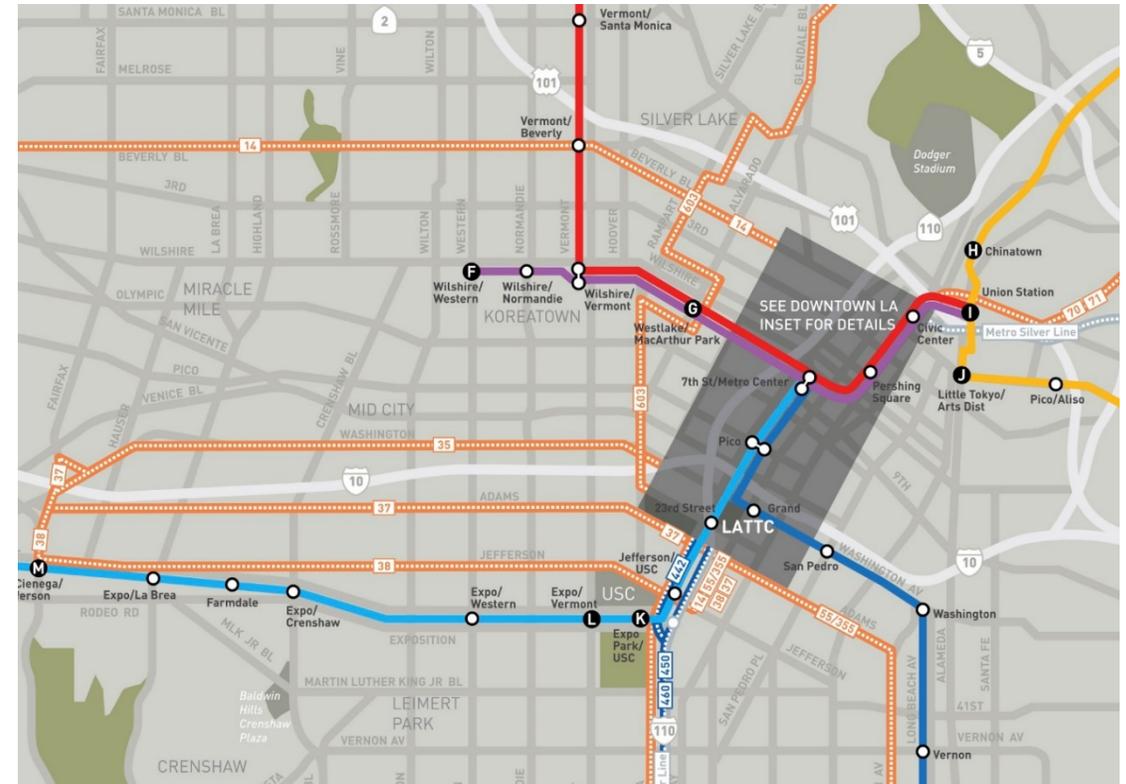
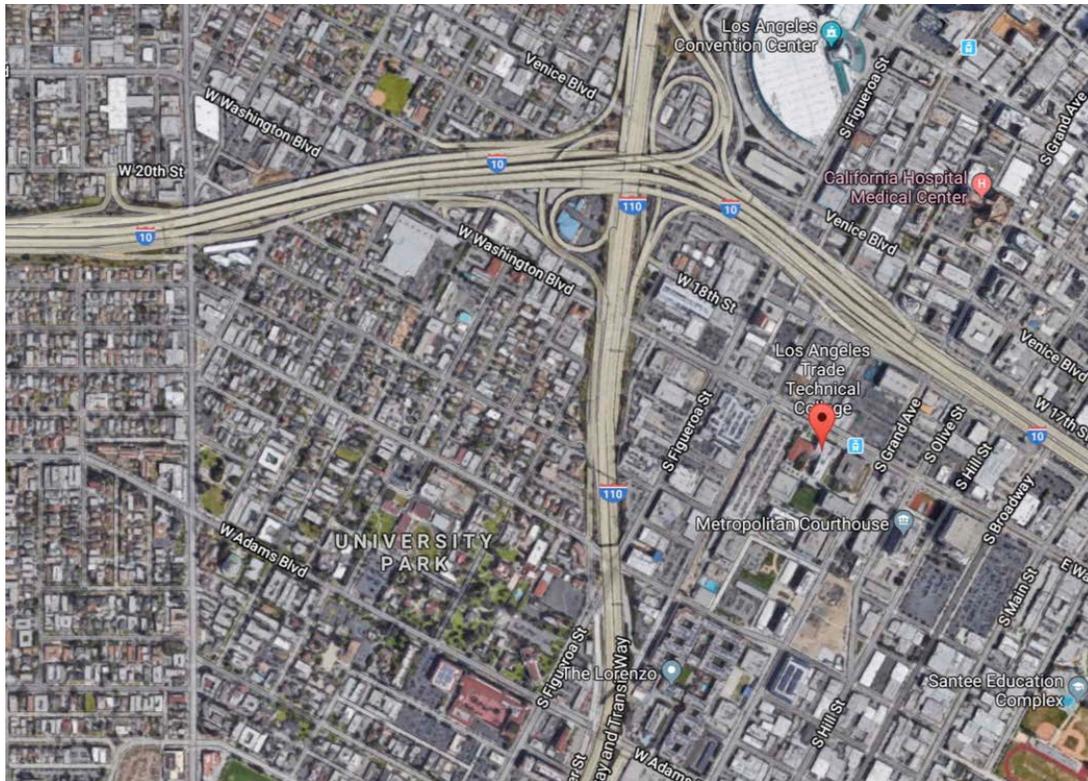
Learning Objectives

