

**Night Comes to the Cumberlands...and It's Awesome: Promoting Night Sky
Conservation and Development in the Upper Cumberland**

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PROJECT FOCUS

Students from the University of Tennessee will work with staff at Pickett CCC Memorial State Park and other stakeholders to help improve and expand dark skies programming and facilities at the park site.

PROJECT DETAILS

Course Number, Name, and Instructor

Pols 410 and Pols 595 (combined graduate and undergraduate sections)

Dr. Tim Ezzell

Community Partner

Pickett CCC Memorial State Park

Need

For the past four years, researchers at the University of Tennessee have been exploring issues and opportunities related to Appalachian night sky conservation and development. At the same time, staff at Pickett State Park has been working to develop night sky programming at their site. In early 2017, Dr. Ezzell and his research team met with Park officials to share experiences and discuss possible collaborations.

During these discussions, UT researchers and the park staff identified three potential ATP research topics:

- Observing field improvements
- Community outreach and engagement
- Improved IT and data services

Pickett CCC Memorial State Park is located in Fentress and Pickett Counties and is approximately 15 minutes north of Jamestown, TN. Both counties are classified as distressed by the ARC and are served by the Upper Cumberland Development District.

Number and description of planned meetings with the community partner

The students will conduct at least three formal meetings with the local community.

These will include the following:

- An initial consultation.
- A mid-project research trip. If possible, this trip will coincide with a dark sky observing session.
- A final presentation or project findings and recommendations.

Overview of the project, including its central focus

The 2017 UT ATP class will work with the staff of Pickett CCC Memorial State Park to help improve and promote dark sky facilities and programming. Pickett State Park is currently Tennessee's most active dark sky destination. The park has been conducting dark skies activities for the past four years and was recently awarded silver level

certification by the International Dark-Sky Association (IDA). The park, which boasts Bortle class 3 skies, currently hosts a half-dozen observing events each year. A schedule of this year's events is attached.

While park staff will be the main partner during this effort, UT students will also reach out to additional stakeholders. They may include regional amateur and professional astronomers, local elected officials, park neighbors and the Upper Cumberland Development District.

During preliminary meetings, park officials and UT researchers identified three potential project areas for the UT class:

- 1) Observing field improvements: While the park enjoys excellent camping, lodging, and meeting facilities, its main observing field is less than ideal. The field, one of the few unwooded areas of the park, is located next to a road and near a local home. This creates safety risks and opportunities for light pollution. The park would like to explore design and/or policy options to mitigate these issues.
- 2) Community Outreach: Local support and cooperation are critical for the success of any dark sky site. Traces of light pollution or bad visitor experiences can ruin a site's reputation. Park officials would like to build bridges to the local community to stress the benefits of dark sky tourism. They would also like to explore possible partnership with local schools.
- 3) IT improvements: During a site visit to the state park, staff members remarked that fiber ran to the park but, to date, was largely unused. This same fiber runs directly past the park's observing field. Park officials would like to explore opportunities related to the asset. The fiber also creates an opportunity to evaluate possible power and data distribution systems for dark sky sites in general.

For this year's ATP project, the UT students will focus primarily on community outreach. Their project will include the following activities:

- Students will research outreach and educational programs in peer communities and explore educational resources available at NASA's Marshall Space Flight Center Educator Resource Center in Huntsville, AL.
- Students will reach out to educators at the York Institute, a state-run high school in nearby Jamestown, Tennessee. The York Institute was founded by WW1 Hero Alvin C. York to help educate Appalachian Youth. Next year, 2018, will mark the 100th anniversary of Sgt. York's Medal of Honor.
- Students will reach out to regional astronomy clubs and determine their interest in participating in outreach activities.
- Students will also reach out to the local business community to assess small business opportunities related to stargazing activities, including local business guides, restaurant guides, and the potential for local food trucks.

- Using their project findings, students will create an outreach and engagement plan for the state park. The plan will include engagement strategies, funding sources, recommendations, and potential business opportunities.

