Energy & Sustainable Resources

Comprehensive Career Cluster Review (C3R)

Postsecondary, Workforce, CTE, and Military Readiness | Spring 2025

TN Department of Education

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Comprehensive Career Cluster Review (C3R)

The comprehensive career cluster review (C3R) is the intentional review of career and technical education (CTE) programs and the course standards within each program to ensure students have up-to-date course standards aligned to postsecondary and career needs. Each career cluster is reviewed annually with input from the state-wide advisory councils comprised of postsecondary partners, industry partners, and secondary CTE teachers. Advisory council meetings allow the stakeholders to engage in dialogue and discuss current needs, emerging trends, and necessary course revisions to course standards. Advisory council input could potentially lead to new or retired programs of study, new courses or retired courses, or revised course standards within existing courses, if necessary. The collaborative engagement ensures students receive instruction of the most up-to-date and relevant course standards, so they are prepared for postsecondary and the workforce.

Energy and Sustainable Resources

The Energy and Sustainable Resources career cluster prepares students for careers in environmental stewardship, energy innovation, and sustainable resource management. As Tennessee continues to grow economically and industrially, there is an increasing need for a workforce skilled in balancing energy demands with ecological responsibility. This program addresses statewide workforce gaps in environmental science, conservation, and energy systems, equipping students with the knowledge and technical skills to pursue careers that support both economic development and environmental sustainability across Tennessee's diverse ecosystems.

Both the Energy and Ecological Research and Conservation programs of study are designed to engage students in the scientific principles, technologies, and practices essential for managing natural resources and supporting sustainable energy solutions. Students explore topics such as alternative and nuclear energy systems, environmental policy, ecological field research, and conservation techniques. Through hands-on learning, field experiences, and project-based coursework, students are prepared to enter postsecondary programs or transition directly into careers in environmental science, energy management, wildlife conservation, or sustainability consulting—helping Tennessee meet the challenges of the future.

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Clean Energy

Clean Energy			
Year 1	Year 2	Year 3	Year 4
Foundations of Energy (C33H00)	Fundamentals of Clean Energy (C33H01)	Fundamentals of Nuclear Energy (C33H02)	Energy Practicum (C33H03) -or- **WBL** Energy Career Practicum [1] (C33H04)

Dual Enrollment Clean Energy [2]				
DE I (C33H05)	DE II (C33H06)	DE III (C33H07)	DE IV (C33H08)	DE V (C33H09)
DE VI (C33H10)	DE VII (C33H11)	DE VIII (C33H12)	DE IX (C33H13)	DE X (C33H14)

Available courses for elective credit in this cluster:

- ***JAG TN Course I*** (C25H20), ***JAG TN Course II*** (C25H21), ***JAG TN Course III*** (C25H22), and ***JAG TN Course IV*** (C25H09) are supplemental courses that can be offered in addition to courses within the programs of study but do not count toward concentrator status.
- ***Preparing for the ACT, Postsecondary, and Career*** (G25H00) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

Footnotes

[1] May be taught for 1, 2, or 3 credits.

[2] Dual Enrollment (DE) courses can be taken in Year 1, Year 2, Year 3, or Year 4.

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Description

The *Clean Energy* Program of Study (POS) prepares students for careers that support the design, installation, maintenance, and optimization of renewable and nonrenewable energy systems, including solar, wind, hydropower, biomass, and nuclear energy. This pathway is designed to equip students with a solid foundation in energy science, engineering principles, environmental sustainability, and emerging energy technologies. Students will develop technical skills in system installation, troubleshooting, data analysis, energy efficiency monitoring, and regulatory compliance. Upon completion of this program, proficient students will be able to explain the principles and applications of multiple energy sources, compare the advantages and limitations of renewable and nuclear energy systems, evaluate the economic and environmental impact of energy choices, and demonstrate industry-relevant competencies through project-based learning and technical documentation. In the fourth-year course, students will participate in a capstone Energy Practicum, which may include a Clean Energy Project, Clinical Internship, or Work-Based Learning (WBL) placement with an industry partner. The capstone course provides students with opportunities to collaborate with energy professionals in real-world environments, apply advanced system design and analysis skills, gain exposure to sustainable energy implementation, and explore postsecondary and career options in Tennessee's energy sector.

Dual credit and dual enrollment opportunities may be established with local postsecondary institutions. Dual credit and dual enrollment opportunities allow high school students to earn college credits while still in high school by partnering with local postsecondary institutions. Upon successful completion of the course, students earn both high school and college credit. In addition to taking college-level courses, students may also have the option to take exams, such as Advanced Placement (AP) exams, which can also count toward college credit if they meet the required score thresholds. Through dual enrollment, students have the opportunity to accelerate their education, reduce future college costs, and gain a head start on earning a postsecondary degree or certification. Moreover, students who participate in dual credit programs often have a smoother transition to college, as they are already familiar with the demands of higher education.

This program is aligned with SkillsUSA and Technology Student Association (TSA) Career and Technical Student Organizations (CTSOs).

