Letter of Notification (LON)

Public Comment Period – 15 Days

Institution: Austin Peay State University

Proposed Academic Program: Environmental Science, Master of Science

Proposed Implementation Date: Fall 2025

CIP Code and Title: 03.0104 (Environmental Science)

CIP Code Definition: A program that focuses on the application of biological, chemical, and physical principles to the study of the physical environment and the solution of environmental problems, including subjects such as abating or controlling environmental pollution and degradation; the interaction between human society and the natural environment; and natural resources management, includes instruction in biology, chemistry, physics, geosciences, climatology, statistics, and mathematical modeling.

LON Submission Date: July 2, 2024

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Public Comment Period: July 2 – July 18, 2024

Austin Peay State University

Letter of Notification

Master of Science
Environmental Sciences
June 27, 2024

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Section I: Overview

Program Information

Provide the institution name, proposed academic program and concentration(s), degree designation, proposed CIP code, CIP code title, and CIP code definition.

Narrative:

Institution Name
Austin Peay State University

Title of the Proposed Program
Environmental Science

Degree Designation
Master of Science

CIP Code
CIP: 03.0104 (Environmental Science)

CIP Code Definition
A program that focuses on the application of biological, chemical, and physical principles to the study of the physical environment and the solution of environmental problems, including subjects such as abating or controlling environmental pollution and degradation; the interaction between human society and the natural environment; and natural resources management, includes instruction in biology, chemistry, physics, geosciences, climatology, statistics, and mathematical modeling.

Academic program liaison name and contact information

The academic program liaison will serve as the information resource for the proposed academic program at the institution.

Narrative:

Dr. Tucker Brown, Vice Provost and Associate Vice President for Academic Affairs
brownt@apsu.edu, 931-221-7725

Proposed implementation date

The proposed implementation date should provide a realistic estimate of when the program will have gone through all of the approval steps, including Commission approval, and be ready to enroll students.

Narrative:

Fall 2025

Section II: Background

Background concerning academic program development

Provide a short narrative describing the circumstances that sparked the initiation and development of the proposed academic program.

Narrative:

Austin Peay State University's (APSU) 2022-2027 Strategic Plan **(Attachment A)** intends to grow graduate enrollment to 1,500 students, and continues to expand its relevant offerings in support of the plan. APSU seeks to add a Master of Science (MS) in Environmental Science to its graduate offerings. The addition of an MS in Environmental Science addresses APSU's mission to support degree programs that align with the Tennessee Higher Education Commission's Master Plan. A feasibility study performed by Hanover Research suggests a solid demand for the proposed MS in Environmental Science within Tennessee and the surrounding region. An economic study performed through Lightcast shows a positive trend in employment opportunities over the next decade. The college and faculty support, embedded curriculum, and facilities are already in place to support the development of this program. After the feasibility study, due to the interdisciplinary nature of this program, initial discussions started with the College of STEM Dean, Associate Deans, and Chairs during the 2021-22 academic year as noted in the highlighted section of meeting minutes from November 4, 2021 **(Attachment B)**. As noted in these minutes, representatives from the Departments of Agriculture, Biology, Chemistry, Earth and Environmental Sciences, and Physics, Engineering and Astronomy participated in further discussions of the overall program. After this group determined the Department of Earth and Environmental Sciences would house the program, curriculum discussions continued at both the department and college levels during Spring 2022 and the 2022-23 academic year. An example is shown in department minutes from August 18, 2022 **(Attachment C - see highlighted sections on pages 3, 4, and 7).** More recent department minutes, highlighted sections in October 30 **(Attachment C)** and December 7, 2023 **(Attachment D)** indicate updates in the process of writing this Letter of Notification. As demonstrated through all of these meeting note examples, the college and department are supportive of creating an MS in Environmental Science, with a targeted launch in the fall of 2025.

Evidence:

- CoSTEM Meeting Minutes 11-4-2021
- Minutes for 10-30-2023 Meeting
- Minutes for 12-07-2023 Meeting
- Minutes for 8-18-2022 meeting
- Strategic-Plan

Purpose and nature of academic program

Provide a general overview of the program including a description of the academic program, total credit hours, target audience, purpose, program outcomes, delivery method (on-ground, online, hybrid, etc.), and any other pertinent information.

Narrative:

APSU's College of Science, Technology, Engineering and Mathematics (STEM) proposes a Master of Science in Environmental Science (MS in Environmental Science). The proposed academic program features a common core of courses and elective hours to help support student career goals. The program focuses on data analysis, critical thinking, and leadership skills while opening opportunities for career advancement and preparing graduates for a variety of employment fields. The proposed MS in Environmental Science program supports APSU's Vison and Mission **(Attachment F)** , by fostering a flexible, quality learning environment that will, "create a collaborative, integrative learning community, instilling in students' habits of critical inquiry as they gain knowledge, skills, and values for life and work in a global society" and is "raising the educational attainment of the citizenry, developing programs and services that address regional needs."

The goal and mission of the college **(Attachment G)** currently supports quality graduate education in the fields of biology and computer science and quantitative methods. The proposed Masters of Environmental Sciences will complement these programs through coursework promoting a core understanding of current environmental issues, analysis and communication of scientific data, and leadership. The proposed graduate program will allow students to complete the degree in both on-ground and online modalities. While a thesis will not be required for this program, research methodologies will be emphasized throughout the core courses.

The interdisciplinary nature of the program can potentially lead to collaborations with other graduate programs at APSU. Such agreements would allow for the sharing of resources such as permitting students to complete outside coursework, shared committee responsibilities, and interdisciplinary research opportunities. Students completing the proposed MS in Environmental Science program will be well versed in: environmental assessment, sustainability, data analysis, leadership, and communicating scientific information. The proposed curriculum emphasizes both the science and leadership skills needed for graduates to position themselves in advanced roles within various environmental career fields. Additionally, the proposed master's degree provides advanced educational opportunities for undergraduate majors in agriculture, chemistry, and earth and environmental sciences who currently do not have graduate program options at APSU.

The College of STEM proposes this interdisciplinary, 30-hour degree plan that draws upon the academic strengths of faculty and established resources within the Department of Agriculture, Department of Chemistry, and Department of Earth and Environmental Sciences. Six courses (eighteen hours) will compose a core curriculum required of all students. In addition to the core requirements, students will have the option to complete the remaining twelve hours between two organized tracks in science and leadership. The elective courses are designed to support the student's educational goals and career aspirations.

List of courses **required** for the program:

CHEM 5150	Data Analysis	3
CHEM 5860	Scientific Communications	3
GEOG 5000	Environmental Management	3
GEOG 5040	Advanced Sustainable Development	3
LDSP 5100	Leadership for the Scientist-Manager	3
GEOG/GEOL 5990	Research Methods/Seminar	3
Total Hours		**18**

List of **elective** courses for the science and leadership tracks:

Science Track

Complete 12 hours from:		
AGRI 5140	Graduate Economic Entomology	2
AGRI 5220/5221	Graduate Soil & Water Conservation	3
BIOL 5540/5541	Plant Ecology	4
BIOL 5740/5741	Conservation Biology	4
CHEM 5140	Chemical and Laboratory Safety (online)	3
CSCI 5015	Data Science in Python	3
GEOG 5010	Environmental Assessment	3
SUST 5060	Sustainable Energy Systems	3

Leadership Track

Complete 12 hours from:		
COMM 5110	Leadership & Communication	3
COMM 5210	e-Communication Strategies	3
LDSP 5105	Project Planning & Scheduling	3
LSDP 5310	Community Leadership	3
LDSP 5400	Grant Development	3
LDSP 5410	Grant Administration	3
MGT 5010	Business Foundations	3

Course descriptions **(Attachment H)** for all classes provided here**.**

APSU has traditional sixteen-week fall and spring semesters as well as a summer semester. Within these traditional semesters are three, five, or ten week courses allowing for the program to be completed in a short time frame. The multiple semester and term options allow students to earn their degrees in a shorter period of time than within a traditional fall/spring calendar, making the program very attractive to potential students.

The College of STEM undergraduate programs **(Attachment I)** currently serve approximately 1800 students. The Departments of Agriculture, Chemistry, and Earth and Environmental

Sciences co-teach an undergraduate level course, collaborate on interdisciplinary minors, and include various cross-discipline course options within their degrees. Examples include:

1. Water Resources Management Minor
2. Environmental Studies Minor
3. The Departments of Chemistry and Earth and Environmental Sciences team teach a course, GEOL 3680, Principles of Geochemistry

The proposed MS in Environmental Science program will provide an opportunity for education at the graduate level, bolstering the opportunities for graduates of undergraduate programs in the College of STEM and those from the surrounding community with similar degrees of other institutions. Additionally, instituting a graduate program enhances the undergraduate curriculum and creates additional exposure to research for undergraduates.

The proposed curriculum is unique from programs offered at Murray State University (MSU), the University of Tennessee at Chattanooga (UTC) and Tennessee State University (TSU) by emphasizing science and leadership consistent with the needs of the current workforce looking for career advancement and opportunities to become leaders in environmental industries consistent with the occupations in the economic modeling study **(Attachment J)**.

The proposed program will draw applicants from the following populations:

- **Current undergraduate students or recent graduates who wish to continue their education.** These individuals seek to obtain an MS in Environmental Science to improve their skills and to enhance their marketability. The proposed MS in Environmental Science program will also provide opportunities for students within Agriculture, Chemistry, and Earth and Environmental Sciences a pathway to graduate education that currently is unavailable in the region.
- **Current employees in environmental science occupations who wish to advance their career.** A graduate degree is becoming commonplace for those desiring advancement in their current careers or as avenues for new career opportunities. The proposed curriculum would provide students with the advanced education necessary to obtain leadership roles within their occupations.
- **Military personnel who desire education beyond the bachelor's degree.** Austin Peay State University is unique in its proximity to and relationship with the Fort Campbell military base. Fort Campbell, Kentucky, has the third largest military population within the army and ranks the seventh largest within the department of defense with approximately 29,000 active duty military and 112,629 retirees. The proposed MS in Environmental Science program provides a relevant academic program to military personnel that fosters career advancement within various federal occupations open to active duty and retirees with competitive service and career transitional status. This includes but is not limited to positions such as environmental protection specialist, physical scientist, or interdisciplinary environmental scientist with federal organizations such as the Department of the Interior, United States Army Corps of Engineers, and the Environmental Protection Agency. The United States Army provides tuition assistance and supports graduate education for those seeking promotion. Therefore, active duty military and retirees are exceptional candidates for the proposed program and are an underserved pool of potential students residing in close proximity to the campus. In recent years nearly 40% of the students within the

Department of Earth and Environmental Sciences have military affiliation.

Diversity, Equity, and Inclusion

Diversity is addressed in the institution's policies and strategic plan. APSU and the proposed MS Environmental Science program value diversity as an essential component of the institution's success. Therefore, the proposed program will align all curricular and administrative activity with APSU policies and strategic plan objectives associated with diversity (excerpt from APSU Policy 1:006 Diversity **(Attachment K)**:

"It is the policy of Austin Peay State University to model and promote diversity at all levels and in all sectors of the University. By modeling and promoting diversity and inclusion, Austin Peay State University will foster environments of equity and inclusive excellence."

Diversity can be broadly defined as differences. When applied within the context of education and the educational community, diversity represents the inclusion and support of groups of people with a variety of human characteristics that go beyond the legally protected classes of race, sex, age, religion, national origin, disability status, veteran status – to include, but not be limited to, other categories such as socioeconomic status, sexual orientation, first generation college status, urban or rural upbringing – and other personal characteristics that shape an individual's identity and life experience in a substantive way. As noted in the University's Strategic Plan 2022- 2027. The program can be advertised to a variety of professional organizations to ensure a diverse student population. Examples include the Association for Environmental Studies and Sciences, National Association of Environmental Professionals, Association for Women Geoscientists, Public Employees for Environmental Responsibility, Black Women in Science and Engineering, Society for the Advancement of Chicanos and Native Americans in Science, National Consortium for Graduate Degrees for Minorities in Engineering & Science, Inc., and the National Organization of Gay and Lesbian Scientists and Technical Professionals.

Evidence:

- APSU_Mission_Vision
- CoSTEM_Mission_Vision
- Course Descriptions
- Diversity-statement
- Enrollment-by-College
- Lightcast-Reports
- Strategic-Plan

Alignment with state master plan and institutional mission

Explain how the proposed academic program specifically aligns with both the THEC State Master Plan and institutional mission statement or profile.

Narrative:

State Master Plan

The State Master Plan **(Attachment L)** for Tennessee Postsecondary Education 2015-2025 notes that "although this Plan places certificate training and undergraduate education at the center of the state's college completion policy agenda for the decade 2015-2025, the state continues to acknowledge the critical need for academic programs of distinction at the graduate and professional level to fully address Tennessee's economic development, workforce, and research need". APSU's proposed MS in Environmental Science closely aligns with the State's Master Plan by offering a graduate program that as demonstrated in the need section below, is a state workforce need. Furthermore, the proposed program has been designed for students to easily earn stackable credentials, another goal of the state master plan, with options to earn either the Graduate Certificate in Sustainability or the Graduate Certificate in Grant Writing dependent on the track and selected elective courses.

APSU Mission and Strategic Plan

APSU's mission and strategic plan **(Attachment A)** align with the proposed MS in Environmental Science in a number of ways:

- The mission includes "to make a positive impact regionally and globally". As demonstrated in the need section below, there is both a state and national need for environmental scientists, and graduates of this program would have an impact on these needs. Similarly, Goal 2 of Pillar 1 of the strategic plan states "APSU will evolve academic offerings to strengthen our emphasis on delivering quality programs that address community and regional needs."
- Goal 2 of Pillar 2 states that "APSU will ensure that all students are equipped to pursue their educational and career goals in an empowering environment." The university does not offer any similar degrees, and this would be the only MS Environmental Science in the state that can be completed online, creating a new opportunity for students with environmental career goals to be able to pursue those via a master's degree.
- Goal 2 of Pillar 3 states that "APSU will support a campus culture where all employees can grow and flourish." This includes Objective 3, "Operationalize collaboration and teamwork across units, divisions, and colleges to foster a problem-solving culture.", which with the diversity of courses in the proposed program across the College of STEM and APSU will require this continued collaboration and problem-solving to maintain and grow an MS in Environmental Science.
- Goal 2 of Pillar 4 states that "APSU will increase community involvement by offering robust and unique programming." The addition of the MS in Environmental Science will provide opportunities for new connections within the community.

Servicing a Local, State, and National Professional Need

APSU employs an online delivery platform and maintains the capacity to deliver services to people working within the state and region or beyond. The faculty involved with the proposed program are well versed in online education and all three departments offer online courses. The proposed program addresses the need for increased education that improves professionalism and service in the state. APSU contracted with Hanover Research

to perform a feasibility study for the proposed MS in Environmental Science. Hanover Research **(Attachment M)** data reveal that there is:

"…high student demand within the state. Within Tennessee, student demand trends for environmental science master's programs are encouraging. State degree completions are growing much faster than average, and national completions are average. At all geographical levels, projected growth rates for related careers meet or exceed the average. An aging and retiring workforce and increasing environmental concerns will drive growth in the public and private sectors. Master's graduates are more appealing to employers because of their specialized focus and expertise. Increased opportunities and marketability are likely driving students to pursue more advanced studies. Programs frequently have both in person and online formats to allow students to study while working if desired."

Integrated Postsecondary Education Data System (IPEDS) data show state graduate degree completions and program degree completions (2-digit CIP code) across the nation are showing good stability, and promising trends in Tennessee and across the country. Figure 1 shows degree completion rates for all master's degrees in Tennessee and Table 1 shows degree completions for Environmental Sciences CIP code master's degrees in Tennessee, the southeast, and nation.

