

JOHN A. DUTTON **E-EDUCATION** INSTITUTE COLLEGE OF EARTH AND MINERAL SCIENCES



PURPOSE

This engaged scholarship experience was a part of the Penn State University online course, "Geographic Information Systems for Transportation (GIS-T): Principles, Data and Applications". This project was conducted with the support of the Pennsylvania Department of Transportation (PennDOT) and the Susquehanna Economic Development Association-Council of Governments (SEDA-COG - a regional Metropolitan Planning Organization (MPO) that covers a portion of central Pennsylvania).

The purpose of this project was to provide students with an opportunity to engage in real-world practical experience that would add rigor to their online class. Many students enrolled in Penn State online geospatial education courses are working adult professionals. As such, they find particular value in learning experiences that are practical, hands-on and relevant to their career path. The partner agencies involved, PennDOT and SEDA-COG, benefitted by having the students provide valuable analysis and recommendations that are currently being evaluated and acted upon by those agencies.

KEY POINTS

- Students applied their knowledge of GIS-T principles, data, and applications to a set of real-world GIS-T projects.
- Students utilized GIS-T to address several practical, real-world needs and aspects of inter-agency operations at state and regional levels.
- Students procured, manipulated, and analyzed various data sources using GIS-T tools.
- Students, working collaboratively from a distance: integrated hands-on GIS analysis, produced and summarized results, and compiled written project reviews and recommendations for continuing work.

BEST PRACTICE

Our planning and evaluation were guided by the following publication: Avila-Linn, C., Rice, K., & Akin, S. (2012). Designing Community-Based Courses: A guide for instructors to develop community partnerships and create engaged public scholarship courses. Cal Corps Public Service Center.

SUMMARY & CONCLUSIONS Students in an online learning environment were able to meaningfully participate in an engaged scholarship experience that advanced the rigor of the regular coursework. Advance planning on the part of the instructor in conjunction with partner agencies was critical. In addition, students needed to find and utilize effective means for asynchronous communication at a distance. Finally, students were able to reflect on their experiences and their relevance to their learning by composing a reflective "Digging Deeper" paper.

Partnering with PennDOT and SEDA-COG: Advancing Rigor Through Real-World Applications

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Three-Pronged Project Analyses:

- Local bridge conditions Non-motorized vehicle safety issues Road Condition Reporting System (RCRS)
- road closures

Collaboration Tools:

- Google documents
- Google hangouts/chats



Impact

Students reflected on the value of the experience in a "Digging Deeper" paper. They also provided partner agencies with recommendations via a formal report and story map.

APPROACH

Project Outcomes:

- SEDA-COG
- Story map production with real-world recommendations
- MPOs
- Meaningful educational experience for all students





deck condition for local bridges >20 ft. in two counties.

CONFERENCE IMPERATIVES

Reciprocity

Students benefitted from being able to apply GIS-T knowledge in an authentic setting. Partners benefitted by receiving valuable analysis and recommendations.

Rigor

This experience advanced the rigor of the course by giving students the opportunity to directly apply their learning in a realworld project.

Diversity

This project brought together adult students with a diverse array of professional backgrounds and expertise from locations all across the U.S.





• Map outputs that can be utilized by PennDOT and

• Recommendations for improved data quality/usefulness • Established working relationship between neighboring

Institution-Wide Involvement

This is an example of finding a meaningful way to bring an engaged scholarship experience to Penn State's World Campus students.