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Job Outlook

According to the Bureau of Labor Statistics, United States jobs related to First-Line Supervisors of Mechanics, Installers, and Repairers are projected to grow three percent from 2022 to 2032, keeping pace with the average for all occupations[1]. Many openings in this field are expected to result from the need to replace workers who transfer to different occupations or retire from the workforce. As Tennessee continues to grow its industrial and energy infrastructure, these supervisory roles will be vital in ensuring the quality, safety, and efficiency of installation and repair work across various sectors, including renewable and nuclear energy. First-line supervisors typically gain experience through a combination of technical training, work-based learning, and on-the-job experience, making this an accessible career path for students completing clean energy or technical programs.

Another promising role within this program is Engineer. Nationally, these positions are expected to grow four percent from 2022 to 2032, reflecting steady demand across diverse engineering fields, including emerging and specialized energy applications. In Tennessee, the Tennessee Higher Education Commission has identified engineering-related occupations as high-value roles, particularly in fields tied to infrastructure development, energy systems innovation, and environmental sustainability. Engineers in these fields often hold a bachelor's or advanced degree and play a critical role in designing, testing, and refining energy technologies.

In addition, Biofuels/Biodiesel Technology and Product Development Managers, classified under Architectural and Engineering Managers, are projected to grow four percent nationally from 2022 to 2032, driven by increasing interest in clean and sustainable energy production. As Tennessee continues to invest in bioenergy and clean technology development, these leadership roles are expected to become increasingly important. Professionals in this role typically possess an engineering background and several years of industry experience, with many progressing through postsecondary education pathways in energy engineering or sustainability management. These managers oversee the design, production, and innovation of renewable fuel systems and help transition Tennessee toward a more sustainable energy economy.

[1] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, [Industrial Machinery Mechanics], at https://www.bls.gov/ooh/installation-maintenance-and-repair/industrial-machinery-mechanics-and-maintenance-workers-and-millwrights.htm (Visited February 1, 2025)

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Figure 1. Tennessee employment projections for Clean Energy-related occupations with positive job openings projected for 2022-2032 according to the Tennessee Higher Education Commission, Supply and Demand Report.

Occupation	SOC Code	Employment (2022)	Projected Employment (2032)	Projected Growth (2020-2030)	Projected Annual Job Openings (2022-2032)
First-Line Supervisors of Mechanics, Installers, and Repairers	49-1011	11,772	14,053	1.78%	1,286
Engineers, All Other	17-2199	4,385	5,111	1.54%	342
Architecture and Engineering Managers	11-9041	2,705	3,013	1.08%	209

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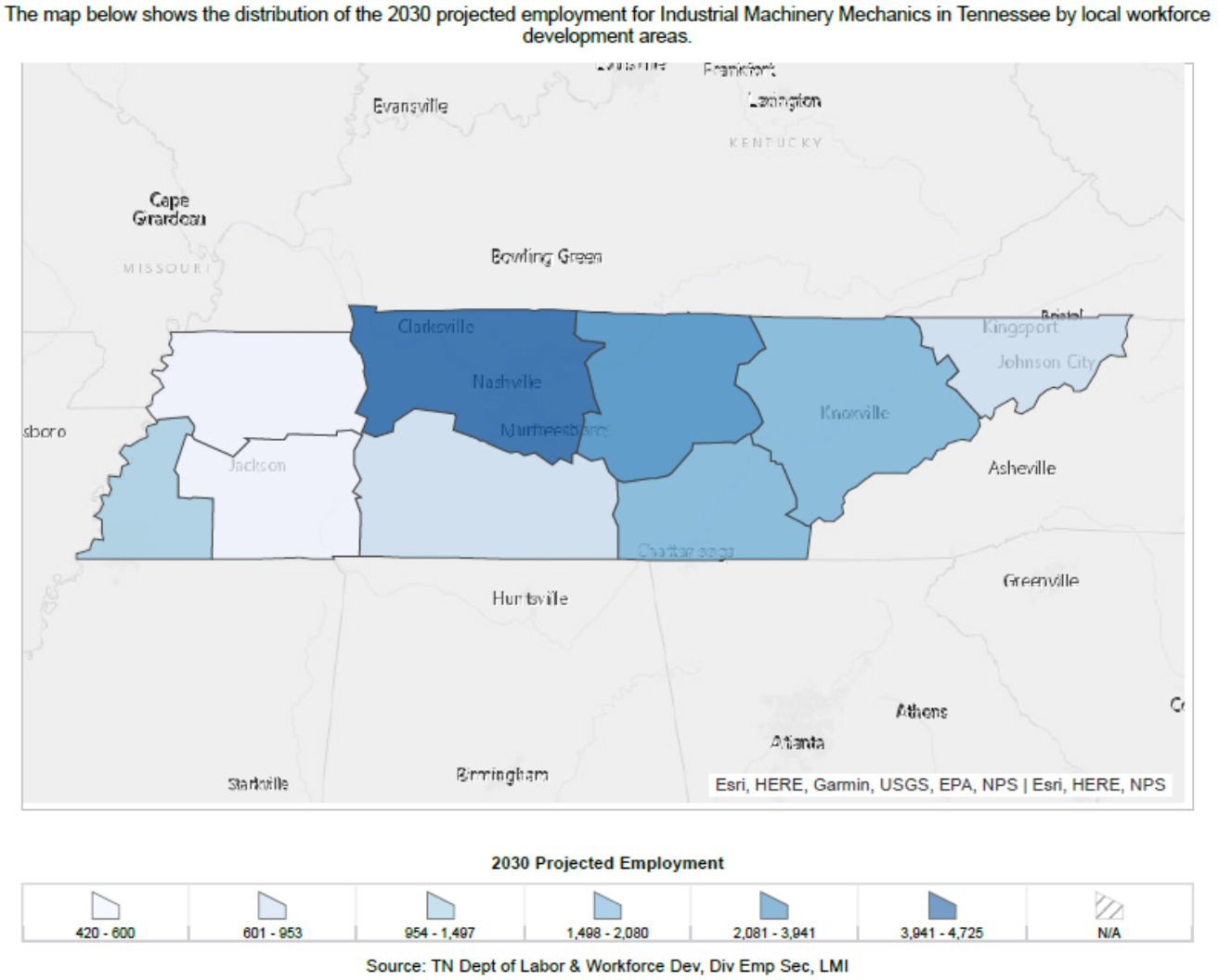
Figure 2. 2032 Projected employment for First-Line Supervisors of Mechanics, Installers, and Repairers in Tennessee[2]