- Introduce GIS Concepts
- Operate ArcGIS Software
- Manage Geodatabases
- Coordinate Systems
- Data Collection & Mapping
- Database Queries
- Spatial Joins & Overlays
- Project Teamwork

ARC 341: A Complex Metropolitan Location

Los Angeles Trade Technical College

- A complex metropolitan location serviced by multiple transportation modalities

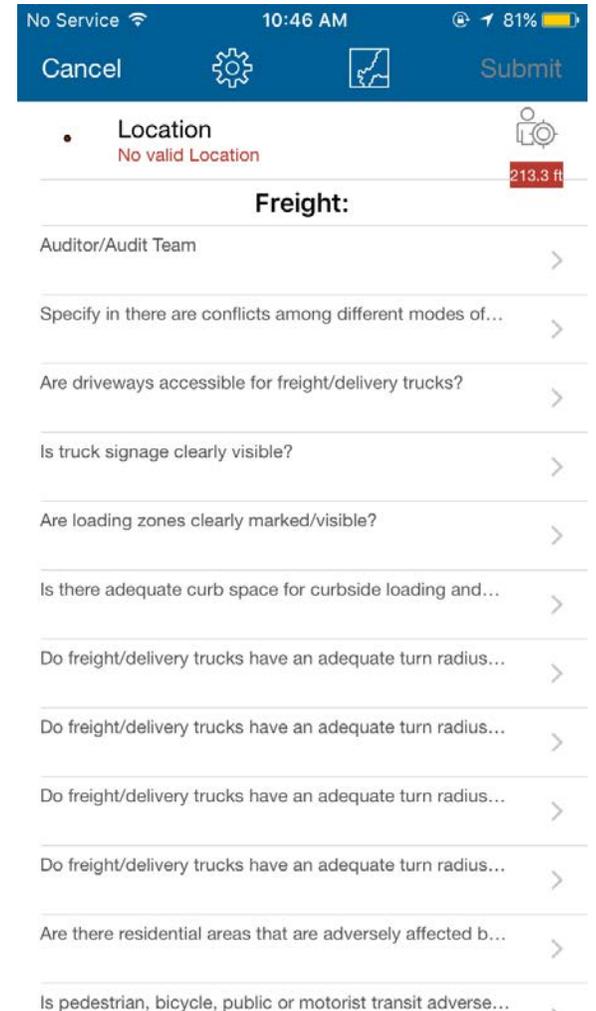


ARC 341: Infused with Contextualized Learning

Engaging Students to Learn

- Infusing planning-based projects into standard classroom curriculum
- Engaging industry support: site visits, guest speakers, technology, etc.
- Career pathway as curriculum: from college students to industry pros

“There’s a need for much greater collaboration across academia and industry than ever before, to address transportation workforce challenges and adequately prepare students for careers of the future.” (Ivey)



ARC 341: Introducing Students to Career Paths

GIS Transportation Planning Career Pathways

Geographic Information System technology is utilized by transportation planners at all levels.