Figure 1. All Master's Degree Completions at public, 4-year institutions in Tennessee

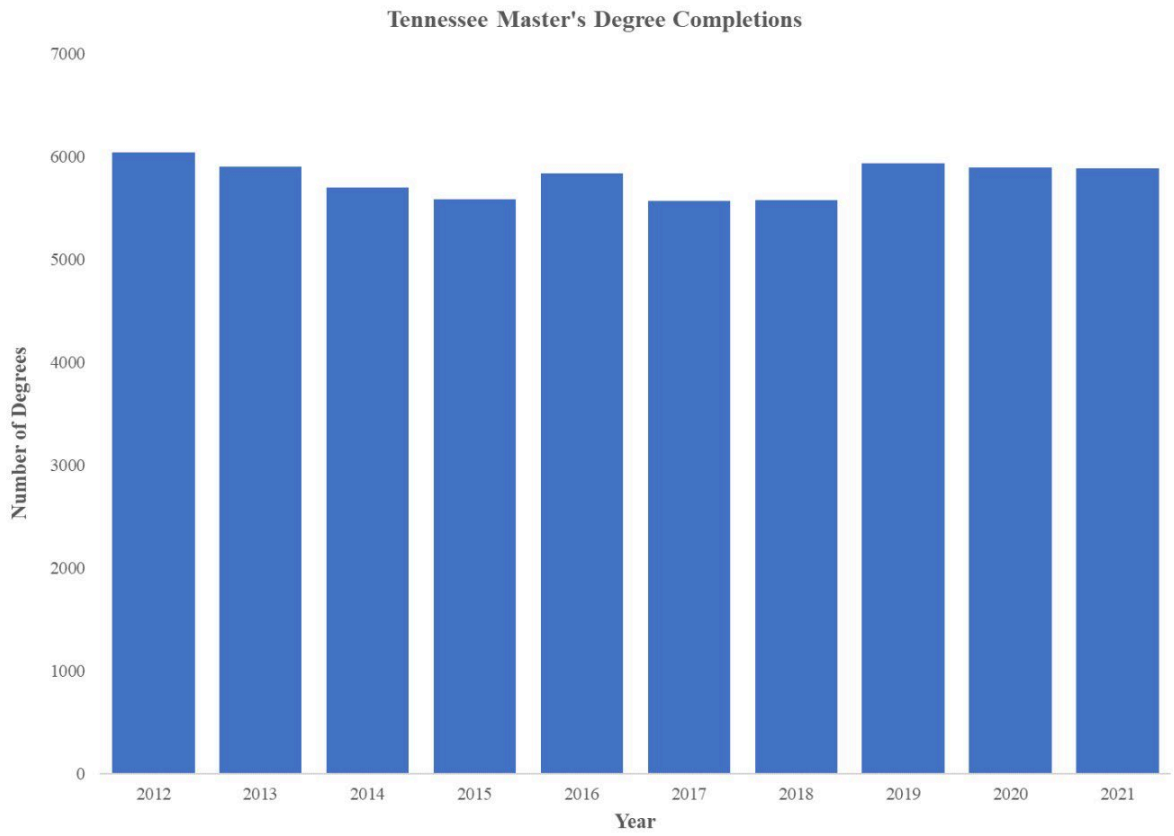


Table 1. Master's Degree Completions by Environmental Sciences CIP Code

Year	Tennessee	Southeast	National
2021	27	730	2,981
2020	27	666	2,932
2019	23	623	2,873
2018	15	556	2,731
Total	92	2,575	11,517
Four Year Average	18	515	2,303

Data from the United States Department of Labor, Bureau of Labor Statistics shows the largest employer of environmental scientists (47%) is local, state, and federal governments with 32% employed with consulting and engineering services. Given the proximity to Fort Campbell, the Tennessee Department of Environment and Conservation, the Nashville District of the US Army Corps, and numerous other federal, state, and local government organizations there is a market for this program. Additionally, the Department of Earth and Environmental Sciences has alumni employed as environmental consultants across the region which will provide graduates with networking opportunities and additional employment opportunities. Many of our alumni and other partners serve various roles in our current curriculum by providing tours of facilities, as invited speakers in classrooms, or as judges or reviewers on various classroom activities.

Evidence:

- APSU-Strategic-Plan
- Hanover
- State_Master_Plan

Institutional capacity to deliver the proposed academic program

Address how the proposed program will impact the overall capacity of the institution, including potential lost enrollment to other majors/programs, collaborative agreements between departments, etc.

Narrative:

The proposed MS in Environmental Science will grow the overall graduate student capacity at APSU as it provides advanced educational opportunities for students enrolled in or alumni with undergraduate degrees who currently do not have graduate program options at APSU, specifically those in the Departments of Agriculture, Chemistry, and Earth and Environmental Sciences. Currently only two graduate degrees are offered by the College of STEM: MS in Biology and MS in Computer Science and Quantitative Methods. The MS in Biology is specifically for students with a BS in Biology so although it is broadly an environmental field, the proposed MS in Environmental Science will not impact this program. The MS in Computer Science and Quantitative Methods is not part of the environmental field and therefore will not be impacted by the proposed program. Finally, the proposed MS in

Environmental Science draws upon the academic strengths of faculty and established resources in the Departments of Agriculture, Chemistry, and Earth and Environmental Sciences as is demonstrated by the following information.

All full-time faculty in the Departments of Agriculture, Chemistry, and Earth and Environmental Sciences meet the standards for teaching at APSU. University policy 2:051 **(Attachment N)**, Faculty Appointments, defines the criteria and hiring processes for faculty appointments. Academic Affairs maintains a webpage for faculty resources that includes information for hiring and credentialing. Each college has a matrix of qualifications developed to meet SACSCOC guidelines for faculty credentials.

All tenured/tenure-track faculty in the supporting departments have terminal degrees in their respective disciplines. Credentials for full-time tenured and tenure-track faculty include:

Agriculture

- Rodney Mills, Associate Professor of Animal Sciences with a Ph.D. from Oklahoma State University
- Isaac Sitienei, Associate Professor of Agri-Economics with a Ph.D. from Louisiana State University
- Donald Sudbrink, Professor of Plant Sciences and Pest Management with a Ph.D. from Auburn University
- Christina Webb, Associate Professor of Pre-Veterinary Medicine with a DVM from Auburn University

Chemistry

- Carrie Brennan, Professor of Chemistry with a Ph.D. from the University of Pittsburgh
- Allen Chaparadza, Associate Professor of Chemistry with a Ph.D. from Portland State University
- Leslie Hiatt, Professor of Chemistry with a Ph.D. from Vanderbilt University
- Dr. Meagan Mann, Associate Professor of Chemistry with a Ph.D. from the University of Illinois at Urbana-Champaign
- Dr. Fred Matthews, Professor of Chemistry with a Ph.D. from Clemson University
- Dr. Anuradha Pathiranage, Assistant Professor of Chemistry with a Ph.D. from Middle Tennessee State University
- Dr. Robin Reed, Professor of Chemistry with a Ph.D. from Vanderbilt University
- Lisa Sullivan, Professor of Chemistry with a Ph.D. from Vanderbilt University

Earth and Environmental Sciences

- Phyllis Camilleri, Professor of Geology with a Ph.D. from the University of Wyoming.
- Jack Deibert, Professor of Geology with a Ph.D. from the University of Wyoming.
- Kallina Dunkle, Professor of Geology with a Ph.D. from the University of Wisconsin-Madison.
- Daniel Frederick, Professor of Geology with a Ph.D. from the University of Tennessee-Knoxville.
- Christopher Gentry, Professor of Geography with a Ph.D. from Indiana State University.

- Madeline Giefer, Assistant Professor of Geography with a Ph.D. from the University of North Carolina, Chapel Hill.
- Christine Mathenge, Associate Professor of Geography with a Ph.D. from Indiana University Bloomington.
- Gregory Ridenour, Professor of Geography with a Ph.D. from Texas A&M University.

All APSU faculty members are provided with annual professional development funds in the amount of $1,100 to offset the cost of traveling to professional conferences, trainings, workshops, etc. These funds may also be used to purchase training materials, books, DVDs, and professional webinars. Faculty in the proposed MS in Environmental Science program can also access these additional university resources:

The Center for Advancement of Faculty Excellence (CAFÉ) offers dynamic programs and professional learning opportunities that help retain and cultivate an engaged, collaborative, and diverse faculty at APSU, including the Faculty Leadership Program. In collaboration with the Office of Academic Affairs, I Am a GOV: First-Year Faculty Program supports the professional success of tenure-track first-year faculty by providing an in-depth understanding of retention, tenure, and promotion criteria through an exploration of teaching, creative or scholarly achievement, service, and advising in predominantly active-learning environments with extensive peer interactions for cohort cohesion and community building.

The Office of Distance Education provides instructional design consultation which includes alignment with Quality Matters standards, and the continuous improvement of online and hybrid (blended) course development. In addition, instructional designers provide flexible training pathways for faculty development such as monthly professional development workshops, one-on-one coaching and online training. In addition, the Office of Distance Education provides training in the learning management system, video and audio production, and streaming video and captioning services.

Through Quality Matters faculty may complete professional development workshops in a variety of areas related to the continuous improvement of online and hybrid (blended) course design. In addition, the Office of Distance Education at Austin Peay State University can assist faculty in reviewing their courses using the Quality Matters rubric and ensuring courses demonstrate at least an 85 percent compliance level with Quality Matters standards.

The Online Learning Consortium (OLC) is the leading professional organization in advancing the continuous improvement of quality online learning. With OLC institutional membership, faculty receive professional development training in online and hybrid (blended) teaching pedagogy and research-based best practices.

Library and Information Technology Recourses

The Woodward Library uses a subject-based liaison model, where library faculty provide resources and instruction support to departments based upon their area of subject expertise. The library also provides an instruction team headed by the Instruction Coordinator/First Year Seminar Librarian. Library liaisons offer instruction sessions, online research guides and tutorials. Librarians also provide individual assistance in-person or remotely by phone, email, chat and text (http://library.apsu.edu/services/). The library provides online research guides that provide the starting point for discipline and course

related research tools and contain information on electronic access to article databases, the library catalog, locating articles, citing sources, new resources, and research tips. Library support focuses on equipping students with skills to perform high quality research with the proper formatting of citations. Electronic databases are available through http://library.apsu.edu.

The Woodward Library provides internet access, as well as access to such applications as Microsoft Word, Excel, and PowerPoint, on 108 computers in the Library's information commons, with an additional 35 student-use computers housed in an instruction room adjacent to the information commons. Library users gain access to online resources through the Woodward Library website. The library's website and all online resources are available 24 hours a day, seven days a week. Remote access (from off campus) is available to students and faculty through an authentication process consisting of the user's last name and university ID number.

Graduate students may check out general collection books for up to six months. Faculty may check out books and government documents for up to six months. Students may check out DVDs for three days, while faculty may check them out for 21 days. Graduates may have a maximum of 50 items checked out at one time. Faculty have no limit on the number of items to check out. After three weeks, all library materials are subject to recall upon the request of another library user.

Woodward Library provides web-based research guides for individual subjects as well as guides tailored for specific programs and courses. A research guide describing resources specific to health and human performance is currently available on the library's website. The liaison librarian will create a research guide designed specifically for the concentration in communication sciences and disorders upon approval of the program. All of the library's research guides are accessible through a menu on the library's website, which takes the user to a variety of browsable lists such as browse by subject, specific course, source type, and research level/type.

Librarians at the Woodward Library are available to provide research assistance 78 hours per week, including evenings and weekends, in person or remotely by telephone, chat, email, and text, as shown in the How-To Guides and Ask a Librarian webpage. The Woodward Library also houses the Writing Center, which provides students with instruction and advice on their writing. Librarians provide research consultation services tailored to meet the needs of individual students and develop research guides for specific programs and courses. With the exception of face-to-face instruction and research assistance, distance learners have access to the same library services and resources as do students on the Clarksville campus. Electronic resources are made available through the library's website, and books and audiovisual materials are available through interlibrary loan. Librarians provide research assistance and consultation by phone, email, chat, and text messaging. In lieu of face-to-face instruction in the use of library resources, online tutorials are available through the library's website. Additionally, librarians are often enrolled in the learning management system course shell to provide students with a more direct way to request research assistance.

Students and faculty may use interlibrary loan to supplement the materials provided by the library. Woodward Library does not charge for the interlibrary loan service, and if needed resources are available in-state, the delivery time is typically five days or less. The library participates in a statewide courier service, which often cuts the delivery time down to two or three days. Materials borrowed from out-of-state libraries usually take one to two weeks to

arrive. Journal articles requested by interlibrary loan are typically emailed to researchers, with most delivery requests fulfilled within two to three days. For ease of use and efficiency, library users and Woodward Library staff use ILLiad, an online system designed to submit and fulfill interlibrary loan requests.

Evidence:

- Policy 2051

Existing programs offered at public and private Tennessee institutions

List all academic programs with the same or similar CIP code offered at public and private higher education institutions in Tennessee along with degrees awarded for the last three years of available data.

Narrative:

Existing Programs Offered at Public Tennessee Institutions
An Environmental Science Masters is currently available at the following institutions within Tennessee or in close proximity to APSU: Tennessee State University, University of Tennessee at Chattanooga, University of Tennessee at Knoxville, and Murray State University (**Table 9**). APSU's proximity to Fort Campbell is an advantageous resource over the aforementioned schools. APSU has more military students than all other Tennessee universities combined. This degree would offer an unparalleled opportunity for members of the military and their families. This proposed program differs from the aforementioned schools as this would be the only program available as both an online and face-to-face program; all other current programs are only face-to-face. Additionally, this proposed program has the option to focus on leadership and career advancement, including courses in grant development and administration. Although University of Tennessee, Chattanooga has an MS Environmental Science: Environmental Administration and Management, this program is not available online and has a different focus overall. Finally, as the proposed MS in Environmental Science is designed with working professionals in mind, it will be unique as it will not require either GRE or letters of recommendation for admission applications.

Table 9. Masters Programs in Environmental Science: Comparison Matrix

Institution	Major	Credit Hours	Delivery Format
Austin Peay State University	MS Environmental Science	30	Online and F2F
Tennessee State University	MS Environmental Science	35	F2F
University of Tennessee, Chattanooga	MS Environmental Science	36	F2F
University of Tennessee Knoxville	MS Environmental and Soil Sciences	33	F2F
Murray State University	MS Earth and Environmental Sciences	30	F2F

Accreditation

If the proposed program has a programmatic accrediting agency, please describe plans, timeline, and any other information required to obtain accreditation.

Narrative:

APSU's SACSCOC Accreditation Liaison and Curriculum Coordinator determined that the proposed MS in Environmental Science constitutes a SACSCOC Substantive Change, based on #9 in Procedure One of the SACSCOC Substantive Change policy, which states:

Expanding at the institution's current degree level (significant departure from current programs). What constitutes a "significant departure" from existing programs depends on what related programs are currently in place at a given institution. Refer to the Glossary of Terms for more specificity. Examples include the following: developing a new general education program, adding a master's degree in nursing when the institution is accredited at Level III but currently offers only a master's degree in education; an institution accredited at Level II (bachelor's degrees), offering only a bachelor's degree with a major in religion, adding three new bachelor's degrees with majors in biology, business administration, and computer science.

The proposed MS in Environmental Science requires the addition of courses at the graduate level. While most of the courses proposed in the curriculum currently exist at the undergraduate or graduate level, several of the proposed courses will need to be cross-listed at the graduate level to be included in the degree program, and one new graduate course will need to be created.

There is no program accreditation for the proposed MS in Environmental Science, so no timeline or plans are needed for additional accreditation.

Administrative structure

Provide an organizational chart that includes the college, department, administrative unit, and program director for the proposed academic program. Please note: If a new academic department will be required for the proposed program, the THEC Academic Policy A1.3: New Academic Units must be followed and should be noted in this section.

Narrative:

The proposed MS in Environmental Science program will be housed in the Department of Earth and Environmental Science in the College of Science, Technology, Engineering and Mathematics (STEM). The department chair will oversee the proposed master's degree, providing guidance, student advising, participate in admissions and serve on the Graduate Academic Council. The chair's responsibilities will also include leading a team of faculty in deliberations meant to improve the graduate curriculum and student academic success. The chair reports directly to the Dean of the College of STEM.

The chair of the Department of Earth and Environmental Sciences is responsible for maintaining a positive working environment supporting the needs of the faculty and the success of students. The chair oversees an operational budget, designs departmental committees, assigns course loads to faculty and participates in the faculty retention, promotion and tenure process. As noted above, the chair reports to the Dean of the College of STEM.

The Dean of the College of STEM is responsible for ensuring quality teaching by the faculty of the college and responsible for student learning outcomes in alignment with accreditation standards according to the different disciplines within the college. The Dean is charged with leadership in maintaining and improving the College's role in instruction, research and public service. The Dean answers directly to the Provost and Vice President of Academic Affairs.

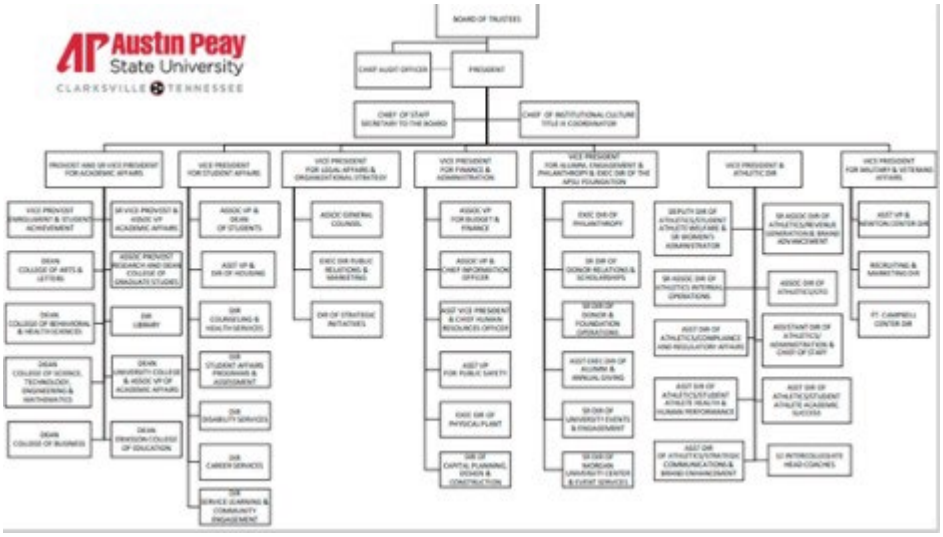
The Provost and Vice President for Academic Affairs is the chief academic officer responsible for overseeing all academic areas of the university including the faculty, academic programs and curricula, and the library. The Provost provides executive leadership for enrollment management, academic support services, institutional research and effectiveness, and assumes a key role in strategic planning, outcomes assessment, and new program development. The Provost also supports professional development and research opportunities for faculty, and ensures fair and equitable allocation of resources to support academic programs.

The Vice Provost and Associate Vice President for Academic Affairs is responsible for leading multiple university-wide initiatives, programs, and processes of Academic Affairs; serves as SACSCOC Accreditation Liaison; provides direction for institutional effectiveness, institutional research, and Quality Enhancement Plan efforts. In addition, the Vice Provost facilitates university processes for academic program development and approval; faculty retention, tenure, and promotion; course evaluation; faculty credentialing; and faculty development.