[2] Jobs4Tn.gov. Industry Profile. Retrieved (February 1, 2025), from https://jobs4tnwfs.tn.gov/vosnet/Default.aspx

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Program of Study Level

The Tennessee Investment in Student Achievement (TISA) provides direct funding for student participation in career and technical education (CTE) programs to drive college and career readiness outcomes. Pursuant to T.C.A. § 49-3-105(c)(2), a direct allocation amount will be generated for each student membership in a CTE program based on the pending rule:

1. The level of the program
    - Programs shall be designated into one (1) of three (3) levels.
    - Programs will be classified into three (3) levels based on alignment to wage-earning potential indicators and additional resources required to support the program if aligned to wage-earning potential occupational pathways.
2. The student progression in coursework through the program.

CTE funding is tiered based on POS level and progression year through the program. The Governor's proposed FY26 budget still needs to go through the General Assembly's appropriations process. The state budget differentiates CTE funding with the lowest tier funded at $5,000 per CTE ADM for 2025-26 school year (based on 2024-25 data). See the CTE TISA Programs of Study Leveling Guide 2025-26 for the current POS levels. For more information on CTE TISA funding please see the CTE Quick Guide.

Clean Energy Program: Level 1

Postsecondary Pathways

In Tennessee, students aspiring to pursue careers in the growing field of clean energy have access to a wide range of postsecondary opportunities designed to build on their high school foundation. The Tennessee College of Applied Technology (TCAT) offers technical diploma and certificate programs in fields such as Electrical and Electromechanical Systems Technology, providing students with hands-on training in energy systems installation, troubleshooting, and maintenance. Community colleges like Chattanooga State Community College and Nashville State Community College offer associate degree programs in Nuclear Power Engineering Technology, Solar Energy Technology, Industrial Technology, and Industrial Electrical Maintenance, equipping students with the technical expertise needed to support Tennessee's transition to sustainable energy solutions. For students seeking advanced academic credentials, universities such as Tennessee Technological University and the University of Tennessee Knoxville offer bachelor's degrees in Environmental Engineering, Nuclear Engineering, Material Science and Engineering, and Mechanical Engineering, with pathways that emphasize renewable energy systems, energy policy, and sustainable infrastructure design. Together, these institutions create a seamless academic and career trajectory, ensuring that students in the Clean Energy POS can successfully transition from high school to industry or higher education, while making meaningful contributions to Tennessee's clean energy workforce.