Entry Level - GIS Technician

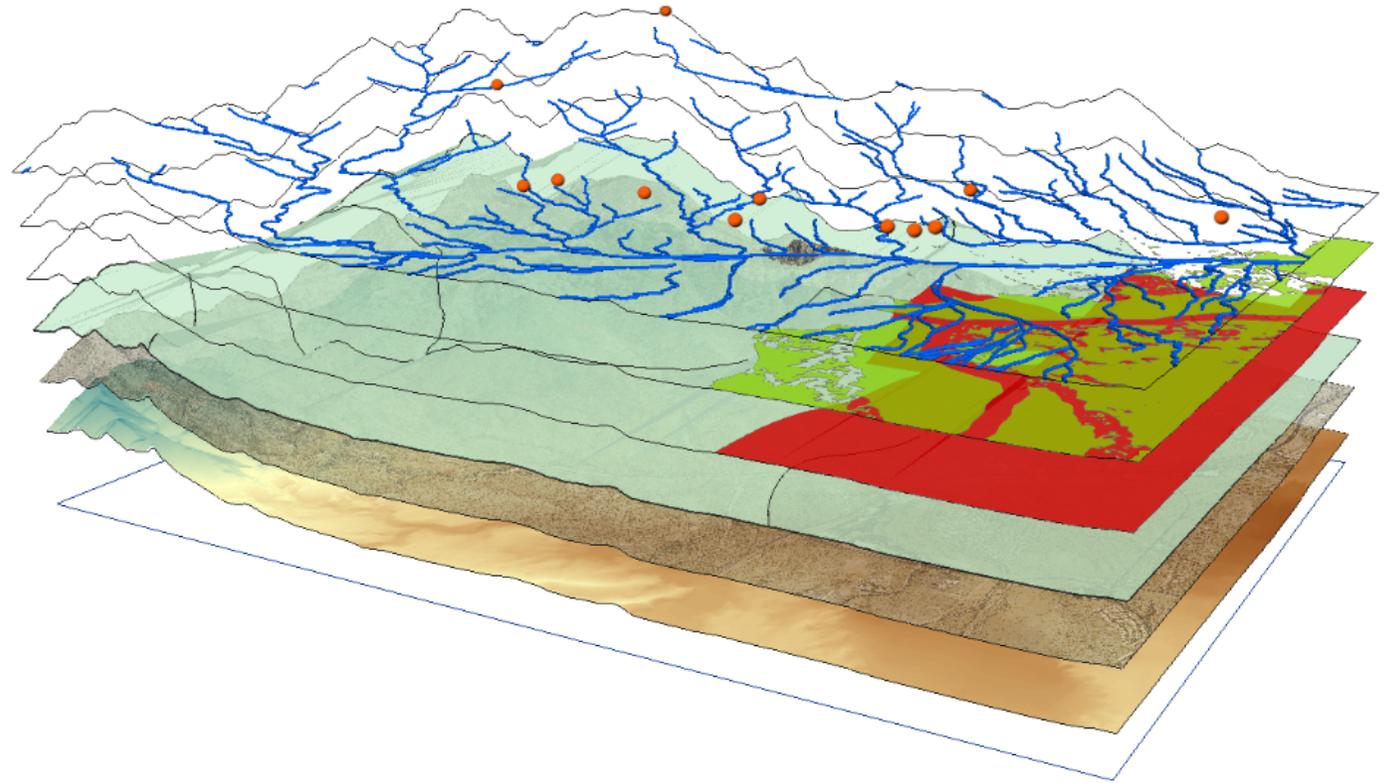
- Salary Range: \$38,000 - \$66,000
- Education and Industry Certification
 - Associates Degree (2 year) in Urban Studies or related specialization

Mid Level - GIS Analyst

- Salary Range: \$74,776 - \$97,219
- Education and Industry Certification
 - B.S./B.S. in Urban and Regional Planning with a transportation focus
 - B.A./B.S. in Urban Studies and Planning Minor in Urban and Regional Studies, Urban Sustainable Planning
 - Masters degree is highly desirable (could be substituted for 2-4 years of related work experience)