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The Associate Provost for Research and Dean of the College of Graduate Studies, is responsible for recruitment efforts and applying the admission standards for students entering the MS in Environmental Science graduate program. Additional duties include oversight and distribution of graduate assistantships. The Associate Provost for Research and Dean of Graduate Studies is the administrative and academic head of the College of Graduate Studies and the Office of Research and Sponsored Programs. The Associate Provost serves as the Chief Research Officer of the University.

Figure 2: APSU Organizational Structure



Section III: Feasibility Study

Student interest

Provide compelling evidence of student interest in the proposed program. Types of evidence vary and may include enrollment in related concentrations or minors; representative student and alumni surveys; and national, statewide, and professional employment forecasts and surveys.

Narrative:

The rationale and justification for offering an MS in Environmental Science are driven by student demand and local, state, and national professional workforce needs. As noted by Hanover Research **(Attachment M)**, the availability of the proposed MS in Environmental Science program's offering provides APSU with the opportunity to address an important educational gap within the region.

The report states the nearest competitor is over 100 miles away, and there are only three other programs in Tennessee despite high student demand in the state. Labor projections for graduates exceed the average growth rate both nationally and regionally, while student demand trends for environmental science master's programs are positive. State degree completions are growing much faster than average and national completions are average **(Attachment M)**. As industrial development in the region continues to grow, new environmental policies pass, and companies seek to become more sustainable, there will be an increased need for the skillsets being offered by the proposed program.

<u>Student Demand</u>

The Hanover Research feasibility study supports the proposed MS in Environmental Science and stated the program would "…allow APSU to take advantage of its underserved market."

The departments making up the core of the proposal do not have graduate programs and have an average enrollment of approximately 360 students (Table 2). Additionally, there are several other departments such as biology, health and human performance, and sociology who either do not have a graduate program or have courses and concentrations aligned with environmental science or environmental/social justice that would increase the recruiting pool for the proposed degree. A labor market analysis **(Attachment M)** reveals the average educational attainment for these positions is a bachelor's degree or lower, however, master's degree is often necessary to take on managerial or advanced positions in the field. The addition of a graduate degree in environmental science at APSU addresses the needs of our regional workforce while also affording greater career opportunities to graduates.

Table 2. APSU Enrollment Trends by Program, 5-year Average (Fall 2022)

Program	Enrollment
Agriculture	194
Chemistry	122
Earth and Environmental Sciences	45
Total	361

Based on comparable data from University of Tennessee at Chattanooga (UTC), approximately 11 graduate students are estimated to enroll in the proposed MS in Environmental Science program each year. This estimate is extrapolated from UTC's undergraduate program **(Attachment O)** which enrolls 168 students per year[1] and graduate 25 environmental science undergraduate students annually. APSU's Agriculture, Chemistry, and Earth and Environmental Sciences programs enroll 361 undergraduate students and graduate 71 students on average with several other majors on campus **(Attachment I)**.[2] Therefore, APSU anticipates nearly a dozen graduate student enrollments per fall census. See Figure 2 describing the math estimate for APSU's proposed MS in Environmental Science.

Figure 2. **Descriptive Statistics for Predicting APSU's Proposed MS in Environmental Science Enrollment.**

$$\frac{\text{25 students enrolled in UTC MS in Environmental Science (5 – year average)}}{\text{168 undergraduate students graduate from UTC BGES program (5 – year average)}} = \frac{\textit{Estimated APSU enrollment in MS Environmental Science}}{\text{71 undergraduate students graduate with BS in Agriculture, Chemistry, or Earth and Environmental Sciences (5 – year average)}}$$

(25 x 71) / 168 = 10.5 students estimated to enroll in the proposed MS in Environmental Science

Further support for student interest in the proposed MS in Environmental Science is demonstrated through a survey given to current students in Agriculture, Chemistry, and Earth and Environmental Sciences. The survey was given in major courses or via email, with information about the degree program and curriculum provided to the students. Forty-two students responded to the survey, with the majority (N=27) of them currently seniors. In addition to questions about their major and current year, they were also asked the following:

- Have you ever been interested in pursuing an environmental science career?
- Have you ever been interested in pursuing a master's degree?
- Please indicate your interest in enrolling in a Master of Science in Environmental Science program at Austin Peay State University.

Results of the survey **(Attachment P)** indicated the majority were interested in pursuing careers in environmental science (69% answered yes, 24% answered maybe, and only 7% answered no), and also in pursuing a master's degree
(76% answered yes, 17% answered maybe, and only 7% answered no). Additionally, the majority of students were very interested (33.3%) or interested (26.2%) in enrolling in the proposed MS in Environmental Science, with 23.8% somewhat interested, and only 9.5% minimally interested and 7.1% not interested.

[1]Based on a five-year average of UTC Biology, Geology, and Environmental Science enrollments.
[2]The Departments of Biology and Health and Human Performance combined enroll approximately 800 students. While they support other graduate programs, it is possible graduates and alumni could choose this program depending on career aspirations/opportunities. Additionally, the Department of Sociology and Community Development enrolls another 70 students who might consider an MS in Environmental Sciences.

Evidence:

- Enrollment-by-College
- Hanover
- MS Environmental Science Student Survey Results
- UTC-data

Local and regional demand

Provide evidence of a local and regional workforce need for the proposed program. Evidence should include anticipated job openings, labor market analysis, and workforce projections for at least five years after the proposed implementation of the program. If similar academic programs exist, how is the local and regional need/demand for the proposed academic program being met by these institutions?

Narrative:

Local and Regional/Need/Demand

Over the past five years, Austin Peay State University's Departments of Agriculture, Chemistry, and Earth and Environmental Sciences have averaged 361 undergraduate student enrollments annually. The College of STEM anticipates its undergraduate population will be able to sustain the proposed program. Additionally, there are also local and regional demands for the proposed MS in Environmental Science and APSU's proximity to Fort Campbell provides another serviceable population. The previously discussed Hanover report **(Attachment M)** recognizes that nationally, environmental science programs are increasing as compared to other master's programs in the state (7.1% growth versus 0.2%); this is in

contrast to declining trends regionally.

A labor market analysis performed by Hanover Research **(Attachment M)** revealed a growing trend (3.7%) of environmental science-based occupations in the nation. However, the State of Tennessee is experiencing far greater growth (7.1%) and the southeast as a whole is experiencing an 9.4% increase in environmental science-based occupations (Table 3). Collectively, Tennessee and the southeast anticipate continued growth over the next five years. In addition to the estimated growth rate, the report noted that "environmental concerns and an aging workforce will drive positive growth for environmental science related positions in governmental and private industries."

Table 3. Total Labor Markets for Environmental Science-based Occupations – Courtesy of Hanover Research

Sector	State	Regional	National
Estimate Current Employment	1,966	28,760	162,300
Projected 10-Year Employment	2,106	31,452	172,800
Employment Growth, Observed Occupations	7.1%	9.4%	6.5%
Total Annual Openings, Observed Occupations	223	3,160	13,800
Employment Growth, All Occupations	7.3%	8.0%	3.7%

The Hanover report **(Attachment M)** also analyzed real-time job postings for environmental science-related positions with top skills in those positions including chemistry, Microsoft Office, report writing/report presentation, and technical writing, all of which are skills that would be gained or improved through the curriculum in the proposed MS in Environmental Science. Top occupations included Technicians-Environmental Science/Geoscience, Environmental Scientists and Geoscientists, Technicians-Occupational Health/Safety Specialists and Conservation Scientists. The analysis also listed top employers regionally and within the state, both of which included government employment for municipal/county or state, and environmental and engineering consulting firms. Example companies included GHD for the region and for the state both S&ME Inc. and Betchel Corporation. Additionally, Oak Ridge National Laboratory was listed as a top employer for Tennessee.

As demonstrated by the letters of support in Appendix A, there are a variety of environmental and engineering consulting firms in the region and state that could hire graduates of this program, including EnSafe Inc. **(Attachment Q)**, Goodwyn Mills Cawood **(Attachment R)**, and Terracon Consultants, Inc **(Attachment S)**. Additionally, graduates could work for any local or state government, as well as the federal government in a variety of roles including Environmental Protection Specialists and Natural Resource Specialists.

Evidence:

- GMC Letter of Support - APSU MS Environmental Science
- Hanover
- MS Environmental Science Endorsement_Ensafe
- Terracon APSU MS ENV Science_encrypted_

Employer demand

Provide an assessment of the statewide and national employment opportunities for graduates from the proposed program. Evidence can include the number of anticipated job openings, an employer needs assessment, labor market analysis, and workforce projections. Projections should be for the first three years for associate and certificate programs, five years for undergraduate and master's programs, or seven years for doctoral programs. Suggested resources include the THEC Supply and Demand Report and the Bureau of Labor Statistics Occupational Outlook Handbook.

Narrative:

THEC Supply and Demand Report
Bureau of Labor Statistics Occupational Outlook Handbook

Employer Demand

APSU is located in Clarksville, TN, which is the fifth largest and third fastest growing city in the state. Fort Campbell Army Installation is adjacent to the APSU Clarksville campus (approx. 12 miles away), and features the APSU Educational Center, a classroom and laboratory building. The proximity of APSU to the Tennessee Department of Environment and Conservation, Army Corps of Engineering, Tennessee Department of Transportation, Fort Campbell Army Installation, and numerous environmental consulting firms, will afford the graduates of the proposed MS in Environmental Science program a competitive local employment market. Those already employed within the field will have the means for pursuing promotions and career advancement. An occupational analysis by Lightcast **(Attachment J)** of environmental positions within Tennessee projects a growth rate of 16.1% and projects 7.0% growth in the Southeast Region by 2032. In a recent analysis of Tennessee job postings for the month of January, Lightcast **(Attachment J)** identified 91 unique job postings that would require specialized skills in environmental science with a graduate level education. Combined with the Hanover report, employment trends in environmental science fields are positive within the state and region supporting the proposed program.

The proposed MS in Environmental Science program conservatively anticipates enrolling 10 students in its initial fall semester (extrapolated from available date from University of Tennessee at Chattanooga; **Figure 2).** Typically, enrollments for APSU's graduate programs do not vary much for the spring and summer semesters. Additionally, increases in graduate enrollment has approached 20% over the past five years. Using estimations from Table 2, current enrollment trends, and persistence numbers, Table 4 illustrates the estimated two-year enrollment and graduation rates for the program.

Table 4: Enrollment Projections

Year	2025	2026	2027	2028	2029
Anticipated New Enrollment	10	12	15	18	22
Anticipated Attrition*	2	3	3	4	4
Anticipated Graduation	-	8	9	12	14

* At APSU, approximately 80% of graduate students persist to graduation within the intended timeframe of the degree.

Summary

Environmental Science related occupations typically experience higher employment rates in Tennessee and the Southeast than nationally. The feasibility of the proposed MS in Environmental Science graduate program is a strong indicator of demand. The proposed program appears to address an unmet need of graduates and the local labor demands. APSU's undergraduate STEM programs, specifically those in agriculture, biology, chemistry, and earth and environmental sciences, could support the proposed program and Hanover Research's analysis reveals additional indicators of demand given the significantly greater labor market needs projected for the region. The proposed MS in Environmental Science graduate program supports APSU's University Mission to serve its community, including our significant military affiliated student population, the region, and the state of Tennessee. [1]At APSU, approximately 80% of graduate students persist to graduation within the intended timeframe of the degree.

Evidence:

- Lightcast-Reports

Community and industry partnerships

Provide an overview of existing and anticipated community and industry partnerships and how they will support the proposed program.

Provide letters of support from regional, community, and/or workforce partners in the LON Appendix A. Letters should be dated and appear on letterhead and address how the partner will support the proposed program (job placements, internships, advisory board, etc.).

Narrative:

The Department of Earth and Environmental Sciences has alumni who work for firms in the environmental and engineering consulting industry both locally, as well as throughout Tennessee and the southeast region. These firms have already supported the department through speaking with undergraduate majors and providing opportunities to visit active sites. As demonstrated in letters of support from Terracon Consultants, Inc. **(Attachment S)**, Goodwyn Mills Cawood **(Attachment R)**, and EnSafe Inc. **(Attachment Q)**, these firms are all in support of the proposed program and willing to support the program in a variety of ways including internships, hiring graduates of the program, and serving on an advisory board. The letter from EnSafe, Inc. **(Attachment Q)** states "We hired 90+ employees in 2023 and anticipate this demand to continue, even with the recent tightening of the job market overall" and also "The need for environmental talent is a consistent, stable trend over last three decades, will continue in the foreseeable future and is a valuable investment for APSU as they build a stronger, sustainable future.", further demonstrating the need for this program in Tennessee.

Evidence:

- GMC Letter of Support - APSU MS Environmental Science
- MS Environmental Science Endorsement_Ensafe
- Terracon APSU MS ENV Science_encrypted_

Section IV: Enrollment and Graduation Projections

Projected Enrollments and Graduates

Provide a brief narrative concerning projected enrollment, attrition, and graduates. Additionally, using Table 1 – Projected Enrollments and Graduates, provide initial projections for the first five-seven years of enrollment and graduates. Enrollment projections should be realistic and based on demonstrable student demand.

Narrative

APSU's proposed Master of Science in Environmental Science is anticipated to have 10 students enroll in the first year. By year three of the proposed program, it is predicted that additional FTE will be needed to cover course rotations and additional course offerings. However, this initial growth could be supported by current faculty within the supporting departments. As the number of FTE/faculty change in departments due to retirement, alternate employment, or reassigned time within the university additional faculty will be needed to support the program. APSU anticipates that in year two, the proposed program's enrollment will support the estimated cost of instruction. The THEC Financial Projection Form **(Attachment T)** describes five years of financial projections and ancillary costs supporting the proposed program's success.

Projections

Table 1 – Projected Enrollments and Graduates

Year	Academic Year	Projected Total Fall Enrollment	Projected Attrition	Projected Graduates
1	2025	10	2	-
2	2026	12	3	8
3	2027	15	3	9
4	2028	18	4	12
5	2029	22	4	22
6*				
7*				

*Year 6 and 7 projections are only required for doctoral programs.

Evidence:

- THEC Financial Projection Form

Section V: Projected Costs to Deliver the Proposed Program

Faculty & Instructional Staff

Describe any new costs associated with current and anticipated faculty and instructional staff including salary and benefits.

Narrative:

Current APSU faculty are experts in areas of sustainability, environmental management, soil and water science, land use, and community development. Faculty participating in the graduate program are already or will become Graduate School Faculty members. Tenured and tenure-track graduate school faculty, as well as other faculty approved by the department, will teach graduate courses. With an even distribution of responsibilities regarding the proposed MS in Environmental Science program, admissions will be closely monitored so graduate student to faculty ratios are in line with available resources and national best practices.

Prospective Faculty

The proposed MS in Environmental Science will not require any new faculty to be hired at the onset of the degree program as most of the current courses in the curriculum are currently available or only need to be cross-listed where applicable. Only one new course needs to be created (GEOG/GEOL 5990). As graduate enrollment increases, additional resources will be necessary to support the undergraduate and graduate curriculum. Individuals possessing expertise that widen the scope of the program or compliment the supporting departments will be targeted for hiring. This will allow for further development of the program and potentially moving towards a thesis option as needs arise.

In establishing the proposed MS in Environmental Science program, a flexible curriculum was created to allow students to choose courses to match their individual needs and maximize efficiency. MS in Environmental Science students must complete a six-course common core and twelve additional hours in alignment with career interests. Table 6 describes course availability, which will allow new students and existing students to meet graduation requirements within a two-year time frame or less. While students may choose to take any elective course, there are two designated tracks offering students a science or leadership focus. Students who select the science track may also be eligible for the graduate certificate in sustainability and those choosing the leadership track may be eligible for the graduate certificate in grant writing.

Table 6. Course offerings

	Available Courses	Fall 2025	Spring 2026	Summer 2026	Fall 2026	Spring 2027
*	CHEM 5150 Data Analysis	Online			Online	
*	CHEM 5860 Scientific Communication		Online			Online
*	GEOG 5000 Environmental Management		Both			
*	GEOG 5040 Advanced Sustainable Development	Both				Both
*	GEOG/GEOL 5990 Research Methods	Online				Online
*	LDSP 5100 Leadership for the Scientist-Manager	Online		Online		Online
#	AGRI 5140 Graduate Economic Entomology	F2F				
#	AGRI 5220/21 Graduate Soil & Water Conservation		F2F			F2F
#	BIOL 5740/41 Conservation Biology		F2F			F2F
#	BIOL 5540/41 Plant Ecology	F2F			F2F	
#	CHEM 5140 Chemical and Laboratory Safety	Online			Online	
#	CSCI 5015 Data Science in Python		Online	Online		Online
#	GEOG 5010 Environmental Assessment				Both	
#	SUST 5060 Sustainable Energy Systems	Online		Online	Online	
^	COMM 5110 Leadership & Communication[1]	Online	Online		Online	Online
^	COMM 5210 e-Communication Strategies		F2F			F2F
^	LDSP 5105 Project Planning & Scheduling[4]	Online			Online	
^	LDSP 5310 Community Leadership[4]		Online			Online
^	LDSP 5400 Grant Development[4]		Online			Online
^	LDSP 5410 Grant Administration[4]		Online			Online
^	MGT 5010 Business Foundations	F2F			F2F	

Key:

*Courses required of all majors.

#Courses in the Science Track.

^Courses in the Leadership Track.

Online = Online instruction only.

F2F = Face-to-Face traditional instruction only.

Both = Online and face-to-face instruction available.

Although students may choose to take more or less credit hours depending on their personal needs, the course availability detailed above provides students the ability to graduate within two-years taking no more than two courses per semester, including the intervening summer session (Table 7).

