Shasta College
Shasta-Tehama-Trinity Joint Community College District

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Forestry Program Statement of Purpose and Learning Outcomes

"The Shasta College Forest Science and Technology degree program prepares students for rewarding careers in forestry and natural resource management. Our curriculum integrates biological, ecological, social, and economic sciences, providing students with a comprehensive understanding of forest ecosystems and the complex challenges facing today's forests.

Students are trained to focus on the entire ecosystem, learning to apply ecological principles to manage forests for a wide range of values—including biodiversity, clean air and water, recreation, and wood products—while balancing various environmental, economic, and social priorities. Through coursework and field experiences, students develop the skills to address the enduring interests of community members, property owners, broader society, and the natural world, ensuring that forest management practices are sustainable, fair, and responsive to all stakeholders.

The program values both current scientific understanding and longstanding ecological knowledge from Indigenous and local communities, integrating these perspectives to foster a comprehensive approach to forest stewardship. Students gain hands-on experience in timber inventory, harvest plan layout, ecosystem restoration, wildlife surveys, and the use of modern tools and technologies such as GIS, preparing them for technician-level roles and further academic pursuits."

Board of Trustees

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There are 8 program learning outcomes for the Forest Science and Technology Degree:

1. Have the appropriate coursework and field experience to pursue forestry technician jobs or to transfer to a university in a forestry-related field.
2. Be able to properly identify common species of trees and shrubs native to the western US by their scientific and common names and to discuss general uses, site characteristics, and geographic distributions of these species.
3. Be able to apply knowledge of the silvicultural treatments used to regulate stand, composition, regenerate stands, increase growth rates, and improve timber quality.
4. Be able to apply skills in the safe use and maintenance of tools and equipment.
5. Be able to apply computer skills using forestry-related software.
6. Be able to select and implement an appropriate protocol following the scientific method to collect, statistically analyze, evaluate, and document original research data.
7. Be able to accurately navigate in the field using maps, a compass, and a global positioning system (GPS). Students will also be able to use GPS for field data collection and geographic information systems (GIS) for data mapping and display.
8. Be able to evaluate basic theory, concepts, and ecological principles as they apply to forestry, wildlife, water resources, and ecosystem restoration and will use his/her cumulative skills to think critically and to work out possible solutions to address problems facing natural resources managers today and in the future.