The timeline for the project is as follows:

- Early September – preliminary site visit to Pickett State Park and Jamestown. Meetings with local stakeholders.
- Mid-September – media relations training with UT and TVA media relations specialists.
- September 30th – Students will attend Fall Astronomy Day at the park and meet with regional amateur astronomers and community members.
- Early to mid-October – Students will research and develop draft engagement strategies. Student team members will travel in small groups to meet with local stakeholders, educators, and business leaders to evaluate ideas.
- Late October – Students will develop final engagement strategies.
- Early November – Students will develop draft engagement plan
- Mid November – Students will present draft plan to local stakeholders for review and comments.
- Late November – Students will travel to Pickett State Park to present the final engagement plan.
- Early December – Students present their findings at the annual ATP conference in Washington.

Goals/Objectives

Course Guidelines and Project Goals:

A. Students will develop leadership skills and awareness of community assets that can foster sustainability.

By working to promote and conserve a local dark sky resource, students will help sustainably leverage an important local asset. By leading and managing this effort, they will develop important leadership skills.

B. Students will be engaged as active learners and participants in community projects.

Students will be working throughout the semester with park officials and other stakeholders to better understand and protect dark sky assets. They will also gain a better appreciation for Appalachian culture and issues during this process and help hone important professional skills related to community engagement, resource conservation, and asset-based development.

C. Students will engage in active research to assist communities in creative approaches to sustainability through asset development.

Students in the class will research dark skies development and conservation and associated best practices and share these findings with the local community.

ARC Goals Addressed

The proposed project will address the following goals of the ARC Strategic Plan:

- *Goal 1: Economic Opportunities:* Invest in entrepreneurial and business development strategies that strengthen Appalachia's economy.
- *Goal 4: Natural and Cultural Assets:* Strengthen Appalachia's community and economic development potential by leveraging the Region's natural and cultural heritage assets.
- *Goal 5: Leadership and Community Capacity:* Build the capacity and skills of current and next-generation leaders and organizations to innovate, collaborate, and advance community and economic development.

Project Outcomes

- Students will develop a better understanding of Appalachian assets and the challenges facing Appalachian communities.
- Students will develop a working partnership with stakeholders in Picket and Fentress Counties.
- Students will assess local dark sky assets, research best practices, and explore alternative design and policy alternatives.
- Students will develop recommendations and guidelines to assist other rural communities.
- Students will present these findings at the ATP meeting in Washington.
- Students will prepare and display a poster at the ATP conference in Washington.
- Students will also present findings at another venue. Possible venues include a local community organization, the Appalachian Studies conference, or the Tennessee American Planning Association Annual Conference.

Project Impact

Dark sky events and activities are becoming an important source of visitation at Picket State Park. Large “star parties” at established sites, such as Cherry Springs Park in Central Pennsylvania, routinely attract hundreds of visitors. An event of that size would have a major economic impact and would be a major economic benefit to surrounding communities. By helping the park achieve this goal, the project should have a positive impact on the community.

Changes expected as a result of this project include the following:

- An increased awareness of Pickett State Park and its dark sky resources.
- An increased awareness, particularly in the local community, of the importance and economic value of this resource.
- Viable plans and ideas to improve park facilities and programming to better accommodate dark sky visitors and enthusiasts.

In addition, the project will also have regional impacts. UT researchers are currently working to develop a regional Appalachian dark sky development and conservation program. Lessons and contacts from this project will help with the creation of this strategy and will likely lead to lessons to help other communities develop their own night sky destinations.

Project Budget

Based on past ATP projects we anticipate the following project costs:

Ground Transportation (Mileage, UT Van charges, etc)	250
Airfare to Washington	1850
Lodging in Washington	1500
Per diem (Dr. Ezzell and students)	800
Miscellaneous costs (poster mounting, etc.)	100
Total Anticipated Costs	\$4500