Table 7. Sample Two-Year Plan[2]

Fall	
CHEM 5150	Data Analysis
GEOG 5000	Environmental Management
Spring	
GEOG 5010	Environmental Assessment
LDSP 5400	Grant Development[3]
Summer	
LDSP 5100	Leadership for the Scientists-Manager
SUST 5060	Sustainable Energy Systems
Fall	
GEOG 5040	Advanced Sustainable Development
GEOG/GEOL 5990	Research Methods/Seminar
Spring	
CHEM 5860	Scientific Communications
LDSP 5410	Grant Administration[5]

[1]This is an 8-week course offered as a portion of both the regular 16-week fall and spring semesters

[2]This sample academic plan represents an entirely online program. Face-to-face option is also available for many of the courses.

[3] This is an 8-week course offered in the first half of a standard 16-week semester. These 8-week courses could help decrease the time required to obtain the MS Environmental Science.

Non-Instructional Staff

Describe any new costs associated with non-instructional staff including salary and benefits.

Narrative:

Additional non-instructional staff will not be needed for the MS Environmental Science as the Department of Earth & Environmental Sciences already has an Academic Associate to the Chair who would be able to assist with the necessary administrative support given the projected size of the program.

Graduate Assistants

Describe any new costs associated with current and anticipated graduate assistants including tuition, salary, and benefits.

Narrative:

The proposed MS in Environmental Science is a non-thesis degree designed for professionals, so graduate support will not be requested during these early years. There is potential sponsorship in the the future for more research-focused degree pathways, but not within the initial years of the proposed degree.

Accreditation

Describe any costs associated with regional and/or programmatic accreditation.

Narrative:

APSU's SACSCOC Accreditation Liaison and Curriculum Coordinator determined that the proposed MS in Environmental Science constitutes a SACSCOC Substantive Change, based on #9 in Procedure One of the SACSCOC Substantive Change policy, which states:

Expanding at the institution's current degree level (significant departure from current programs). What constitutes a "significant departure" from existing programs depends on what related programs are currently in place at a given institution. Refer to the Glossary of Terms for more specificity. Examples include the following: developing a new general education program, adding a master's degree in nursing when the institution is accredited at Level III but currently offers only a master's degree in education; an institution accredited at Level II (bachelor's degrees), offering only a bachelor's degree with a major in religion, adding three new bachelor's degrees with majors in biology, business administration, and computer science.

The proposed MS in Environmental Science requires the addition of courses at the graduate level. While most of the courses proposed in the curriculum currently exist at the undergraduate or graduate level, several of the proposed courses will need to be cross-listed at the graduate level to be included in the degree program, and one new graduate course will need to be created.

There is not external programmatic accreditation for the proposed MS in Environmental Science, therefore no additional costs related to accreditation are required for this proposed program.

Consultants

Provide a summary of anticipated consultant needs and associated costs.

Narrative:

APSU will not utilize a consultant for the development of the MS in Environmental Science program, therefore, there will be no associated needs and costs for a consultant.

Equipment

Describe any new equipment needed and summarize the associated costs.

Narrative:

There will be no associated cost for purchasing equipment as the MS Environmental Science program will utilize current facilities and equipment from both the Department of Earth and Environmental Sciences and the Department of Chemistry. Those facilities and equipment include:

- Computer lab with appropriate technology (printers, plotter, scanners)
- GIS and Remote sensing software
- Hydrologic Software
- Statistical Software
- Scanning Electron Microscope Lab
- Microscope Lab
- Ground Penetrating Radar
- Hydrogeologic and Environmental testing equipment
- Rock preparatory lab
- 3D Shape Analysis and Reproduction equipment
- Meteorology and Climatology lab
- Biogeographical Environment Tree-Ring lab
- Paleontology lab
- Field Equipment
- Atomic Absorption Spectrometer
- Electrochemical Analyzer
- UV Visible Spectrometer
- Fluorescence Spectrometer
- Microplage Spectrometer
- Fourier Transform Infrared Spectrometer
- Gas Chromatograph
- Gas Chromatograph Mass Spectrometer
- High Performance Liquid Chromatography
- Liquid Chromatography Mass Spectrometer
- Nuclear Magnetic Resonance
- X-Ray Diffraction
- Scanning Electron Microscope
- Vernier Technology

Information technology

Describe additional information technology acquisitions needed, including associated costs.

Narrative:

The MS in Environmental Science will not require additional information technology. The current technology utilized by APSU and the Department of Earth and Environmental Sciences will be sufficient to launch and maintain the program.

Library resources

Describe additional library acquisitions needed and their cost.

Narrative:

The Woodward Library uses a subject-based liaison model, where library faculty provide resources and instruction support to departments based upon their area of subject expertise. The library also provides an instruction team headed by the Instruction Coordinator/First Year Seminar Librarian. Library liaisons offer instruction sessions, online research guides and tutorials. Librarians also provide individual assistance in-person or remotely by phone, email, chat and text (http://library.apsu.edu/services/). The library provides online research guides that provide the starting point for discipline and course related research tools and contain information on electronic access to article databases, the library catalog, locating articles, citing sources, new resources, and research tips. Library support focuses on equipping students with skills to perform high quality research with the proper formatting of citations. Electronic databases are available through http://library.apsu.edu.

The Woodward Library provides internet access, as well as access to such applications as Microsoft Word, Excel, and PowerPoint, on 108 computers in the Library's information commons, with an additional 35 student-use computers housed in an instruction room adjacent to the information commons. Library users gain access to online resources through the Woodward Library website. The library's website and all online resources are available 24 hours a day, seven days a week. Remote access (from off campus) is available to students and faculty through an authentication process consisting of the user's last name and university ID number.

Graduate students may check out general collection books for up to six months. Faculty may check out books and government documents for up to six months. Students may check out DVDs for three days, while faculty may check them out for 21 days. Graduates may have a maximum of 50 items checked out at one time. Faculty have no limit on the number of items to check out. After three weeks, all library materials are subject to recall upon the request of another library user.

Woodward Library provides web-based research guides for individual subjects as well as guides tailored for specific programs and courses. A research guide describing resources specific to health and human performance is currently available on the library's website. The liaison librarian will create a research guide designed specifically for the concentration in communication sciences and disorders upon approval of the program. All of the library's research guides are accessible through a menu on the library's website, which takes the user to a variety of browsable lists such as browse by subject, specific course, source type, and

research level/type.

Librarians at the Woodward Library are available to provide research assistance 78 hours per week, including evenings and weekends, in person or remotely by telephone, chat, email, and text, as shown in the How-To Guides and Ask a Librarian webpage. The Woodward Library also houses the Writing Center, which provides students with instruction and advice on their writing. Librarians provide research consultation services tailored to meet the needs of individual students and develop research guides for specific programs and courses. With the exception of face-to-face instruction and research assistance, distance learners have access to the same library services and resources as do students on the Clarksville campus. Electronic resources are made available through the library's website, and books and audiovisual materials are available through interlibrary loan. Librarians provide research assistance and consultation by phone, email, chat, and text messaging. In lieu of face-to-face instruction in the use of library resources, online tutorials are available through the library's website. Additionally, librarians are often enrolled in the learning management system course shell to provide students with a more direct way to request research assistance.

Students and faculty may use interlibrary loan to supplement the materials provided by the library. Woodward Library does not charge for the interlibrary loan service, and if needed resources are available in-state, the delivery time is typically five days or less. The library participates in a statewide courier service, which often cuts the delivery time down to two or three days. Materials borrowed from out-of-state libraries usually take one to two weeks to arrive. Journal articles requested by interlibrary loan are typically emailed to researchers, with most delivery requests fulfilled within two to three days. For ease of use and efficiency, library users and Woodward Library staff use ILLiad, an online system designed to submit and fulfill interlibrary loan requests.

The current availability of material and access to articles, combined with the use of interlibrary loan through the Woodward Library means that there are no additional library acquisitions required for the proposed program. Additionally, there are a variety of open education resources for graduate level environmental science courses that could be utilized.

Marketing

Outline any anticipated costs associated with the marketing for the proposed program.

Narrative:

Marketing and Recruitment Plan

The staff of the College of Graduate Studies (COGS) are primarily responsible for marketing of graduate programs and recruitment of all graduate students. The Dean of COGS and Director of Graduate Admissions and Recruitment have developed a year-long marketing strategy for the recruitment of future graduate students. Using third party vendors, COGS buys GRE names, and other name buys, each quarter. Implemented in Fall 2017, COGS funds four cycles of heavy marketing involving the following:

- Direct email campaigns using email-marketing software and segmented marketing emails. This allows COGS to know open rates and click through rates. Also, this allows

COGS to know which of marketing creatives have the most impact on each prospective student demographic.
- Social media platforms that are geo-fenced around the name buys during marketing campaigns and/or special events occurring across the state or nearby states.
- Direct mail to prospective students who have been identified to be more likely to start a graduate program. These prospective students have responded to one of the marketing outreaches and therefore have shown greater interest in joining a graduate program.
- Direct phone calls and text messaging
- Radio advertisements
- Selected magazine and newspaper advertisements
- Billboards and advertisements in major thoroughfares like Nashville's airport and movie theaters
- Digital IP address buys for digital marketing
- Businesses/employer registries name buys
- Brochures
- Career fairs
- COGS has an international recruiter and uses third party vendors to find prospective international graduate students.

Collectively, APSU's graduate programs have continued to grow in the past five years using the above marketing methods. Graduate enrollment has exceeded 1,000 students in each of the past five years; an important milestone for any university. International graduate enrollment has increased by more than 70% over this same time period.

Facilities

For new or renovated facilities, clearly outline them and include the amount and type of space, costs identified, and source(s) of funds to cover costs.

Narrative:

There will be no new associated costs for facilities as the MS Environmental Science program will utilize the current classrooms and faculty belonging to the Department of Earth and Environmental Sciences in the McCord building. The departmental space consists of 8 classrooms and 11 faculty offices which will be more than sufficient for the program.

Travel

Provide a summary of anticipated travel expenses.

Narrative:

APSU's current travel allowance, $1,100, will be utilized for faculty professional development. As funding is currently budgeted in each departmental account for faculty development, no additional funding will be needed regarding the MS in Environmental Science.

Other resources

Describe additional resources that may be needed to support the program.

Narrative:

No additional resources are needed for the MS Environmental Science degree program.

Section VI: Projected Revenues for the Proposed Program

Tuition

Provide an overview of anticipated tuition revenue which aligns with enrollment and graduation projections.

Narrative:

APSU's proposed Master of Science in Environmental Science is anticipated to have 10 students enroll in the first year. Once new students join the proposed program, APSU anticipates that in year two, the proposed program's enrollment will financially support the proposed program. The THEC Financial Projection Form **(Attachment T)** describes five years of financial projections and ancillary costs supporting the proposed program's success.

One FTE (faculty full-time equivalent) is defined as 12 teaching load credit (TLC) hours plus 3 credit hours of advising, research, and committees per 16-week semester. For graduate level courses, 1 additional TLC is added to each 3-hour lecture course due to the increased rigor and efforts of the faculty in teaching at the graduate level. While course credit hours within the program vary, based on two-three credit lecture courses per semester (6 total credits) it will cost the equivalent of 0.54 FTE, or approximately 1 FTE over two semesters. Summer pay is calculated at 1/32 of salary times the number of credit hours taught. It is anticipated by the course rotation and frequency in which courses will need to be offered that in year three of the proposed program, 0.5 additional FTE will be needed to allow students to graduate within students' desired timeline. Another increase in FTE would be needed by year five. Cost of instruction was calculated as the median base salary of faculty in departments supporting the degree program plus benefits and summer compensation. For each year, a 2% increase was added to accommodate state mandated cost of living increases. This does not include travel expenses, marketing, Program Review costs, faculty professional development funding, moving costs for new faculty hires, and personal computer for new faculty hires. This information is described in full in the THEC Financial Projections Form **(Attachment T)**. Gross revenue is based on the total number of anticipated credit hours enrolled for all students multiplied by $561.50 per credit hour. This information was taken from the APSU Online Cost of Education Calculator and is the average cost between online and face-to-face enrollment and based on each in-state student taking six hours each semester and summer. Attrition and graduation rates were used in these calculations to adjust for enrollment variation between cohorts, however, under-enrolled courses which alter FTE, cost-sharing among departments that includes FTE as normal load not related to the degree program, and other variables were unable to be controlled for. In the current course structure, several of the courses in the program are dual-listed which will help to

avoid low-enrolled courses as well as provide an opportunity to recruit students into the degree program.

Based on the projected enrollment numbers shown in Table 8 below, APSU projects positive financial returns beginning in Year 2 that will support the resource needs of the proposed program.

Table 8. Revenue Model for the proposed MS in Environmental Science program

	Year 1	Year 2	Year 3	Year 4	Year 5
Anticipated Fall Enrollment	10	20	24	30	36
FTE	1	1	1.5	1.5	2
Cost of Instruction	$125,529	$128,039	$195,900	$199,818	$271,753
Gross Revenue	$101,070	$175,188	$216,290	$262,782	$319,381
Net Revenue	$(24,459)	$47,149	$20,390	$62,964	$47,628
Anticipated Graduation	-	8	9	12	14

Evidence:

- THEC Financial Projection Form

Grants

If applicable, identify any grants that will be used to support the proposed program.

Narrative:

There are not any applicable grants that would support the proposed program for additional revenues.

Other

Describe any other revenue sources that will be associated with the proposed program.

Narrative:

There are no additional sources of revenue for the proposed program.

Appendix A: Letters of Support

Letters of support must be included regional, community, and/or workforce; should be dated; appear on letterhead; and address how the partner will support the proposed program (job placements, internships, advisory board, etc.).

Narrative:

Letters of support from EnSafe Inc. **(Attachment Q)**, Goodwyn Mills Cawood **(Attachment R)**, and Terracon Consultants, Inc. **(Attachment S)** indicate both a need for the proposed MS in Environmental Science, as well as support for the program from these companies.

Evidence:

- GMC Letter of Support - APSU MS Environmental Science
- MS Environmental Science Endorsement_Ensafe
- Terracon APSU MS ENV Science_encrypted_

Appendix B: THEC Financial Projections Form

The THEC Financial Projections Form must be completed with all anticipated new costs and revenues that aligned with Sections V and VI.

Narrative:

APSU's proposed Master of Science in Environmental Science is anticipated to have 10 students enroll in the first year. By year three of the proposed program, it is predicted that additional FTE will be needed to cover course rotations and additional course offerings. However, this initial growth could be supported by current faculty within the supporting departments. As the number of FTE/faculty change in departments due to retirement, alternate employment, or reassigned time within the university additional faculty will be needed to support the program. APSU anticipates that in year two, the proposed program's enrollment will support the estimated cost of instruction. The THEC Financial Projection Form describes five years of financial projections and ancillary costs supporting the proposed program's success

Evidence:

- THEC_Projections

EXPERIENCE AUSTIN PEAY

2022-2027 STRATEGIC PLAN

Austin Peay State University
CLARKSVILLE TENNESSEE



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From the President

You might not realize it, but Austin Peay State University's front gates are an architectural marvel. Every day, dozens of students pass through that brick entrance, hurrying to experience a life-changing opportunity, and their faces reveal an unconscious optimism as if they're stepping through a portal into a bright and promising future. That feeling comes from the fact that our front gates don't have a door or some other obstruction. Austin Peay and the experiences we provide are always open to them, and this fact reminds me of Ralph Waldo Emerson's famous quote, "Be an opener of doors."

But Austin Peay, while beautiful, remains a project continually under construction. As stewards of this institution's legacy, we must continue building upon our successes and renovating old modes of thinking. In August 2021, I challenged this University community to make student success – the student experience – the foundation of what we're creating here so that it will infuse all areas of this campus.

Now, we're ready to begin work on creating a better, stronger university, and this strategic plan is the blueprint we'll follow over the coming years. More than 65 members of the campus community came together to develop this plan, and the architecture of our success depends upon the stability of four main pillars – the Academic Experience, the Student Experience, the Employee Experience and the Community Experience. These pillars will raise this University to new heights for its 100th anniversary in 2027, and on our centennial, we will celebrate our status as the region's premier public university.

As we build this future, I'll continue looking through my office window at the University's front entrance. It's one of the most photographed spots on campus, particularly for graduating students. Dressed in their regalia, they pose for senior photos to share with their friends and families. They stand a little taller, shaped by the experiences they've had here. You also can see the pride in their faces, knowing that as this University's reputation continues to grow atop those four pillars, the door will always remain open to them.

With this new plan, those open doors will let them experience change, community and compassion. They'll walk through our gates because the life they want begins at Austin Peay.