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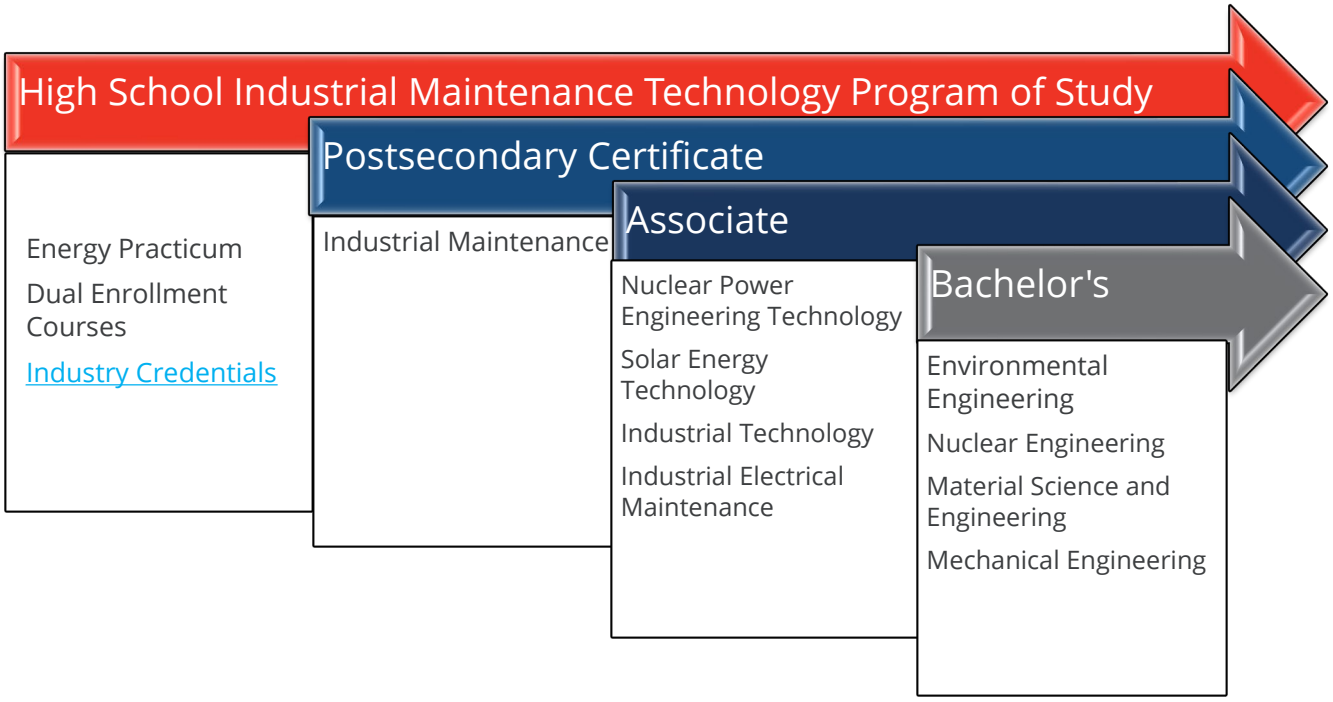
These postsecondary pathways enable students to develop the expertise, critical thinking, and analytical skills needed for successful careers in clean energy. Whether students choose to enter the workforce immediately or pursue advanced degrees, Tennessee's robust education system ensures they have the resources and training necessary to thrive in the energy field. Specific information on post-secondary programs, and their anticipated costs can be found on College for TN, a site developed to help students explore additional educational opportunities.

Figure 3. The figure below illustrates the pathways available for students graduating from a Tennessee Clean Energy program in high school.



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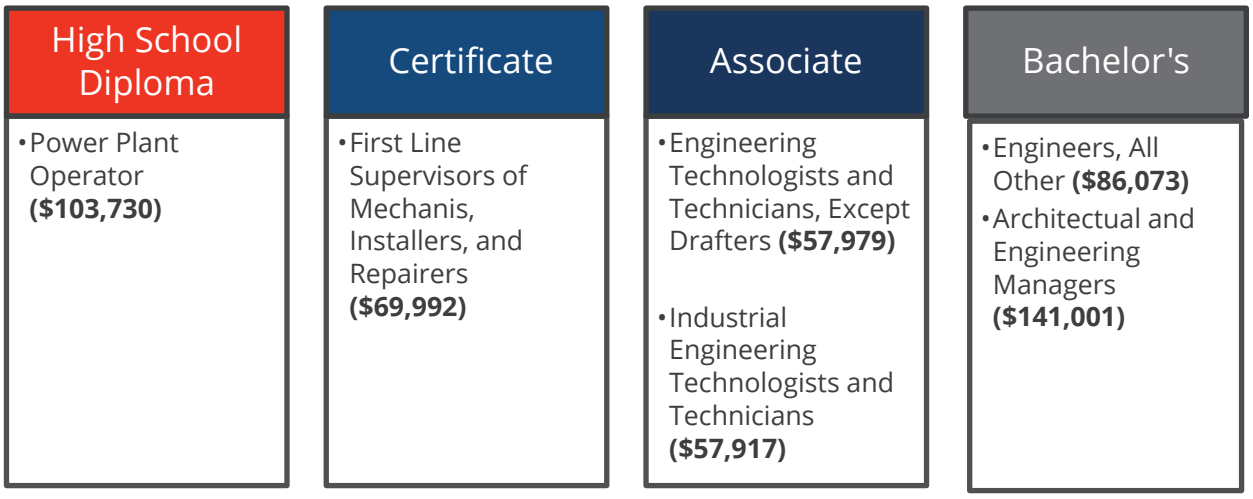
Additional opportunities are offered at multiple postsecondary institutions as indicated in the Tennessee Department of Labor and Workforce Dashboard.



Current Secondary Landscape

New POS in 2025-26, Data will be released in Fall of 2026.

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Ecological Research and Conservation

Ecological Research and Conservation			
Year 1	Year 2	Year 3	Year 4
Introduction to Ecology and Conservation (C33H15)	Conservation Strategies (C33H16)	Advanced Ecology and Conservation (C33H17)	Ecological Research and Conservation Practicum (C33H18) -or- **WBL** Ecological Research and Conservation Career Practicum [1] (C33H19)

Dual Enrollment Ecological Research and Conservation [2]				
DE I (C33H20)	DE II (C33H21)	DE III (C33H22)	DE IV (C33H23)	DE V (C33H24)
DE VI (C33H25)	DE VII (C33H26)	DE VIII (C33H27)	DE IX (C33H28)	DE X (C33H29)

Available courses for elective credit in this cluster:

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- ***Preparing for the ACT, Postsecondary, and Career*** (G25H00) is a supplemental course that can be offered in addition to courses within the programs of study but does not count toward concentrator status.

Footnotes

[1] May be taught for up to 6 credits.
[2] Dual Enrollment (DE) courses can be taken in Year 1, Year 2, Year 3, or Year 4.