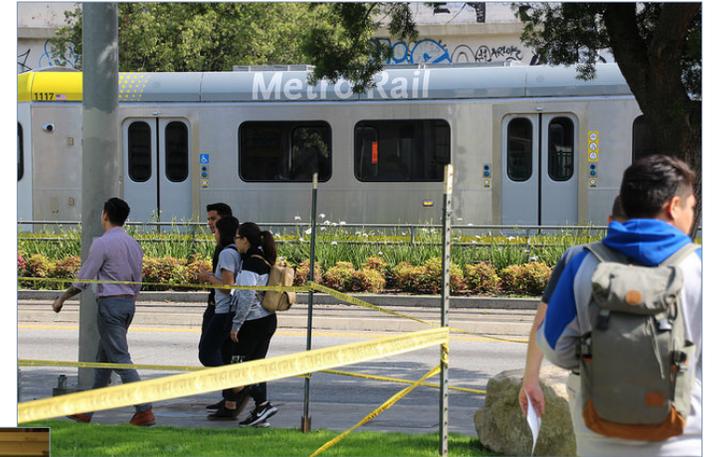
Advanced Level - Regional Planner Specialist

- Salary Range: \$95,388 - \$124,009
- Education and Industry Certification
 - Masters of Urban and Regional Planning (MURP)
 - Masters of Planning with a Concentration in Transportation and Infrastructure Planning
 - Certificate of Transportation Systems Professional Education in Collaboration with American Planning Association
 - Masters degree is highly desirable (could be substituted for 2-4 years of related work experience)



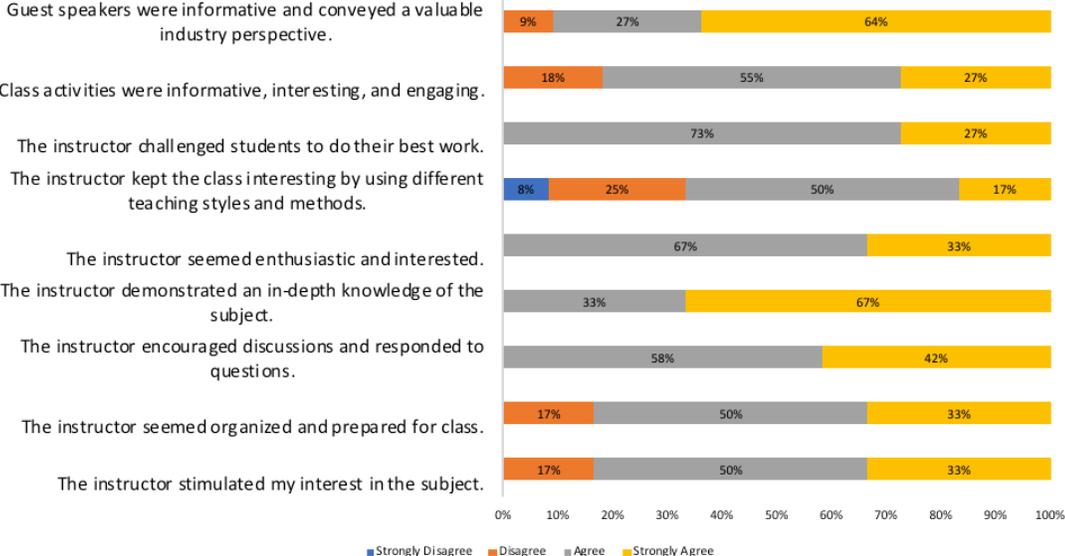
Bringing the Career Path into the Classroom