Dr. Mike Licari
APSU President

2021-2022 Strategic Planning Process

In the summer of 2021, Dannelle Whiteside, vice president for Legal Affairs and Organizational Strategy, formed the University Strategic Planning Committee. Members were chosen from across campus, and several sub-committees were established to oversee the plan's different pillars. The initial committee included:

- **Dannelle Whiteside**, Strategic Planning Committee chair, vice president for Legal Affairs and Organizational Strategy
- **Dr. Emily Lean**, Strategic Planning Committee co-chair, Harper-Bourne Chair of Excellence/associate dean of the College of Business
- **Kito Aruh**, SGA president (2021-2022)
- **Dr. Prentice Chandler**, dean of the Eriksson College of Education
- **Victor Felts**, associate dean of students and director of Student Life and Engagement
- **Jordan Harmon**, senior associate athletics director
- **Tom Hutchins**, executive director, Physical Plant
- **Dr. Nancy KingSanders**, vice provost, Student Achievement
- **Dr. Marsha Lyle-Gonga**, chair of the Department of Political Science and Public Management
- **Dr. Kristine Nakutis**, executive director, Austin Peay Center at Fort Campbell
- **Dr. Lorneth Peters**, director of the Tennessee Small Business Development Center
- **Nikki Peterson**, director of Alumni Relations
- **Dr. Jane Semler**, faculty senate president (2021-2022)
- **Jerica Swiger**, staff senate president (2021-2022)

Ex-Officio Members:

- APSU Senior Leadership Team
- **Dr. Kathrine Bailey**, director of Strategic Initiatives
- **Dr. Tucker Brown**, interim senior vice provost and associate vice president for Academic Affairs
- **Dr. Andrew Luna**, executive director of Decision Support and Institutional Research
- **Dr. William Rayburn**, process advisor
- **LaNeeca Williams**, chief diversity officer

Strategic Plan Key Terms

- **Pillars** are the metaphorical beams that support a plan and help an organization reach the vision it aspires to achieve. Plans typically have

three to five pillars, each centered around a specific theme, that provide the foundation for the plan's future success.

- **Goals** are the aspirational endpoint that a plan seeks to achieve. They set the tone and direction a plan must follow to be successful.

- **Objectives** are the measurable steps one must take to achieve a plan's goals.

- **Tactics** are the strategic approaches used to accomplish an objective.

Building the Planning Team

In the Fall of 2021, the Strategic Planning Committee revised the University's Mission and Vision statements and developed Austin Peay's first Values Statement. In December, the APSU Board of Trustees unanimously approved the new statements. The process allowed the University community to explore important philosophical questions about Austin Peay's purpose, goals and direction.

During the Spring 2022 semester, the Strategic Planning Committee focused on aligning the University strategic plan with the revised APSU Mission, Vision and Values statements. That process, which included gathering feedback from the APSU community, was completed in May 2022, and the revised plan was presented to the APSU Board of Trustees that June.

Mission, Vision, and Values Development Timeline

- **May 24, 2021** – Call for Strategic Planning Committee nominations
- **June 22, 2021** – Committee formed
- **Aug. 24, 2021** – Committee hosts inaugural meeting
- **Oct. 20-Nov. 10, 2021** – Rough draft of new mission, vision and value statements presented to APSU community through a series of Town Halls.
- **Nov. 18, 2021** – Senior Leadership Team approved final draft of statements
- **Nov. 24, 2021** – APSU President Mike Licari approved statements
- **Dec. 3, 2021** – APSU Board of Trustees approved statements

Strategic Plan Development Timeline

- **January 2022** – Strategic Planning Committee and subcommittees develop proposed pillars, goals and objectives for the plan
- **April 5- April 14, 2022** – Strategic plan rough draft presented to APSU community through a series of Town Halls
- **May 25, 2022** – APSU Senior Leadership Team approved final draft of plan
- **May 26, 2022** – APSU President Mike Licari approved plan
- **June 10, 2022** – APSU Board of Trustees approved Experience Austin Peay Strategic Plan

Our Mission

Austin Peay State University is a mission-driven, community-minded institution that provides transformational experiences through innovative, creative, and scholarly activities. We welcome and inspire an inclusive community of learners to make a positive impact regionally and globally.

Our Vision

We will be the region's university of choice for those seeking to improve their lives. We will achieve this vision through student-centered teaching, unique developmental opportunities, and our focus on innovative research and public service.



Our Values

We are a collaborative community that values personal growth and life-long engagement through the promotion of integrity and academic excellence.

ACADEMIC EXCELLENCE

By providing meaningful and practical learning opportunities with highly qualified and dedicated faculty and staff.

INTEGRITY

By maintaining an honest, fair, and credible environment.

COMMUNITY

By fostering learning in an environment where all are welcomed and valued.

PERSONAL GROWTH

By providing the knowledge, tools and resources for all Governors to reach their full potential.

LIFE-LONG ENGAGEMENT

By providing services, programs and experiences that promote loyalty, pride and mutual support.

COLLABORATION

Collaboration by enriching our local, regional and global communities through value-added programs, strategic partnerships, and meaningful service.

EXPERIENCE CHANGE.

EXPERIENCE COMMUNITY.

EXPERIENCE COMPASSION.

THE LIFE YOU WANT BEGINS AT AUSTIN PEAY.

In December 2021, the Austin Peay State University Office of Public Relations and Marketing began developing a new University tagline to align APSU's marketing and communication efforts with the institution's new Mission, Vision and Value statements. Those statements will help encapsulate the University's new strategic plan. The new taglines will represent that plan to the wider community, providing a shorthand of what Austin Peay is and where it's going.

In developing the tagline, the Public Relations and Marketing staff examined how the new Mission, Vision and Value statements set Austin Peay apart from its competitors. During this analysis, the words "opportunities" and "experiences" arose multiple times. The team chose "experiences" – a more active term – as the anchor for a two-tiered tagline featuring a headline and a subheading. The headline incorporated the repetition of the word "experience" – Experience Change. Experience Community. Experience Compassion.

THE THREE Cs

Change.

The tagline's first call to action involves "change," which speaks to an incoming student's desire to experience personal growth and be change

agents in the world. Using market research provided by the Nashville-based MP&F Strategic Communications, the PR and Marketing staff examined how potential students want to be better people and pursue careers that matter. Their desires align perfectly with Austin Peay's new mission that challenges students to "make a positive impact regionally and globally."

Community.

The second call to action – "Experience Community – addresses the potential student's desire to find a campus home where they'll receive "personalized and one-on-one support." The MP&F research also found that community, which equates to safety and security, was also a priority for the parents of these students. Austin Peay's new mission touts its "community-minded" and "collaborative" environment. Austin Peay will provide students with that community – both in the classroom and through personal connections with peers and professors – while also preparing them to join a global community once they graduate.

Compassion.

The third call to action – and possibly the most important word in the tagline – is for "compassion." MP&F focus groups found that students "are motivated most by the opportunities to meet new people who look and think differently from them." This demand is supplied by Austin Peay's new mission to "inspire an inclusive community of learners to make a positive impact regionally and globally." Compassion is also inherent in the University's new values, which prioritize "public service," "integrity," and "personal growth."

These experiences from the tagline's headline – "Experience Change, Experience Community, Experience Compassion" – speak directly and succinctly to what Austin Peay offers, what sets it apart from other schools, and what potential students are looking for.

Experience Change. Experience Community. Experience Compassion.
The life you want begins at Austin Peay.

This phrasing helps capture the core of Austin Peay and lays out an exciting and ambitious path for the future of the University.



Pillar 1: The Academic Experience

Goal 1:

APSU will be a premier public regional university known for student-centered teaching excellence and high quality, innovative, and creative scholarship that is responsive to the needs of our diverse community and beyond.

Objective 1: Increase high quality instruction and scholarship related to pedagogy.

Objective 2: Enhance the quality and breadth of faculty scholarship.

Objective 3: Improve support for diversity and inclusion across the APSU academic community.

Goal 2:

APSU will evolve academic offerings to strengthen our emphasis on delivering quality programs that address community and regional needs.

Objective 1: Improve the quality of academic programs to exceed state standards and professional accreditation expectations.

Objective 2: Align degree programs to better serve the needs of the community and region.

Objective 3: Evolve programs and curricula to reflect best practices in preparing students to contribute professionally, civically, and creatively in their field of choice.

Goal 3:

APSU will optimize our institutional infrastructure to meet the academic needs of our students.

Objective 1: Increase the efficient use of educational spaces.

Objective 2: Align organizational structures across the university.

Objective 3: Increase the variety and flexibility of academic offerings across terms, instructional sites, times of day, and modalities to improve educational accessibility.

Objective 4: Monitor and assess our social, physical, and financial environment to identify and address threats to institutional sustainability.



Pillar 2: The Student Experience

Goal 1:

APSU will afford each student the opportunity to have interactions and experiences by cultivating an inclusive community.

Objective 1: Support all student populations through a variety of resources, programming, and spaces.

Objective 2: Foster meaningful opportunities and experiences for student engagement and exploration.

Objective 3: Provide more dynamic programs and events that celebrate and unite our diverse community and instill a sense of belonging for all Governors.

Goal 2:

APSU will ensure that all students are equipped to pursue their educational and career goals in an empowering environment.

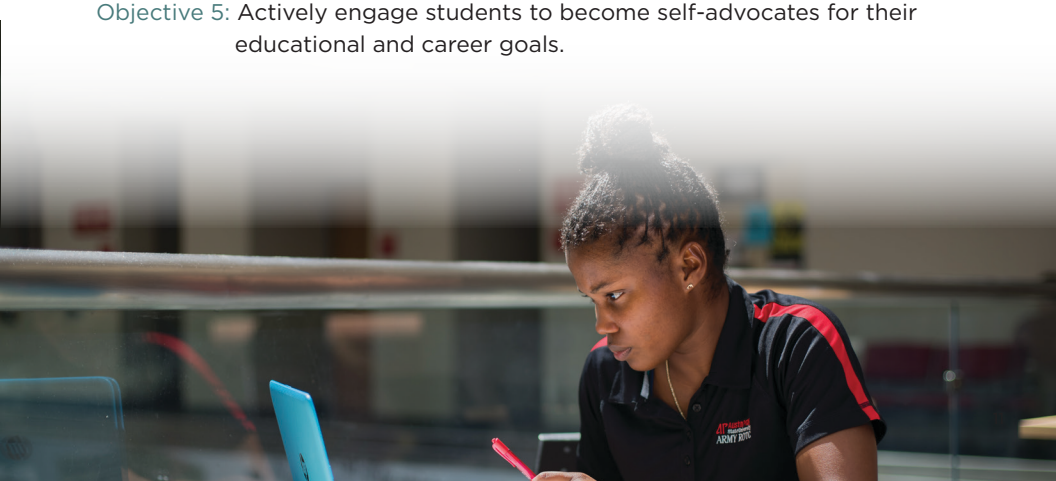
Objective 1: Develop, implement and track a robust strategic enrollment plan to support higher education initiatives including the Tennessee Drive to 55.

Objective 2: Strengthen University collaboration to foster awareness of and access to student support resources.

Objective 3: Increase the number of students academically engaged beyond the classroom.

Objective 4: Improve the quality, consistency, and accessibility of our student support resources.

Objective 5: Actively engage students to become self-advocates for their educational and career goals.





Pillar 3: The Employee Experience

Goal 1:

APSU will empower employees to meet their learning and development objectives.

Objective 1: Provide opportunities to enable employees to flourish in or advance their personal and professional development through best practices.

Objective 2: Equip campus leaders with training and support to thrive in their roles while advancing the mission of APSU.

Goal 2:

APSU will support a campus culture where all employees can grow and flourish.

Objective 1: Create a culture of flexibility in response to the evolving workforce to strengthen employee retention and personal well- being while maintaining the vibrancy of the APSU campus.

Objective 2: Attract, hire, and retain high quality faculty and staff to include underrepresented populations.

Objective 3: Operationalize collaboration and teamwork across units, divisions, and colleges to foster a problem-solving culture.

Goal 3:

APSU will cultivate a culture of connectedness in which employees intentionally engage with students to enrich the campus experience and influence student success.

Objective 1: Actively support students by attending University events.

Objective 2: Build awareness of the impact our work has on the APSU Mission and in the lives of our students.



Pillar 4: The Community Experience

Goal 1:

APSU will develop and enhance mutually beneficial community partnerships.

Objective 1: Create partnerships and engage with businesses, local government, donors, and alumni.

Objective 2: Connect the university with corporate advisers, increase prospects for new revenues and expand experiential learning opportunities for students.

Objective 3: Develop a sustainable model that links service learning courses, service opportunities, internships, and volunteer efforts to community organizations.

Goal 2:

APSU will increase community involvement by offering robust and unique programming.

Objective 1: Increase community engagement experiences for students, faculty, staff, and alumni.

Objective 2: Provide and promote experiences that connect our community with Austin Peay.

Objective 3: Promote and expand formalized relationships with government, education, business, industry, and non-profit entities.

Objective 4: Increase support to Fort Campbell and other military-related communities through innovative programming and research partnerships.

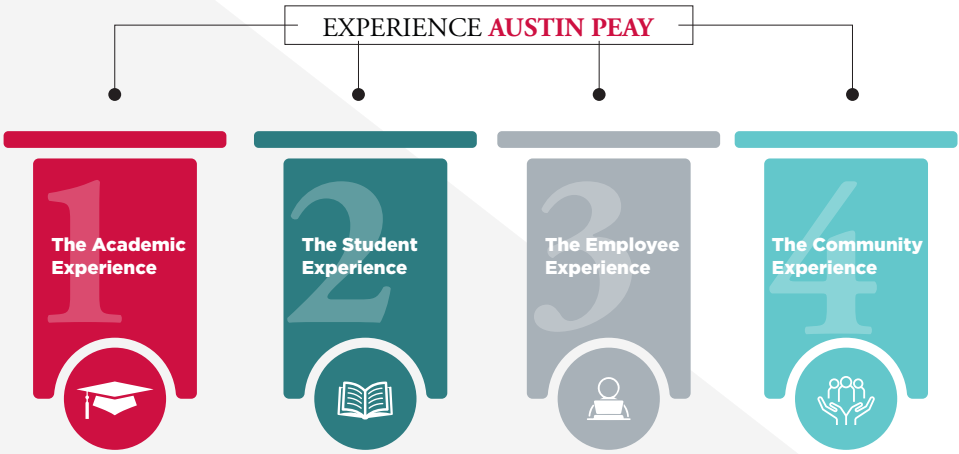
Objective 5: Maintain a successful NCAA Division 1 Athletics program that strengthens campus and community involvement.

Goal 3:

APSU will create a Gov-for-Life atmosphere that promotes sustained student and alumni engagement.

Objective 1: Expand regional and global networks and mentoring opportunities for our students and alumni.

Objective 2: Strengthen our alumni engagement and participation.



Strategic Plan Assessment

The Strategic Planning Team will establish a subcommittee to inform the creation of the University Strategic Plan Dashboard. The sub-committee will also serve as the reviewing body for goal and objective achievement annually for the life of the strategic plan. A structure has been established that will support the Strategic Plan through alignment of the annual Institutional Effectiveness Process (IEP) with the annual budget process.

The Institutional Effectiveness Process

The strategic planning process is supported, in part, by the annual Institutional Effectiveness Process (IEP). The IEP is focused on assessment of outcomes selected by, and relevant to, departments and units. The process involves the collection and analysis of relevant data, specific to departments and units, in order to make improvements to department and unit functions and services, as well as to improve student learning and success. It is expected that the department and unit outcomes align with one or more of the Austin Peay State University strategic plan goals. In addition, the annual IEP provides an opportunity for departments and units to submit budget requests that will enhance the department's ability to make improvements to its functions and services, and/or to student learning and the student learning environment.

The Budget Advisory Task Force

The Budget Advisory Task Force is an advisory body to the president. The task force is knowledgeable of the University budgeting process and has a comprehensive understanding of the resource issues facing the University and the context in which budget decisions are made relative to the University's strategic plan. The task force also reviews and provides input into the budget process, as appropriate, and facilitates communication of the University's operating budget that is transparent and informative. The task force provides input on the framework of the University's strategic plan and provides input on budget priorities for resource allocation or reallocation.

Dashboard Measurements

The University will create a dashboard to measure its progress in accomplishing its goals. This dashboard will consist of multiple data fields that depict a broad view of the University, as well as key indicators of success. The Strategic Planning Committee and the assessment sub-committee will work with various stakeholder groups to determine the best key performance indictors (KPI) to display and share through the strategic planning website.

Tactical Planning

In the fall of 2022, committee members will develop tactical plans to successfully achieve each goal. The Strategic Planning Committee, working with each subcommittee, will evaluate these tactics each year and adjust them if necessary.

The Next 5 Years

The Austin Peay State University strategic plan is a flexible document that allows for changes in the coming years. Unanticipated economic and environmental factors may require the adjustment of priorities and objectives. Scheduled reviews will occur annually to ensure that the plan continues to represent the best path forward for the University.

During the review periods, changes may be proposed through goal champions who will bring those proposals to the Strategic Planning Committee. The Strategic Planning Committee will also regularly determine if a goal has been achieved, or if new objectives or priorities should be solicited, based on current trends and needs of the University.





Austin Peay State University

CLARKSVILLE TENNESSEE

Office of the President
Box 4576 601 College St. Clarksville, TN 37044

CoSTEM Leadership Meeting Minutes
November 4, 2021

The meeting was called to order at 2:30 pm. The following were in attendance: Nicolas Coleman, Jack Deibert, Kallina Dunkle, Samuel Jator, Alex King, Amy Lebkuecher, Leong Lee, Karen Meisch, Debbie Shearon, Don Sudbrink, Lisa Sullivan, and Amy Thompson.

1. Plant Funds: College will send forward $150,000 in requests. Are there critical safety issues?
   - Allied Health has an x-ray machine that the light will not go off. This could be a fire hazard. It was suggested that the department reach out to Perry Scanlan to see if he has funds to cover this or Carl Gerhold since this could be a safety issue. Dr. Meisch will need this information by November 19th.
   - Fume hoods are needed. Dr. Sullivan will send out list of available hoods that are currently in Allied Health.
   - Dr. Meisch will meet with Chairs who are located in SSC to discuss fume hoods and future available space.
   - The first four items on the list for Chemistry are critical.
   - Mathematics requested updating desks/tables for Math classrooms in the Technology Building. The department should check to see how many are needed and if we are required to purchase specific tables.