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Description

Ecological Research and Conservation is a new POS under the meta cluster Cultivating Resources. This updated career cluster reflects a modernized framework from Advance Career and Technical Education (ACTE) to create a stronger connection between education and the workforce.

Ecological Research and Conservation POS is designed for students to achieve a thorough understanding of ecology and conservation. It covers essential ecological concepts, ecosystem dynamics, and the interactions between organisms and their environments. The program emphasizes applied learning and integrates conservation strategies and best practices to address real-world environmental challenges, with a focus on local ecosystems. Students explore the scientific, ethical, and social dimensions of conservation, examining the roles of individuals, communities, governments, and non-governmental organizations (NGOs). Students engage with current conservation efforts, technological innovations, ecotourism, and environmental policies. The program also nurtures critical thinking and leadership skills, preparing students for careers in environmental science and sustainability. Students will work on hands-on ecological and conservation projects, applying their knowledge to design and implement practical solutions, thereby enhancing their employability and equipping them for success in the growing green economy.

Dual credit and dual enrollment opportunities may be established with local postsecondary institutions. Dual credit and dual enrollment opportunities allow high school students to earn college credits while still in high school by partnering with local postsecondary institutions. Upon successful completion of the course, students earn both high school and college credit. In addition to taking college-level courses, students may also have the option to take exams, such as Advanced Placement (AP) exams, which can also count toward college credit if they meet the required score thresholds. Through dual enrollment, students have the opportunity to accelerate their education, reduce future college costs, and gain a head start on earning a postsecondary degree or certification. Moreover, students who participate in dual credit programs often have a smoother transition to college, as they are already familiar with the demands of higher education.

This program is aligned with the SkillsUSA CTSO.

Job Outlook

According to the Tennessee Projections and Wage Report jobs related to Ecological Research and Conservation with the highest projected growth are Environmental Engineers and Compliance Officers which are projected to grow 22-23 percent. Occupational Outlook, reports employment of environmental scientists and specialists is projected to grow seven percent from 2023 to 2033, faster than the average for all occupations. About 8,500 openings for environmental scientists and specialists are projected each year,

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on average, over the decade. Many of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire" [3].

As more people become concerned about environmental issues, the need for environmental scientists and specialists is expected to grow. These professionals analyze environmental problems and create solutions to protect community health. Businesses will rely on environmental experts to reduce their environmental impact by minimizing waste, preventing pollution, and conserving resources. Additionally, environmental scientists will assist in planning and building infrastructure like buildings and transportation systems in ways that protect natural resources and reduce land damage.

Figure 1. Tennessee occupational outlook for Ecological Research and Conservation related occupations that are projected for high-skill, high-wage, or high-demand for 2022-2032 according to the Tennessee Higher Education Commission, Supply and Demand Report[4].

Occupation	SOC Code	Employment (2022)	Projected Employment (2032)	Projected Growth (2022-2032)	Projected Annual Job Openings (2022-2032)
General Operations Managers	11-1021	66,201	78,396	18%	6903
Compliance Officers	13-1041	8,071	9,843	22%	856
Environmental Engineers	17-2081	1,202	1,473	23%	111

[3] Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Environmental Scientists and Specialists, at https://www.bls.gov/ooh/life-physical-and-social-science/environmental-scientists-and-specialists.htm (visited *March 14, 2025*).

[4] Tennessee Department of Economic and Community Development, Tennessee Department of Education, Tennessee Department of Labor, and Workforce Development, & Tennessee Higher Education Administration, *Improving the Pipeline for Tennessee's Workforce: Academic Supply for Occupational Demand Report 2025*, (2025) 2025 Supply and Demand Report.pdf