ARC 341: Engaging Students Outside the Classroom

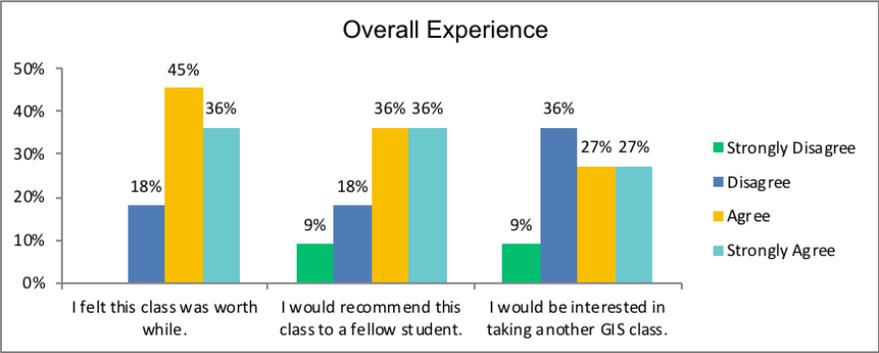
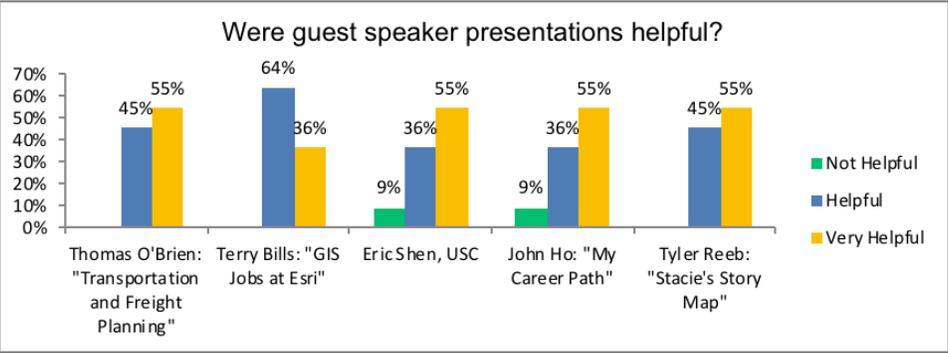
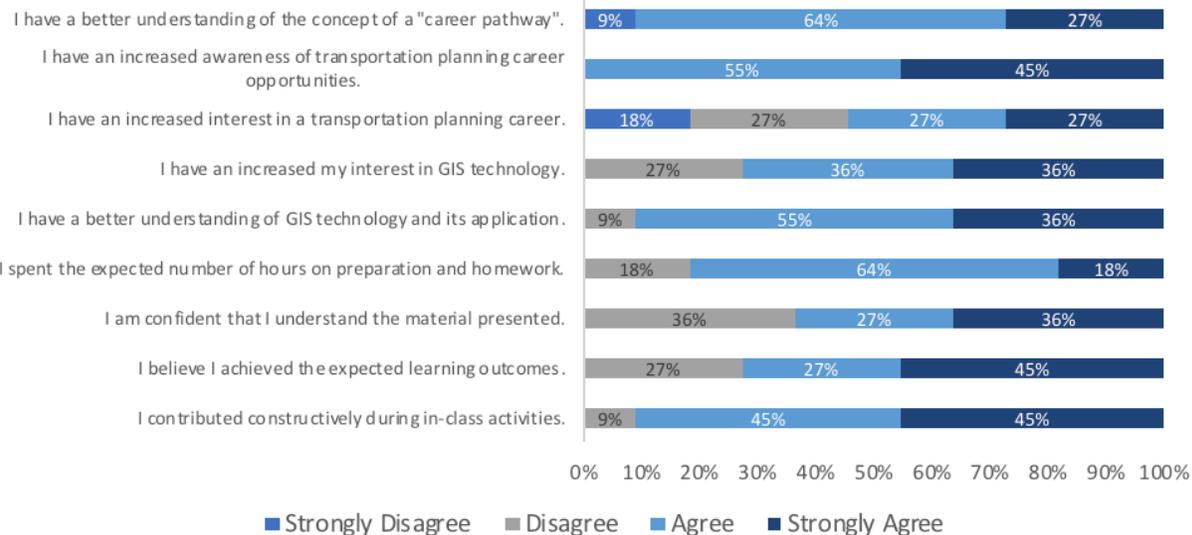


ARC 341: Student Evals & Suggestions

Teaching Approach



Self-Assessment



ARC 341: Student Evals & Suggestions

“Improve more physical activities and go outside more.”

“Two sessions min per week to hold concepts more effectively.”

“Make this class more fun.”

“More collaboration and discussion among the students.”

“Wanted professor to acknowledge all students.”

“More energetic and engaging.”

“More informational videos.”