2. CoSTEM Stars: Dr. Chaparadza's proposal which focuses on student success. Faculty volunteers will serve as mentors to students.
   - One year requirement.
   - Mentor to meet with student during the first two weeks of the semester. Meet twice a semester.
   - Allow students to choose their mentor. Faculty pictures and bios would be housed on a STEM Stars webpage.
   - Possibly provide one-on-one advising, take student to a seminar, performance, etc.
   - This service could be used for RTP or evaluation of faculty.
   - Department chair would approve this service so that if it was not a good time for the faculty member, the chair could steer them in another direction.

3. Science on Tap: Dr. Coleman will create a process for faculty who are interested in presenting to send him a proposal and abstract for review. This information will be added to the College website and an email will be sent to all faculty detailing how to submit their information.

4. CoSTEM Student Spotlight: Dr. Chaparadza will be bringing back the student spotlight.
   - Two students will be spotlighted each month.
   - Don't have to be top achieving students. Could be non-traditional or active in a student organization.
   - Faculty should start sending in nominations now so that a repository can be built. Will begin posting on social media in the spring.
   - The college will spotlight two faculty or staff the other two weeks of the month. Will begin with Associate Deans and Department Chairs.

5. Substitutions & Waivers: Concerns were shared with Nancy King-Sanders. She stated that paper forms can be used while the system is not working properly. If anyone is told differently, they are to contact her. She recommends calling Sherry Comperry right away when an issue occurs. It was noted that if a lab is being substituted as well as a lecture, two forms will be needed.

6. Master of Environmental Science: Feasibility study has been completed, Dr. Meisch will send to chairs.
   - Degree would consist of courses we already offer.

- Maybe non-thesis, internship, or capstone track.
- Maybe face-to-face and online.
- Who wants to be a part of this conversation? Biology, Geosciences, Agriculture, Physics, Chemistry.
- Maybe outside of STEM. Possibly housed in Geosciences.

7. SSC Lobby TV: Will be located in the lobby and used by Geosciences to recruit. Can share screen time.

8. Shared equipment: Dr. Meisch will find the list of equipment for the college and send it out to everyone.
   - Find out what equipment can be shared with others in the college.
   - Need to know what equipment is available and determine what makes sense to share.
   - Look at shared space opportunities.
   - Declutter lab spaces and storage areas.
   - Create a procedure for machine time allotment along with rates and charge grants for usage. Rates would need to be set as well as a process for charging grants.

9. DoE Student Support Services Grants: Department of Education. Received a list of grants.
   - Look over grants and have interested faculty build teams.
   - Tim Atkinson making a list of who has submitted grants and what the grants were.
   - SSSTEM grant is normally due in December or January.

10. GTA update: Chad talked to Andrew Luna about Dr. Jator's suggestion. He like it but wasn't sure if there would be issues. Chad is talking to Doug Austin in IT.

11. Other:
    - ROW will be changing to GO, Govs Orientation next year. The sessions will focus on getting students registered.
    - There will be 7 or 8 sessions from April to August. Sessions will mainly be on Friday and Saturday.
    - Would like to have 2 to 3 chairs at a session so that department chairs attend 2 or 3 a year, by rotation.
    - Can attend any or all sessions.
    - When a student is admitted and declares a STEM major they are sent a letter from Admissions and a STEM sticker. Departments are welcome to reach out to these students also.
    - Faculty can teach APSU 1000 in the fall.
    - Mid November an invitation to the graduation reception will be going out to students, faculty, and staff.
    - We will begin seeing billboards specific to academic programs.
    - Ellen Harmon is the new Director of Marketing.
    - Chairs meeting with Provost Friday afternoon. There is a bill on Governor Lee's desk that will go into law that states any government entity receiving state funding can't require masks or vaccinations.
    - Aviation Science Open House Saturday.

Upcoming Important Dates:

- Science on Tap First Tuesday each the month 5:30 Upstairs at Strawberry Alley
- Graduate Reception Friday, December 10th following graduation Sundquist Atrium
- Capstone Presentations Friday, April 22nd 4:30-8:00 Echo Power Club
- Spring Awards Banquet Friday, April 29th UC Ballroom

Action Items:

1. Submit requests for fund raising.
2. Reminder – if you have not already done so, please submit your assessment timeline.

Department of Geosciences Faculty Meeting
August 18, 2022, 9:30-11:00 AM
McCord Building, Room 211 and via ZOOM
Agenda
Minutes

[Text in italic red are the minutes, text in black are the original agenda items.]

In attendance: Camilleri, Carrigan, Deibert, Dunkle, Frederick, Gentry, Giefer, Haroldson, Mathenge, Ridenour, Clay

Welcome to New Lab Manager – Mitchell Clay

Welcome Mitchell to our department.

Cindy will be retiring October 7, 2022. Please turn in any paperwork you might need assist with before she leaves.

Approval of Minutes

-see handout of the 5-3-22 minutes
Minutes approved. No changes needed

Chair's Remarks

Congratulations to Dr. Haroldson for his promotion to Associate Professor, and for his work on the new Honor's course, that proposal is interesting.

Congratulations to Dr. Dunkle for ten years of service to the university. Congratulations on publishing a paper this summer titled "Groundwater origami: folding paper models to visualize groundwater flow".

Thank you to Dr. Gentry for serving as summer chair, his outstanding work in organizing GO Weekend. He will have assistance from Drs. Dunkle and Haroldson, and Mitchell.

Thank you to Dr. Gentry for also spending a significant amount of time updating our website.

Congratulations to Dr. Giefer for surviving this summer in the Galapagos Islands. Dr. Deibert suggests at some point giving a talk on her adventures and research while in the Galapagos Islands.

Important Things to Do/Know Before Classes Start and for First Weeks of Class

- Plan for SLO assessments in Fall classes (see Chair's e-mail of 8/15/22).
- Send Cindy ADA compliant syllabi (Word file).
- Post pdf of syllabi to D2L shells.
- Log into classroom computer way ahead of time. It will take a fair amount of time for computer to start-up.
- Every student is important!!! *As there will be students admitted next week, look for new students to possibly show up on your class rosters.*
- Be prepared for students adding late to your classes.
- Take roll and early-alert students who never attend.
- Look for new majors on your roll sheets in introductory courses. Reach out and make a connection with these students.
- Extra effort needed in 1000-level courses for recruitment of majors.
- All grades must be posted on D2L in a timely manner for all courses (new requirement). *Dr. Deibert suggests no more than a week between the time you sign that grade or give it back to students, and posting onto D2L. Students need to know what their grade is.*

Dr. Gentry suggests raising geology lab TA pay to $15 an hour to be competitive with other lab TA workers on campus, and off campus entry level jobs in the area.

Drs. Dunkle and Gentry also commented on lowering the GPA to 2.25 on geology lab TAs.

Geosciences Budget (as of 8/9/22)

Operating Budget
Beginning: $15,725
(15% reduction from 2019)

Lab Budget
Beginning: $31,000

Faculty Travel and Travel in Support of Instruction
Beginning: $10,900

Dr. Deibert states the lab budget started out last year at $31,000; then, by the end of December, it was cut in half. He is not sure if this will reoccur again this fall.

Proposed M.S. in Environmental Sciences [Gentry and Dunkle]

- see attached page at end of agenda

Per Dr. Gentry, all of these courses have already been taught on campus with the exception of the research/seminar course. These courses have already been taught online or are currently being taught online, or can be taught online. Some students interested in the M.S. in Environmental Sciences degree would not be able to attend courses if they were already working in their field of study. Therefore, they had to offer courses that would be available for professionals to take online. There will be a science track and a leadership track.

Dr. Ridenour asks the question of what if a student has already taken GEOG 4000 and/or GEOG 4040? How or what would the professor teach the incoming master's degree student that had previously taken the 4000-level course/s? Dr. Gentry answers that the option could be that those particular core courses could be waived and the student would have to pick 6 hours of other courses that they have not had. In order to get students into the program for it to start up, there will have to be a case by case for each student. So, it would be an advising task, more so than a problematic task for registrations.

Dr. Deibert explained to Dr. Mathenge (who will be teaching some of the core classes) that even though these courses are currently being taught on ground, lectures could be recorded and broadcast via Zoom and then posted on D2L.

Dr. Gentry states Sustainable Energy Systems is not currently being taught. It resides in the physics department. There is a physics adjunct professor that will teach the course as requested. It is set up as an online course, based on very basic principles. It is a course that could reside over in the geosciences department eventually.

Dr. Gentry states the leadership courses in the M.S. in Environmental Sciences degrees are all online 8-week courses. Some of these courses are taught in summer semester.

Dr. Gentry also discussed the Sustainability Certificate and courses required for it.

Dr. Gentry explained the Master's Degree along with the Sustainability Certificate is an open opportunity for many students. Core courses have very minimal pre-requisites.

Dr. Deibert states this is a master's degree without a thesis.

Discussion on two-year rotation of courses.

The proposal has to pass through CoSTEM, THEC and SACS. Program will more than likely not be in place until Fall 2024.

Possible Curriculum Proposals for 2022-2023

1. Change the name of Geosciences major.
2. Other proposals?

- Any changes to the 2023-24 Catalog need to be approved by the end of the Fall semester.

Dr. Dunkle we should really try to change our GEOL 1040 and GEOL 1050 descriptions.

Discussions on changing the names of courses.

Dr. Deibert will schedule a meeting to discuss name change of the major.

Revision of RTP Criteria

- Revision of criteria by departments needs to be done early this Fall.
- Our department needs to form a criteria review committee.
- The committee needs to include Assistant professors, Associate professors, and Professors.
- The review committee will review the current criteria, propose changes, and discuss the revised criteria with the department.
- Dean and Provost will review department's proposed changes.

Dr. Deibert states there needs to be a review committee formed. Volunteers were Drs. Dunkle, Giefer, Gentry and Haroldson.

Dr. Gentry will be in charge of scheduling a meeting to go over criteria.

Faculty discussed current criteria, and possible changes to the criteria.

New CV Software - Watermark Faculty Success

- All faculty need to load CVs in the new system by mid-January
- The software will be used in the annual faculty evaluation process

Departmental "expectation" for minimum amount of office hours per week

- Provost wants each department to establish an expectation.
- Office hours need to match teaching modality (in-person, on-line)

Dr. Deibert feels that the provost wants to have some sort of minimum number of office hours for faculty. The provost has "kicked it" down to the departments to set their own departmental standards for expected office hours.

Dr. Gentry mentioned a standard across the board for the university (unspoken rule) is at least five hours a week, for at minimum of four days.

Discussion concerning the college possibly changing of the name "office hours".

Spring 2023 Course Schedule

- Spring 2023 course schedule needs to be finalized by Aug. 29.

Dr. Ridenour asked about being under in TLCs this Fall semester. Dr. Deibert explained the possibility that he and Dr. Ridenour could have an agreement to complete a research project. At the end of the semester, Dr. Ridenour could give Dr. Deibert tangible research.

Meeting with the Provost

- Provost Cronley wants to attend a department meeting for 30 minutes.
- Should this be a separate meeting?

Dr. Deibert suggests provost coming at the beginning of the meeting, possibly at 12:30 pm.

Future Fall Department Meeting dates

- Fridays 1:00-2:00 pm?

Dr. Mathenge asked if there is alternate time, other than Fridays 1 – 2pm.

Dr. Deibert suggests maybe alternating days and times.

Other Agenda Items?

Dr. Camilleri mentioned that if anyone ran out of OneDrive space, to call IT and they will give you more space.

Announcements:

Important Dates

- Academic Rush: September 15th from 4:00-6:00 pm
- Govs Preview Days: Sat. October 15, Sat. October 29, 2022, 12 – 2 pm

Dr. Deibert suggests maybe getting some of the geoclub students to help out with these events.

Adjournment

Masters of Science, Environmental Science – Summary Information

The proposed interdisciplinary Masters of Environmental Science is geared towards professionals who seek employment benefits from the completion of a master's degree focused on environmental science and leadership. The core courses are composed of 18hrs of online classes between chemistry, geosciences, and leadership. The remaining courses are divided into science and leadership tracks. Degree candidates can choose any additional 12hrs from select courses in agriculture, biology, chemistry, communications, computer science, geosciences, leadership, or management. Courses do not have to be taken from a single track. While all of the core courses are online, courses within the tracks are a mix of online and face-to-face delivery methods. It is possible for a candidate to complete the entirely program online. The Department of Geosciences will administer the degree.

Core Courses – 18hrs

Number	Course Title	Units
CHEM 5150	Data Analysis	3
CHEM 5860	Scientific Communications	3
GEOG 5000	Environmental Management	3
GEOG 5040	Advanced Sustainable Development	3
LDSP 5100	Leadership for the Scientist-Manager	3
GEOG/GEOL 5995	Research Methods/Seminar	3

Elective Courses – 12hrs from either track

Science Track

Course Number	Course Description	Hrs
AGRI 5140	Graduate Economic Entomology	2
AGRI 5220/5221	Graduate Soil & Water Conservation	3
BIOL 5540/5541	Plant Ecology	4
BIOL 5740/5741	Conservation Biology	4
CHEM 5140	Chemical and Laboratory Safety (online)	3
CSCI 5015	Data Science in Python	3
GEOG 5010	Environmental Assessment	3
SUST 5060	Sustainable Energy Systems	3

Leadership Track

Course Number	Course Description	Hrs
COMM 5110	Leadership & Communication	3
COMM 5210	e-Communication Strategies	3
LDSP 5105	Project Planning & Scheduling	3
LSDP 5310	Community Leadership	3
LDSP 5400	Grant Development	3
LDSP 5410	Grant Administration	3
MGT 5010	Business Foundations	3

Austin Peay State University
CLARKSVILLE TENNESSEE

Department of Earth and Environmental Sciences

Monthly Meeting Agenda: 10/30/23

Start Time: 2:30 pm CST Location: McCord 211

- Approval of Minutes from September 26, 2023
  - Please review OneDrive Link to previous meeting minutes: link

- **Action Items from Previous Meeting**
  - **a. Alumni and Employer Survey**
    - **i. Work on going…**
  - **b. Lower Division GEOL Lab TLC Reduction**
    - **i. Official email/conversation with Dean Meisch, TLC must follow workload policy; 2 TLC as is was rejected**
      1. **Several other departments have lab courses with more than 24 students; some limited by the size of the rooms (fire code)**
    - **ii. How would you prefer to proceed?**
      1. **Continue with 2 days/week at 1.5 TLCs**
      2. **Increase the number of contact hours to 3hrs/week for 2 TLCs**

Geology faculty will meet to discuss the options available and come up with a plan.

  - *c. Follow-up Items*
    - i. Register for APPQMR training
      1. October 11-25, Online Asynchronous
      2. December 14, Face-to-face
      3. January 9-10, Synchronous Zoom
      4. January 11-12, Synchronous Zoom

December 7th added to the list: Erik and Christine will be attending so they will miss the dept. meeting.

    - ii. Recruit, recruit, recruit

- Chair's Comments

Thanked Mitchell and JJ for help with the open house and to all faculty for speaking with students and recruiting at the event.

Thanked faculty taking students to GSA and working with them to complete their research and posters.

Thanked Mitchell in advance for the elementary school visit on Friday, December 1.

Thanked JJ for all her work in the department this past year.

- Reduction in Lab Budget
  - Due to an error in the estimation for lab fees for the college, our lab budget will be reduced by $1,000.
  - Depending on fluctuations in enrollment this could be temporary but the budget is dependent on the number of students paying those fees.

Other departments took larger reductions; hopefully everything will return as normal in 2024.

- Renaming GEOG 1035 and GEOG 1045 World Regional Courses
  - The department will be submitting a proposal to change the names of the world regional courses.
    - The current names were forced on us by TBR: World Regional 1 and World Regional 2
    - Professional advisors and students believe the courses are sequential when in reality they can be taken in any order.
  - Departmental Vote (all faculty):
    - New Names
      - GEOG 1035 – Geography of Europe and the Americas
      - GEOG 1045 – Geography of Africa and Asia

Name change passed by majority vote; Christine voiced concerns about various issues she has regarding the name change. Requested a geographers only email to discuss. Meeting scheduled for next week. If solution isn't found at meeting dept will proceed with above names.

- Change in Advising Software
  - OneStop advising will be transitioning to AP Navigate in March
  - We will no longer advise students using OneStop
    - Comments placed in previous semesters will be retained.
  - More training and information will be available on this change in the upcoming months.

- Supplemental Instruction Model
  - Dr. Griffy is looking for faculty who teach multiple sections of the same course with high DFW rates.

- UC would provide assistance with the development of a faculty led, 1hr extra course (potential for student workers as well) to provide supplemental instruction to less the DFW rates.

- Update: Master of Science, Environmental Sciences
  - Edits provided to Provost's Office; waiting on response
    - Kallina is taking the lead for the college

Kallina stated the proposal is in the provosts office and we were waiting to hear about the next steps.

- Travel and Travel Authorizations for GSA
  - All individuals with outstanding travel claims need to submit them to JJ ASAP
  - If you are submitting a new travel authorization, please work with Mary Biggers until a new AA2C is hired

- Faculty Medical Accommodations
  - Faculty requesting medical accommodations need to work with Sheila Bryant in the Office of Institutional Culture for approval.
  - Faculty cannot, even temporarily, adjust their teaching modality without prior approval.

- Faculty Absence Forms
  - Faculty must submit a Faculty Absence Form for any leave during regular work hours
  - This includes personal or family illness, health care appointments, or other instances when you are away from campus for personal errands
    - Counts against sick time
  - Institutional leave for field trips, conferences, invited talks, meetings, or other activities where you are representing the university in an official capacity
    - Does not count against sick time

As long as you are present during the courses, events, and activities required of your position then you're fine. If you need to miss any part of your required duties you will need an absence form.