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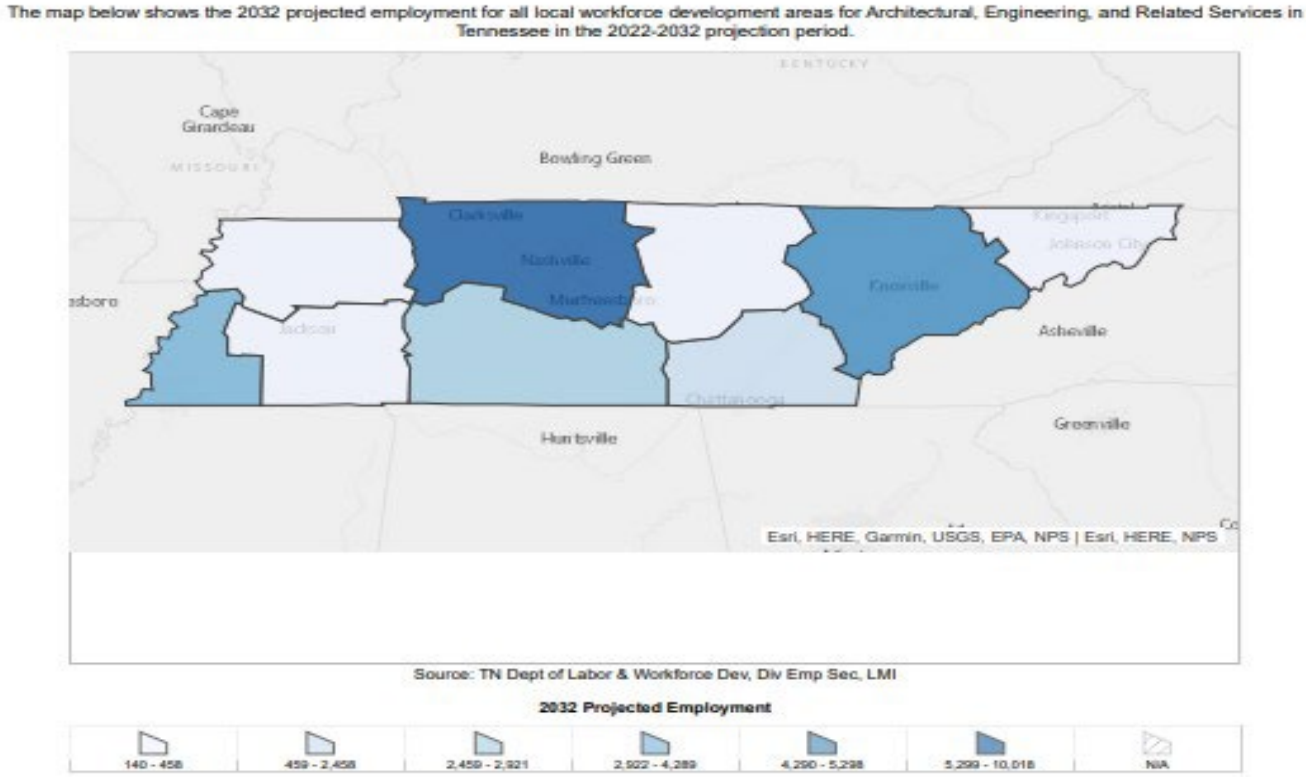
Figure 2. Projected employment for Architectural, Engineering and Related Services that include occupations such as Environmental Engineers, Surveyors, Surveying and Mapping Technicians, and Water and Wastewater Engineers in Tennessee.



The top three local workforce development areas in Tennessee with the highest 2032 projected employment for Architectural, Engineering, and Related Services were Northern Middle TN (10,018), East TN (5,298), and Greater Memphis (4,289)[5].

[5] Jobs4tn. Labor Market Data. Industry Data. Area Employment Area Data Distribution. (2024), JOBS4TN.GOV

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Program of Study Level

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2. The student progression in coursework through the program

*CTE funding is tiered based on POS level and progression year through the program. The Governor's proposed FY26 budget still needs to go through the General Assembly's appropriations process. The state budget differentiates CTE funding with the lowest tier funded at $5,000 per CTE ADM for 2025-26 school year (based on 2024-25 data). See the CTE TISA Programs of Study Leveling Guide 2025-26 for the current POS levels. For more information on CTE TISA funding please see the CTE Quick Guide.

Ecological Research and Conservation: Level 3

Post Secondary Opportunities

Upon completion of this POS, students will be prepared to further their education in the areas within the Ecological Research and Conservation program. Some occupations require a high school diploma or a postsecondary certificate or degree, most occupations in ecology and conservation require a bachelor's degree. These postsecondary pathways enable students to develop the expertise, critical thinking, and analytical skills needed for successful careers. Whether students choose to enter the workforce immediately or pursue advanced degrees, Tennessee's robust education system ensures they have the resources and training necessary to thrive in the Ecology and Conservation field. Specific information on post-secondary programs, and their anticipated costs can be found on College for TN, a site developed to help students explore additional educational opportunities.

TCAT Hohenwald Forestry and Ag Technology program aims to equip students with the necessary knowledge and skills for entry-level positions in the forestry and agricultural industries. Through technical instruction and skill development, students will become proficient in various areas such as forestry work, agricultural technology, and equipment operation. The curriculum covers a wide range of topics including forest product methods, timber harvesting, forest conservation, agriculture, soil science, basic electricity, machinery maintenance and repair, welding, sawmill operation, and heavy equipment operation. Safety

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procedures and equipment specifications are also emphasized throughout the training. Overall, the program prepares students for careers as forestry workers, agricultural technicians, or equipment operators in these industries.

Pellissippi State Community College offers an associate's degree in applied science in Water Quality Technology as well as an associate's degree in Geosciences. These pathways study Geography, Geology, and Environmental Science. The Water Quality Technology program is designed to train students for careers in water and wastewater operations. This program provides a strong background in math, chemistry, and aquatic sciences.

Roane State Community College offers an Environmental Health Technology program that prepares students for occupations in the local area, in private consulting, industrial facilities, waste treatment and disposal facilities, and in government agencies.

Volunteer State Community College offers a Geosciences and an Environmental Science transfer pathway program that allows students to continue their education at a university leading to the bachelor's degree in Geology or Environmental Science.

- Geologists study physical aspects of the Earth, including its composition, structure, and the processes that modify Earth through time.
- Environmental Science pathway investigates major environmental concerns including social and economic consequences of energy production, resource consumption, over-population, pollution, sustainability, and environmental stewardship.

University of the South, Sewanee offers three majors Forestry, Natural Resources and Environmental Science.