“Easier access to stuff.”

“More explanations.”

“Updated version of Arc GIS (Arcmap).”

“Updated computers.”



ARC 341: Observations & Conclusions

Student Surveys

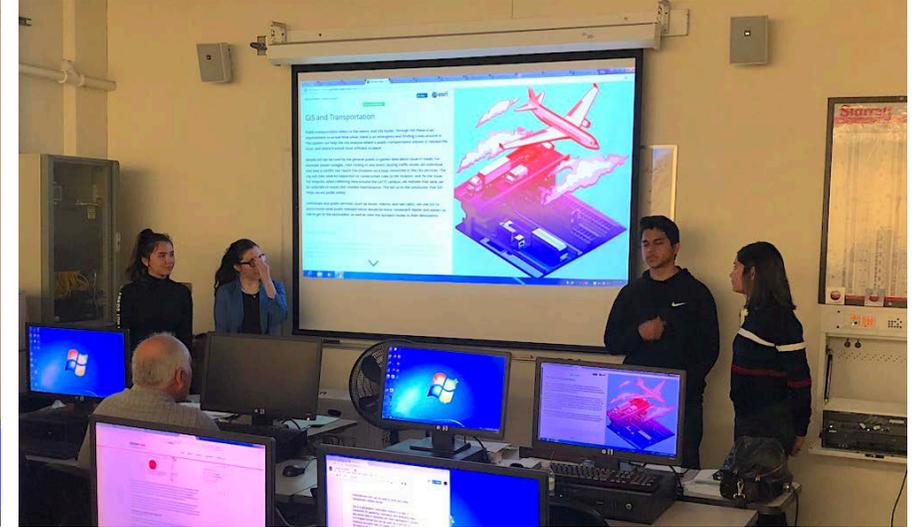
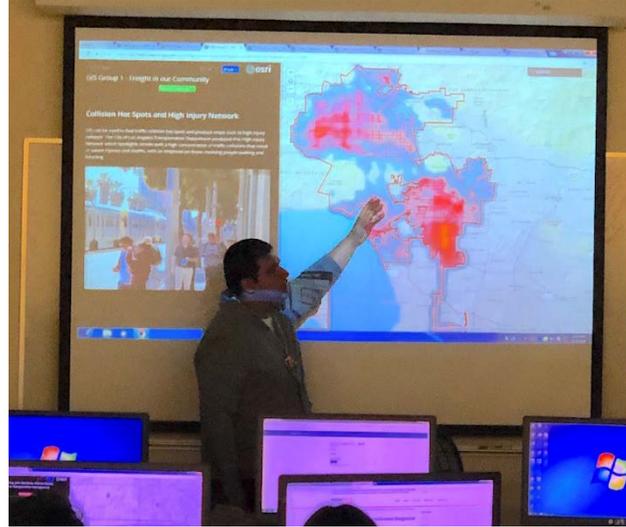
- Enjoyed technology & learning activities.
- Picked up on GIS more than “Planning”.
- Had little/no pre-knowledge of either.
- Left with little/no change to career plans.

Speaker Surveys

- Presentations were engaging and explored various kinds of careers within the transportation industry.
- Speakers has a pleasant experience presenting and making connections to the class’ curriculum.
- Instructor
 - Enjoyed teaching the class and is interested in teaching it again.
 - Believes that the curriculum and the learning materials provided by SWTWC were effective in teaching students about transportation planning career opportunities.

Planning Demo Class at LATTC

- Ginny Tsu, FHWA Office of Innovation Director, joined LATTC and SWTWC team members on May 28, 2018.
- Students presented their final presentation projects using Story Maps which focused on the transportation challenges they faced during their daily commutes to campus.
- Students were awarded certificates of completion.



Next Phase: Implementation Plan

Next Phase: Implementation Plan

- **Institutionalizing the Pilot:**
The 9 Colleges of the LACCD
- **Replicating the Success:**
Pima Community College, AZ
- **Planting More Seeds:**
Expanding K-12 Partnerships
- **Crafting Articulations:**
USC, UCLA, Cal Poly, CSULB
- **Building Institutional Bridges:**
Connecting K-12 to 2 & 4-year programs



Join Us!

<http://tiny.cc/ITS-PCB>

Thank You

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