- Open Discussion
- Important Dates
  - Govs Preview Day
    - Fall: October 14
    - Spring: February 3, March 16
  - Spring Advising Luncheon
    - March 15, 11am-1pm
  - CoSTEM Coffee/Earth Day Event
    - April 2024

Austin Peay State University
CLARKSVILLE TENNESSEE

Department of Earth and Environmental Sciences

Monthly Meeting Agenda: 12/07/23

Start Time: 11:00 am CST Location: McCord 211

In attendance- Camilleri, Clay, Deibert, Dunkle, Frederick, Gentry, Giefer, Ridenour
Haroldson & Mathenge – Training
DeCelle - minutes

- Approval of Minutes from October 10, 2023

  Please review OneDrive Link to previous meeting minutes: link

  Voted to approve

- **Action Items from Previous Meeting**
  - **a. Alumni and Employer Survey**
    - **i. Work on going…**
  - **b. Lower Division GEOL Lab TLC Reduction**
    - **i. Decision was to increase the number of contact hours to 3hrs/week for 2 TLCs via conversion to hybrid. Details to be worked out in the spring. (make sure 2 tlc time frame will be met-online portion will be subject to RSI)**

      Spring of 2025 all online will need RSI
  - **c.** *Follow-up Items*

    Very close to being done by January (Dan / Greg need to finish)
    - **i.** Register for APPQMR training
      1. December 14, Face-to-face
      2. January 9-10, Synchronous Zoom
      3. January 11-12, Synchronous Zoom
    - **ii.** Recruit, recruit, recruit

- Chair's Comments

Welcomed Renee

Thanked for recruitment (no less than 5 students a month) double digit increases from summer to fall with students; run new numbers of students

Above 40 students?

Thanked Mitchell -sandbox for elementary; Meisch on the Mike (thanked Mitchell);

Good feedback (new students coming in spring from Meisch on mike)-2 new students

Good feedback on Erik's Science on Tap-one of the best that has been held; some social media posted

Thanked everyone for semester support

- Renaming GEOG 1035 and GEOG 1045 World Regional Courses ○

New Names

- ✦ GEOG 1035 – World Geography
- ✦ GEOG 1045 – Popular World Geography ○

Currently at the University Curriculum Committee

UCC meets December 11th – to clear hurdles (fall new names)

- Update: Master of Science, Environmental Sciences
  - ○ Need letters of support from regional businesses for the letter of notification ✦ Ideas of companies?

(3 needed)

Still in letter of notification process; some items changed

need letters of support (Kallina/Chris discussed)-no GIS – environmental friends-TTL folks(Kallina); Mark Van Aiken, Jared Manning,

Heathbush, Chris Green, TDEK, Hankook, Nearstar, mining people (Erik), Fort Campbell(?), Sara Zerkel(?), Water Treatment Plant(?)

Our master degree??

not approved by whole college – approved by K Meisch; bulk of courses are chemistry & ess; curriculm changes must go through us;

Discussed down the road – future of program – big enough to have 15-20 grad students to do on-ground

Board must approve and approved by everyone APSU

- Graduation
  - ○ Reminder that faculty are required to attend two (2) graduations per year; one in May and the other either in December or August ✦ Who will be attending?
    - ✦ Anyone attend in August?

Provost wanted to remind everyone what is required (she has spoken to Deans); Chris not taking attendance

(December '23) Chris, Geifer,

Haroldson (August '23)
Everyone else needs 2

- Collapsing Terms -informational only
  - Currently there are 8 terms listed in Banner
    - Spring I FC, Spring, Spring II FC, Summer, Summer III FC, Fall I FC,
      Fall, Fall 2 FC
  - Beginning Fall 2024 there will only be three terms
    - Fall, Spring, Summer
- Will still have intersessions within each term but will be identified as one of three terms

Fall, spring, summer – banner side (professors will not see)
As advisors make sure students know that there will be a lot of classes and to scroll-pay close attention-not doing a lot of 1st/2nd year advising;

- Summer/Winter Teaching Rotation
  - Faculty senate is looking into "fair and equitable way to assign summer teaching opportunities consistent with expertise."
  - The dean would like to understand how departments assign summer/winter teaching schedule
    - Interested in determining the necessity for a policy or guidelines

Problematic? – not in our college/dept; have been problems in our areas;
GEOG- ask professor if they wanted to teach (Y/N)-when can you teach?
GEOL- work it out who / when
We have had discussions about when we could teach – based on class size in advance
Should we determine a policy to assign summer / winter teaching? Chris will draft a vague "how we do it" based on need, willingness &/or assignments for TLC deficits; untenured faculty (on track or not), or other considerations-will show to everyone and gather feedback from everyone; hold in his pocket for future
Do we want actual policy or department – handle internally?

- Annual Faculty Evaluation, Link to Policy 2:053 ○ Criteria percentages for 2024 set in January
  - All faculty must have up-to-date 2023 accomplishments in Watermark by February 9, 2024

Chris will view - Goes through Watermark-have it up to date (ANNUAL-year of 2023); accomplishments for 2023; 2/9/2024 (submitted); 2024 will be set in January;

- College Career Night ○ Potentially on Monday, February 19 (President's Day)

  Kallina said definitely happening on this date; CMCSS is off (5:30 start time-being discussed)
  Provide food was requested – Chris will continue to bring up

  - This was one of the most useful recruitment events for our department ✦ If resurrected, I would like to see all out participation

  Chris to gather more info as we develop it;
  Gathered most students from previous college career fair; told everyone to mark calendar -to be in one space; great place to recruit (students on campus and invite all High Schools)

- CoSTEM Student Advisory Board
  - The student board has already meet, however, there is not a representative from EES
    - ✦ Thoughts on students to encourage to participate?

  Per Kallina - Karen Meisch wants 2 from each department (we have 0);
  Reach out Allen Chaparadza / Mary Biggers
  Tech Bldg 134 (12/7 meeting)

- Open Discussion

  Will schedule January meetings this month & send out
  Good luck with finals
  Adjourned at 11:56am

- Important Dates ○ **Grades Due: December 18 by Noon** ○ Spring Term Reporting Date: January 8
  - Spring College Meeting: January 10 from 1:30-3:30pm (Chris not taking attendance but someone will be so all should attend)
  - Govs Preview Day
    - ✦ Spring: February 3, March 16 (Chris doing-may ask Mitchell for help-sandbox?); takeover seismometer?
- February 3, CoSTEM Hosted Basketball Game
  - Spring Advising Luncheon
    - ✦ March 15, 11am-1pm ○ CoSTEM Coffee/Earth Day Event
    - ✦ April 2024

Austin Peay State University
CLARKSVILLE TENNESSEE

Our Mission

Austin Peay State University is a mission-driven, community-minded institution that provides transformational experiences through innovative, creative and scholarly activities. We welcome and inspire an inclusive community of learners to make a positive impact regionally and globally.

Our Vision

We will be the region's university of choice for those seeking to improve their lives. We will achieve this vision through student-centered teaching, unique developmental opportunities and our focus on innovative research and public service.

Our Values

We are a collaborative community that values personal growth and lifelong engagement through the promotion of integrity and academic excellence.

ACADEMIC EXCELLENCE

By providing meaningful and practical learning opportunities with highly qualified and dedicated faculty and staff.

INTEGRITY

By maintaining an honest, fair and credible environment.

COMMUNITY

By fostering learning in an environment where all are welcomed and valued.

PERSONAL GROWTH

By providing the knowledge, tools and resources for all Governors to reach their full potential.

LIFELONG ENGAGEMENT

By providing services, programs and experiences that promote loyalty, pride and mutual support.

COLLABORATION

By enriching our local, regional and global communities through value-added programs, strategic partnerships and meaningful service.

Austin Peay State University
CLARKSVILLE TENNESSEE

College of STEM

Mission Statement

The College of STEM provides study for students in the areas of agriculture, astronomy, biology, chemistry, computer science, Earth and Environmental Sciences, mathematics, medical laboratory science, radiologic technology, physics, engineering physics, and engineering technology. Our outstanding, discipline-based programs are student-centered and designed to prepare students for responsible positions at all levels of research, industry, education, medicine, and government. We emphasize degree programs relevant to regional economic and market trends, designed to enable graduates to compete in the global economy and foster lifelong learning skills.

Our mission is to promote scientific literacy while emphasizing the process, content, and interdisciplinary nature of science. Additionally, our mission is to develop critical thinking skills, to enhance verbal and written communication abilities, encourage reasoned debate on scientific issues, and promote civic responsibility.

Our goal is to provide professional training at the undergraduate and graduate levels, while serving as a foundation for a career in science, technology, engineering or mathematics, as well as to provide training for allied health profession and pre-professional training in preparation for careers in medicine, dentistry, pharmacy, and veterinary science. In addition, we encourage collaborative research with faculty, internships, and other learning experiences that facilitate transition to work or graduate and professional education.

Course Descriptions

AGRI 5140 - Graduate Economic Entomology
Prerequisite: Graduate student status or permission of instructor; Description: Characteristics, biology, identification and economic importance of prominent insect pest species, and introduction to integrated pest management concepts and sustainability. Additional graduate level requirements will include a paper and an advanced insect collection.
2.000 Credit hours, 2.000 Lecture hours

AGRI 5220 - Grad Soil and Water Conservation
Co-requisite: AGRI 5221; Cross-listed: AGRI 4220; Description: Problems and methods of soil and water conservation; topography, soil erosion, water control structures, farm planning for sustained use of land, controlling water run-off from urban developments.
2.000 Credit hours, 2.000 Lecture hours

AGRI 5221 - Grad Soil and Water Conservation Lab
Co-requisite: AGRI 5220; Description: Laboratory investigation of problems and methods of soil and water conservation; topography, soil erosion, water control structures, farm planning for sustained use of land, controlling water run-off from urban developments.
1.000 Credit hours, 1.000 Lab hours

BIOL 5540 - Graduate Plant Ecology
Prerequisite: Admission to M.S. Biology or permission of instructor; Corequisite: BIOL 5541; Description: Plants and their environment with emphasis on quantitative and qualitative analysis of regional plant communities and their determining factors.
3.000 Credit hours, 3.000 Lecture hours

BIOL 5541 - Graduate Plant Ecology Lab
Description: see BIOL 5540
1.000 Credit hours, 1.000 Lab hours

BIOL 5740 - Graduate Conservation Biology
Prerequisite: Admission to M.S. Biology or permission of instructor; Corequisite: BIOL 5741; Dual Listed: Dual listed with BIOL 4740 for undergraduates; Description: A survey of biodiversity and the biogeography of biodiversity. Students will learn current tools used to assess diversity as they examine the challenges facing biodiversity and investigate methods to conserve global biodiversity. This course will emphasize quantitative methods in Conservation Biology and critical thinking to solve real-world problems.
3.000 Credit hours, 3.000 Lecture hours

BIOL 5741 - Grad Conservation Biology Lab
Prerequisite: Admission to M.S. Biology program or permission of instructor; Corequisite: BIOL 5740; Dual Listed: Undergraduate course BIOL 4741; Description: Laboratory course associated with BIOL 5740. A survey of biodiversity and the biogeography of biodiversity. Students will learn current tools used to assess diversity as they examine the challenges facing biodiversity and investigate methods to conserve global biodiversity. This course will emphasize quantitative methods in Conservation Biology and critical thinking to solve real-world problems.
1.000 Credit hours, 1.000 Lab hours

CHEM 5140 - Chemical and Lab Safety Grad
Prerequisite: CHEM 3210/3211 with grades of "C" or higher; Dual Listed: CHEM 4140; Description: An overview of best practices to minimize incidents in a laboratory setting. Topics include federal, state, and local regulations, measures for the prevention of laboratory incidents, and general chemical knowledge as it pertains to risk assessment and prevention.
3.000 Credit hours, 3.000 Lecture hours

CHEM 5150 - Data Analysis Graduate Level
Prerequisite: CHEM 3210/3211 with grades of "C" or higher; Dual Listed: CHEM 4150; Description: Theory and applications of advanced chemical analysis. Sampling methods, experimental design, Excel analysis, case studies, large and small data sets, utilizing data to teach statistical analysis and error, noise processing, data interpretation, and communication of results.
3.000 Credit hours, 3.000 Lecture hours

CHEM 5860 - Scientific Communication Grad
Prerequisite: CHEM 3210/3211 or 3510/3511 with grades of "C" or higher; Dual Listed: CHEM 4860; Description: Overview of written, visual, and oral methods of science communication; major sources of scientific information and procedures for their efficient use. Focus will be on writing papers, proposals and presentations targeting both scientific and non-scientific audiences.
3.000 Credit hours, 3.000 Lecture hours

COM 5110 - Leadership and Communication
Description: This course is designed to introduce students to leadership perspectives and the role communication plays in effective leadership and management strategies.
3.000 Credit hours, 3.000 Lecture hours

COMM 5210 - e-Communication Strategies
Description: This course surveys critical issues in management communication, promotional strategies, public relations and marketing communication in the context of electronic marketplaces and virtual communities. Course activities include online assignments, traditional and online readings, projects and guided evaluations of a variety of e-strategies.
3.000 Credit hours, 3.000 Lecture hours

CSCI 5015 - Data Science in Python
Description: This course introduces data scientific methods, processes and systems used to extract knowledge from structured or unstructured data. It covers the basics of the Python programming environment, as well as, data manipulation and cleaning techniques using Python data science libraries for data analysis.
3.000 Credit hours, 3.000 Lecture hours

GEOG 5000 - Environmental Management[1]
An analysis of environmental regulations and management strategies employed by federal agencies, state, and local governments, and corporations.
3.000 Credit hours, 3.000 Lecture hours

GEOG 5010 - Environmental Assessment[1]
Prerequisite: ENGL 1100, GEOG 4000; Description: An analysis of the environmental impact statement (EIS) process. Emphasis is placed on preparation, review, and requirements of an EIS as a tool for environmental assessment.
3.000 Credit hours, 3.000 Lecture hours

GEOG 5040 - Advanced Sustainable Development
Prerequisite: GEOG 1015 and MATH 1710 or higher, or consent of instructor; Course Description: Utilizing systemic human, economic and environmental interactions, sustainable development carries out the examination of a rapidly growing Earth population footprint through continued natural resource use, pollution production, and population adaptation. Minerals and energy resources, soil, water, air, forests, and wildlife habitats will be considered. Reducing consumption and development of alternative resources are course focuses.
3.000 Credit hours, 3.000 Lecture hours

GEOG/GEOL 5990 - Seminar in Geoscience[2]
Prerequisite: Consent of instructor; Description: Techniques of writing, editing, and oral presentation in the geosciences. Professional geologic reports, abstracts, research proposals and papers are emphasized. Location and critical evaluation of data in print and electronic media will also be addressed.
3.000 Credit hours, 3.000 Other hours

[1]Will need to be cross-listed as a graduate course.
[2]Will need to be created as a new graduate course.