- Forestry students study the composition, structure, processes, and socioeconomic issues of forested and woodland areas that facilitate communities to thrive and learn how forests influence local to global scale processes.
- Natural Resource students combine coursework in Forestry & Geology with the courses in anthropology, archaeology, and environmental ethics to give a broad career experience for occupations that require a compassion of the vital and practical value of the Earth's limited resources.
- Environmental Science major that integrates natural and social sciences with the humanities and fine arts, providing students with an ample educational experience. The program is designed to offer both in-depth knowledge of specific environmental fields and a broad understanding of environmental issues.

University of Tennessee, Knoxville (UT) has many options available to students to major in Ecology and Conservation.

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- Biological Sciences with a minor in Ecology and Evolutionary Biology, the science majors provide innovative research for students by partnering with local industry. UT co-manages Oak Ridge National Laboratory—thus providing additional resources to one of the nation's largest and most diverse science and energy laboratory.
- Public Affairs with concentration in Environmental Policy at the Baker School of Public Policy and Public Affairs.
- Biosystems Engineering with concentrations in Ecological Systems, Integrated Systems and Pre-Professional, Environmental Engineering. This major is offered by two colleges at UT which includes a broad slate of fundamental engineering skills, including soil and water conservation, machine design, sensor development, and bioprocessing. Minors in this area can be earned and completed to help the student extend additional strengths in a specialized technical area.
- Environmental and Soil Science with concentrations in Conservation of Agriculture and Environmental Sustainability, Environmental Science and Soil Science
- Forestry major has four concentrations in Forest Resources Management, Restoration and Conservation Science, Urban Forestry, and Wildland Recreation.
    - Forest resources management concentration provides an education related to managing the broad spectrum of natural resources.
    - Restoration and Conservation Science concentration prepares students for a career in maintaining and restoring the health of our natural landscapes.
    - Urban Forestry concentration is an interdisciplinary program emphasizing forestry, arboriculture, horticulture, urban forest management, and urban wildlife.
    - Wildland Recreation is an interdisciplinary program that prepares students to work in natural resource-based recreation settings. Students can obtain specializations in complementary areas such as education, cultural and natural history interpretation, communications and public relations, landscape design and ornamental horticulture, or business and public administration**.**
- Wildlife and Fisheries offers two concentrations wildlife and fisheries management and wildlife health.
    - Wildlife and fisheries concentration study the science and art of maintaining populations of wild animals at levels consistent with the best interests of both wild species and people. Management goals may be aesthetic, economic, or ecological.
    - Wildlife health concentration provides training for biologists interested in ensuring the health of wildlife and fisheries populations, conserving wild species, and protecting domestic animals and humans from diseases spread by wildlife.

Tennessee Technological University (TTU) has multiple opportunities for student to pursue degrees in this program:

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- Environmental Agriscience equips students with diverse skills in traditional sciences and agriculture. The curriculum emphasizes soil science, water quality, and environmental principles, with courses in geology, biology, hydrology, and GIS,
- Environmental Biology provides students with the ability to discover life's intricacies from molecules to ecosystems. Our Environmental Biology concentration merges disciplines like ecology, physics, chemistry, and geology to tackle environmental challenges. Study focuses on plants, animals, microbes, and other forms of life, as well as environmental factors such as air, water, and soil that affect these organisms' (and our own) ability to survive.
- Zoology, a degree in biology provides students with general courses needed to understand the basic concepts and principles on which these disciplines are based, as well as advanced coursework in a wide variety of these disciplines. With a strong base in general biology principles, a concentration in Zoology provides an understanding of entomology, physiology, and more, as well as opportunities to study specializations such as animal behavior, ornithology, ichthyology, mammalogy, and more.
- Environmental Chemistry concentration is for students interested in the study of chemical and biochemical phenomena in natural places. It is an interdisciplinary field that includes atmospheric, aquatic and soil chemistry. Opportunities with this background include entry level positions in government, industry, as well as graduate study.
- Civil Engineering program with a concentration in Environmental Engineering is to instill in our graduates the knowledge, skills, attitude, and ethical values necessary to be successful practitioners who can impart positive social impacts at the state, regional, national, and international levels. Environmental engineers apply engineering principles and sustainable best management practices (BMPs) for the enhancement and protection of human health and the environment, and work in areas such as wastewater treatment, collection, and distribution systems; landfills; assessment of the fate and transport of contaminants in the environment; and development of low impact strategies to treat runoff.
- Environmental and Sustainable Studies provides insight on environmental issues which become more complex due to population growth, pollution and limited natural resources. This academic program effectively prepares students for careers to sustain Earth's resources for future generations. There are multiple concentrations in the science within this degree program, Biology, Chemistry, Natural Resources, Environmental Sustainability and Environmental Technology Concentrations. The Environmental Leadership, Communication & Policy concentration allows students to study how organizations address environmental problems and how complex concepts regarding those issues are communicated. In this concentration, students can choose a POS in communications and media, social science and policy, or leadership and environmental management. In the Environmental Technology concentration equips students with GIS tools for informed decision-making, environmental modeling, and water treatment.

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The University of Memphis has a major in Earth Sciences with several concentrations that are related to Ecology and Conservation. prepare students for critical roles in protecting, conserving, restoring, evaluating, and managing the environment. Environmental scientists study the complex interactions between the atmosphere, lithosphere, biosphere, and hydrosphere, applying scientific principles to address environmental challenges.

Middle Tennessee State offers Geosciences with a few concentrations in Geology that is related to this pathway.

- Geology concentration prepares students to excel in Geology-related careers in public service, the private sector, and education, and for continued studies in graduate school. Job demand for geologists is high with the prevalence of long-term issues such as oil and gas exploration, critical minerals, climate change, water quality, dwindling natural resources, renewable energy, and natural hazard mitigation.
- Physical Geography concentration prepares students to integrate aspects of the Earth's physical and human environments, making them attractive for a variety of jobs. The training in computer-based cartography, remote sensing, and the use of geographic information systems that geospatial analysis graduates receive is especially valuable as this tech is a major growth area in all areas of professional geosciences.

East Tennessee State University provides a degree in Biology with a concentration in Natural Resource Ecology. This program is intended for students who plan to enter such occupations as biology, biochemistry, science education, medicine, veterinary medicine, agriculture, conservation, and industry. Courses may be applicable for students in other fields of study who desire to acquaint themselves with the phenomena of living organisms.

Lincoln Memorial University offers a degree in Conservation Biology. This program will equip students in a path that focuses on conservation, restoration, and research as it focuses in on modern landscape-scale ecosystem management and research concepts while providing skills in genetics, soils, GIS, and environmental policy.

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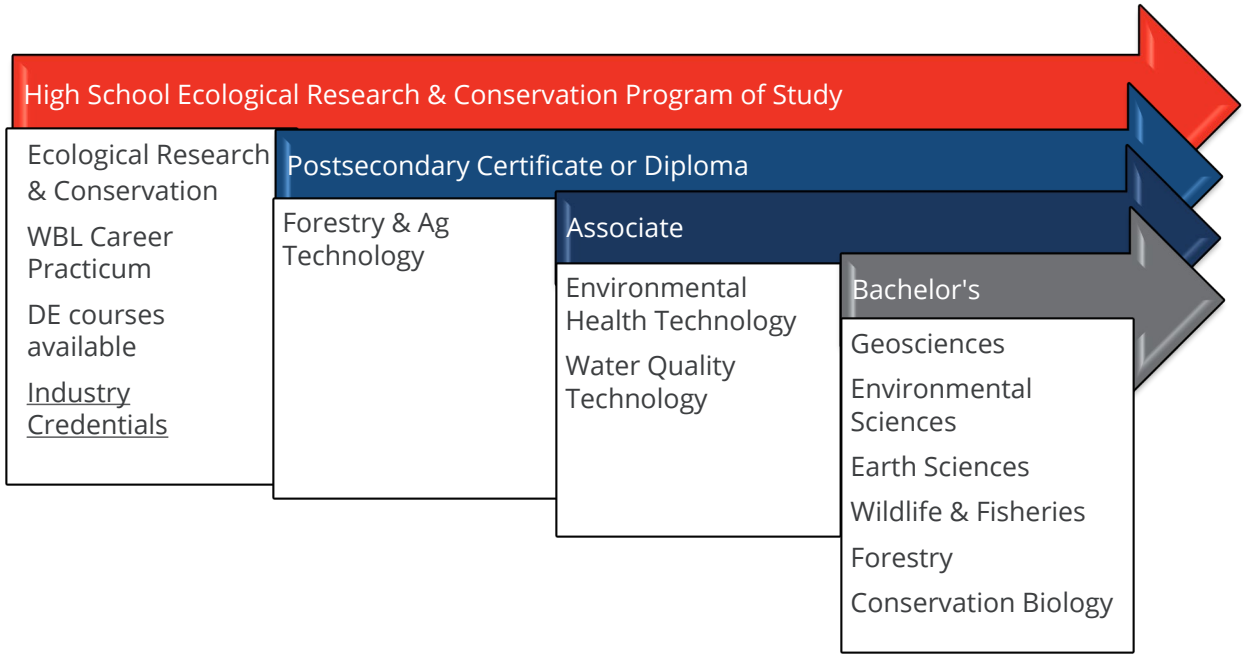
Figure 3 illustrates which opportunities are available for a student graduating from a Tennessee Ecological Research and Conservation program in high school. The figure outlines some of the related postsecondary certificates and degrees, career opportunities, and salaries available to students in the pathway. Students may acquire hours transferable to a postsecondary institution for the completion of certificates and degrees.

Figure 3. Postsecondary Opportunities



Additional opportunities are offered at multiple postsecondary institutions as indicated in the [Tennessee Department of Labor and Workforce Dashboard](#).

High School Diploma	Certificate	Associate	Bachelor's
• Surveying & MappingTechnician **($45,425)** • Fish Hatchery Technician **($81,275)** • Logging Crew Foreman **($58,301)**	• Forestry Technician **($48,985)** • Water Plant Operator **($46,660)** • Precision Agronomist **($41,760)**	• Water Quality Analyst **($48,985)** • Geological Technician **($50,297)** • Environmental Health Officer **(48.985)**	• Environmental Restoration Planners **($78,000)** • Environmental Protection Specialist **($75,670)** • Agriculture Engineer **($83,260)**

Current Secondary Landscape

New POS in 2025-26, Data will be released in Fall of 2026

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