LDSP 5100 - Leadership for the Scientist Manager
Description: The interplay between management and leadership will be addressed. Using readings, group discussions, case analyses, and self-assessments, this course will explore such management topics as hiring, motivating, and appraising employees. Leadership topics to be explored include prominent leadership theories and their practical application, and leading change in today's multicultural workplace.
3.000 Credit hours, 3.000 Lecture hours

LDSP 5105 - Project Planning and Scheduling
Description: Contemporary methods used in project planning and scheduling are covered. Critical path method with computer applications and solution of case problems are stressed. MS Project software will be used during the course. Note: This course is equivalent to PTMA 5105 and TECH 5105. Student cannot take both courses to complete requirements for the degree.
3.000 Credit hours, 3.000 Lecture hours

LDSP 5310 - Community Leadership
Description: This course explores how individual backgrounds lead organizations, groups, and teams in the community realm.
3.000 Credit hours, 3.000 Lecture hours

LDSP 5400 - Grant Development
Description: This course provides students with the knowledge and skills to effectively request funds through grant proposals. Students will learn how to find a funding source among various public and private sources and how to plan and write a proposal.
3.000 Credit hours, 3.000 Lecture hours

LDSP 5410 - Grant Administration
Prerequisite: LDSP 5400; Description: This course prepares students for the procedures required within organizations for proposal processing and managing grant awards. Topics covered include budget development, implementation, accepting and managing grant and contract awards, reporting and record keeping, ethics in the grant’s environment, closeout procedures, and program evaluation.
3.000 Credit hours, 3.000 Lecture hours

MGT 5010 - Business Foundations
Description: Designed as the first course for non-business majors. Students are exposed to the competitive, fast-paced, constantly changing global business environment. This class offers students an overview of strategic planning, managerial and financial decision, employee relations, and ethical and social behavior.
3.000 Credit hours, 3.000 Lecture hours

SUST 5060 - Sustainable Energy Systems

Prerequisite: MATH 1530 or higher numbered MATH class or equivalent. Description: Fundamentals of both traditional and sustainable energy technologies with a focus on sustainable sources. Sustainable energy options surveyed include solar, wind, biomass, tidal, geothermal, hydropower, fuel cell (hydrogen) and others. Sustainability practices associated with supply, use, re-use and disposal of materials will be briefly addressed. The particular sustainability considerations of buildings and municipalities will be investigated.
3.000 Credit hours, 3.000 Lecture hours

Austin Peay State University Decision Support & Institutional Research

Enrollment Trends by College
Fall 2018 - Fall 2022

College	2018	2019	2020	2021	2022	5 Year Average
ACADEMIC AFFAIRS						
LIBERAL ARTS (AS)*	1,434	1,350	1,274	1,283	1,237	1,315.60
GENERAL STUDIES (BS)*	82	286	353	332	268	264.20
ACADEMIC AFFAIRS TOTAL	**1,516**	**1,636**	**1,627**	**1,615**	**1,505**	**1,579.80**
ACADEMIC FOCUS/UNDECIDED						
ACADEMIC FOCUS/UNDECIDED	197	165	147	41	68	123.60
ACADEMIC FOCUS/UNDECIDED TOTAL	**197**	**165**	**147**	**41**	**68**	**123.60**
ARTS AND LETTERS						
UNDERGRADUATE PROGRAMS						
ART (BA/BFA)	225	239	222	202	232	224.00
COMMUNICATION ARTS (BA/BS)	333	290	240	176	130	233.80
ENGLISH (BA)	147	129	115	98	112	120.20
FOREIGN LANGUAGES (BA)	41	47	51	37	32	41.60
HISTORY (BA/BS)	148	139	121	94	87	117.80
MUSIC (BA/BM/BS)	135	122	104	100	112	114.60
PHILOSOPHY & RELIGION (BA/BS)	16	17	16	15	9	14.60
THEATRE & DANCE (BA/BFA)	76	85	77	50	50	67.60
UNDERGRADUATE TOTAL	**1,121**	**1,068**	**946**	**772**	**764**	**934.20**
GRADUATE PROGRAMS						
COMMUNICATION ARTS (MA)	53	57	67	60	49	57.20
ENGLISH (MA)	12	16	15	14	14	14.20
HISTORY (MA)	26	26	26	27	18	24.60
MILITARY HISTORY (MA)	11	3	2	1	n/a	4.25
MUSIC (MMU)	33	30	26	24	25	27.60
GRADUATE TOTAL	**135**	**132**	**136**	**126**	**106**	**127.00**
CERTIFICATE PROGRAMS						
CLASSICS (C4 CERTIFICATE)	n/a	1	n/a	1	1	1.00
MUSIC PERFORMANCE (C4 CERTIFICATE)	n/a	n/a	n/a	2	0	1.00
CERTIFICATE TOTAL	**n/a**	**1**	**n/a**	**3**	**1**	1.67
ARTS AND LETTERS TOTAL	**1,256**	**1,201**	**1,082**	**901**	**871**	**1,062.20**
BEHAVIORAL AND HEALTH SCIENCES						
UNDERGRADUATE PROGRAMS						
CRIMINAL JUSTICE (BS)	407	433	374	350	319	376.60
HEALTH & HUMAN PERFORMANCE (BS)	648	621	591	478	437	555.00
KINESIOLOGY (BS)	n/a	n/a	2	127	170	99.67
LEADERSHIP & ORGANIZATIONAL ADMINISTRATION (BS)	107	111	113	107	65	100.60
LEADERSHIP SCIENCE (BS)	n/a	n/a	n/a	n/a	17	17.00
MANAGEMENT TECHNOLOGY (AAS)	71	54	53	10	2	38.00
NATIONAL SECURITY STUDIES (BS)	n/a	n/a	n/a	n/a	5	5.00
NURSING (BSN)	741	552	442	430	361	505.20
POLITICAL SCIENCE (BA/BS)	155	119	97	85	79	107.00
PROFESSIONAL SERVICES (AAS)	n/a	n/a	n/a	4	20	12.00
PSYCHOLOGICAL SCIENCE (BA/BS)	389	418	419	403	350	395.80
PUBLIC MANAGEMENT (BS)	49	46	28	25	22	34.00
SOCIAL WORK (BSW)	252	246	202	154	124	195.60
SOCIOLOGY (BS)	70	88	69	56	64	69.40
UNDERGRADUATE TOTAL	**2,889**	**2,688**	**2,390**	**2,229**	**2,035**	**2,446.20**

Source: Student Data File

Enrollment Trends by College
Fall 2018 - Fall 2022

College	2018	2019	2020	2021	2022	5 Year Average
GRADUATE PROGRAMS						
COUNSELING (MS)	53	51	45	50	59	51.60
COUNSELING PSYCHOLOGY (PsyD)	n/a	n/a	5	9	9	7.67
CRIMINAL JUSTICE (MS)	n/a	n/a	n/a	19	42	30.50
HEALTH & HUMAN PERFORMANCE (MS)	38	34	35	33	23	32.60
HEALTH CARE ADMINISTRATION (MHA)	35	36	69	48	39	45.40
INDUSTRIAL-ORGANIZATIONAL PSYCHOLOGY (MSIO)	36	41	49	59	52	47.40
LEADERSHIP & ORGANIZATIONAL ADMINISTRATION (MSL/MPS)	70	79	80	74	74	75.40
NURSING (MSN)	154	132	114	103	110	122.60
PUBLIC HEALTH (MPH)	n/a	n/a	n/a	n/a	10	10.00
SOCIAL WORK (MSW)	47	46	52	50	48	48.60
SPEECH-LANGUAGE PATHOLOGY (MSLP)	n/a	n/a	n/a	n/a	14	14.00
GRADUATE TOTAL	**433**	**419**	**449**	**445**	**480**	**445.20**
CERTIFICATE PROGRAMS						
ACADEMIC ADVISING (C4 CERTIFICATE)	n/a	3	7	6	2	4.50
COMMUNITY & ORGANIZATIONAL LEADERSHIP (C4 CERTIFICATE)	5	2	1	2	0	2.00
CONFLICT REOLUTION AND NEGOTIATION (C4 CERTIFICATE)	n/a	n/a	2	1	1	1.33
DIVERSITY, EQUITY & INCLUSION IN THE WORKPLACE (C4 CERTIFICATE)	n/a	n/a	n/a	4	0	2.00
FAMILY NURSE PRACTITIONER (C4 CERTIFICATE)	4	5	3	5	2	3.80
GRANT WRITING (C4 CERTIFICATE)	n/a	3	5	3	2	3.25
INTERDISCIPLINARY HEALTH AND SOCIAL JUSTICE (C3 CERTIFICATE)	n/a	n/a	n/a	n/a	1	1.00
PROJECT MANAGEMENT (C4 CERTIFICATE)	6	6	4	1	3	4.00
CERTIFICATE TOTAL	**15**	**19**	**22**	**22**	**11**	**17.80**
BEHAVIORAL AND HEALTH SCIENCES TOTAL	**3,337**	**3,126**	**2,861**	**2,696**	**2,526**	**2,909.20**
BUSINESS						
UNDERGRADUATE PROGRAMS						
ACCOUNTING (BBA)	182	187	159	157	121	161.20
FINANCE (BBA)	79	112	116	124	141	114.40
GENERAL BUSINESS (BBA)	52	11	3	n/a	n/a	22.00
MANAGEMENT (BBA)	357	454	417	384	352	392.80
MARKETING (BBA)	165	200	184	198	229	195.20
UNDERGRADUATE TOTAL	**835**	**964**	**879**	**863**	**843**	**876.80**
GRADUATE PROGRAMS						
MANAGEMENT (MS)	66	52	56	66	69	61.80
GRADUATE TOTAL	**66**	**52**	**56**	**66**	**69**	61.80
BUSINESS TOTAL	**901**	**1,016**	**935**	**929**	**912**	**938.60**
EDUCATION						
UNDERGRADUATE PROGRAMS						
EDUCATION (BS)	277	304	339	300	234	290.80
SPECIAL EDUCATION (BS)	56	46	38	26	26	38.40
UNDERGRADUATE TOTAL	**333**	**350**	**377**	**326**	**260**	**329.20**
GRADUATE PROGRAMS						
CURRICULUM & INSTRUCTION (MAED)	63	49	38	23	21	38.80
EDUCATION (EDS)	20	17	20	13	9	15.80
EDUCATION LEADERSHIP (EDD)	20	43	44	40	49	39.20
EDUCATIONAL LEADERSHIP STUDIES (MAED)	28	20	81	103	109	68.20
READING (MAED)	27	20	12	10	14	16.60
TEACHING (MAT)	109	102	132	132	103	115.60
GRADUATE TOTAL	**267**	**251**	**327**	**321**	**305**	**294.20**

Source: Student Data File

Enrollment Trends by College
Fall 2018 - Fall 2022

College	2018	2019	2020	2021	2022	5 Year Average
CERTIFICATE PROGRAMS						
SPECIAL EDUCATION K-8 INTERVENTIONIST (C4 CERTIFICATE)	n/a	n/a	2	2	1	1.67
TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES (C4 CERTIFICATE)	1	1	3	2	1	1.60
CERTIFICATE TOTAL	**1**	**1**	**5**	**4**	**2**	**2.60**
EDUCATION TOTAL	**601**	**602**	**709**	**651**	**567**	**626.00**
NON DEGREE						
UNDERGRADUATE PROGRAM						
NON DEGREE	806	1,037	892	928	1,067	946.00
UNDERGRADUATE TOTAL	**806**	**1,037**	**892**	**928**	**1,067**	**946.00**
GRADUATE PROGRAM						
NON DEGREE	9	8	5	4	22	9.60
GRADUATE TOTAL	**9**	**8**	**5**	**4**	**22**	**9.60**
NON DEGREE TOTAL	**815**	**1,045**	**897**	**932**	**1,089**	**955.60**
STEM						
UNDERGRADUATE PROGRAMS						
AVIATION SCIENCE (BS)	3	14	30	37	53	27.40
BIOLOGY (BS)	383	343	310	261	247	308.80
CHEMISTRY (BS)	158	157	114	99	81	121.80
COMPUTER INFORMATION SYSTEMS (BS)	157	187	180	153	133	162.00
COMPUTER INFORMATION TECHNOLOGY (BS)	153	155	143	118	115	136.80
COMPUTER SCIENCE & INFORMATION SYSTEM (BS)	94	34	12	4	1	29.00
COMPUTER SCIENCE (BS)	142	148	140	149	185	152.80
ENGINEERING PHYSICS (BSE)	20	39	34	35	28	31.20
ENGINEERING TECHNOLOGY (AAS)	104	79	72	76	52	76.60
ENGINEERING TECHNOLOGY (BS)	230	219	186	180	163	195.60
GENERAL AGRICULTURE (BS)	214	204	197	178	176	193.80
GEOSCIENCES (BS)	46	52	54	42	31	45.00
MATHEMATICS (BS)	71	78	57	40	31	55.40
MEDICAL LABORATORY SCIENCE (BSMLS)	153	137	130	128	124	134.40
PHYSICS (BS)	48	33	24	20	18	28.60
RADIOLOGIC SCIENCE (BSRS)	198	184	146	124	139	158.20
UNDERGRADUATE TOTAL	**2,174**	**2,063**	**1,829**	**1,644**	**1,577**	**1,857.40**
GRADUATE PROGRAMS						
BIOLOGY (MS)	33	32	26	28	24	28.60
COMPUTER SCIENCE & QUANTITATIVE METHODS (MS, PSM)	120	153	150	170	186	155.80
ENGINEERING TECHNOLOGY (MS)	4	6	5	1	1	3.40
GRADUATE TOTAL	**157**	**191**	**181**	**199**	**211**	**187.80**
CERTIFICATE PROGRAMS						
DATA MINING GRAD CERTIFICATE (C4 CERTIFICATE)	n/a	1	2	0	0	0.75
DATA SCIENCE (C4 CERTIFICATE)	n/a	2	2	1	0	1.25
CERTIFICATE TOTAL	**0**	**3**	**4**	**1**	**0**	1.60
STEM TOTAL	**2,331**	**2,257**	**2,014**	**1,844**	**1,788**	**2,046.80**
UNIVERSITY TOTAL	**10,954**	**11,048**	**10,272**	**9,609**	**9,326**	**10,241.80**

*Starting 2015, the Tennessee Promise program provides students enrolled in Associate degree programs with a last-dollar scholarship. The AS Liberal Arts, APSU's eligible Tennessee Promise program, is indicated in the Academic Affairs College.

Source: Student Data File

Program Overview

Environmental Science

Lightcast Q4 2022 Data Set

January 2023

Tennessee

Parameters

Completions Year: 2021

Jobs Timeframe: 2020 - 2032

Job Postings Timeframe: Aug 2020 - Dec 2022

Programs:

Code	Description
03.0104	Environmental Science

Regions:

Code	Description
47	Tennessee

Education Level:

Description
Master's degree

Tuition Type: Tuition & Fees

Graduate Status: Undergraduate

Residency: In-State

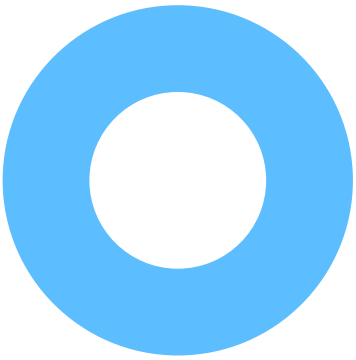
2	15	Completions Distribution
Institutions	Completions	3 — Average: 7.5 — 12
100% Growth (2017-2021)	36% Growth (2017-2021)	Median: 7.5

Program Overview



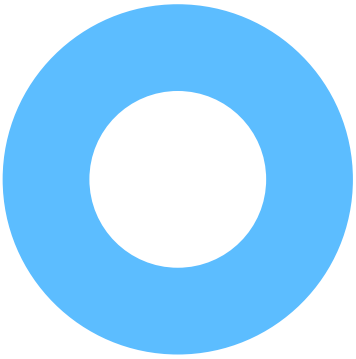
	Completions (2021)	% Completions	Institutions (2021)	% Institutions
All Programs	15	100%	2	100%
Distance Offered Programs	0	0%	0	0%
Non-Distance Offered Programs	15	100%	2	100%

Market Share by Institution Type



Institution Type	Completions (2021)	Market Share
Public, 4-year or above	15	100.0%

Market Share by Program

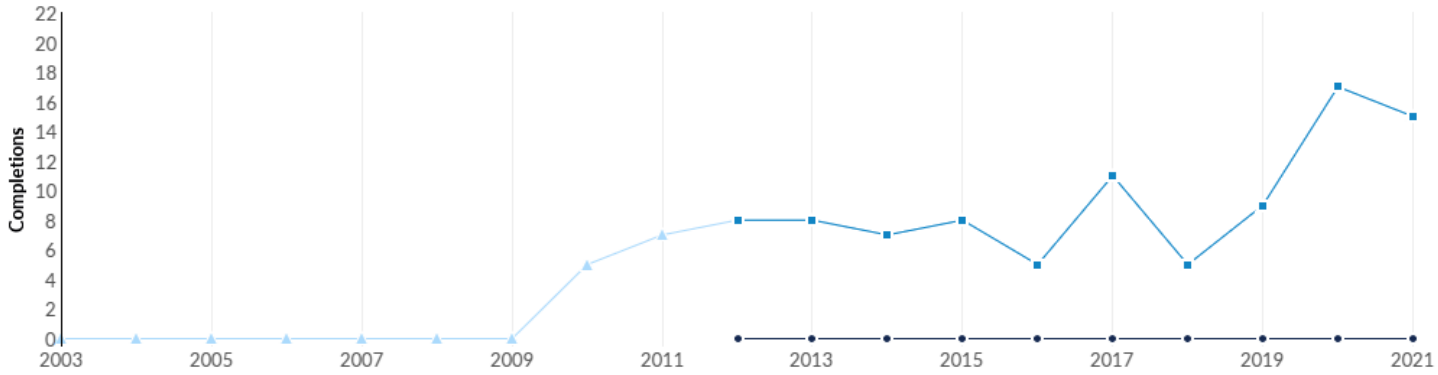


Program	Completions (2021)	Market Share
Environmental Science (03.0104)	15	100.0%

Completions by Institution

Institution	Master's Degree Completions (2021)	Growth % YOY (2021)	Market Share (2021)	IPEDS Tuition & Fees (2021)	Completions Trend (2017-2021)
The University of Tennessee-Chattanooga	12	-29.4%	80.0%	$9,848	
Tennessee State University	3	Insf. Data	20.0%	$8,336	

Regional Trends



	2012 Completions	2021 Completions	% Change
Distance Offered Programs	0	0	0.0%
Non-Distance Offered Programs	8	15	+87.5%
All Programs	8	15	+87.5%

Regional Completions by Award Level



Award Level	Completions (2021)	Percent
Master's Degree	15	100.0%

Similar Programs

145	5,856
Programs (2021)	Completions (2021)

CIP Code	Program	Master's Degree Completions (2021)
52.0201	Business Administration and Management, General	1,705
44.0701	Social Work	568
24.0102	General Studies	180
52.0101	Business/Commerce, General	176
52.0299	Business Administration, Management and Operations, Other	169
51.2201	Public Health, General	168
25.0101	Library and Information Science	135
51.0701	Health/Health Care Administration/Management	125
51.0000	Health Services/Allied Health/Health Sciences, General	122
51.1508	Mental Health Counseling/Counselor	122

Target Occupations

*Filtered by the proportion of the national workforce in these occupations with a Master's degree

28,507	+32.8%	$38.79/hr $80.7K/yr	3,584
*Jobs (2020)**	*% Change (2020-2032)**	Median Earnings	*Annual Openings**
*4% below National average**	*Nation: +27.6%**	Nation: $43.97/hr; $91.5K/yr	

Occupation	*2020 Jobs**	*Annual Openings**	Median Earnings	*Growth (2020 - 2032)**	*Location Quotient (2020)**
General and Operations Managers	*5,381*	*837*	$47.69/hr	*+52.85%*	*1.03*
Managers, All Other	*4,784*	*485*	$29.39/hr	*+23.41%*	*1.46*
Management Analysts	*3,622*	*469*	$39.14/hr	*+26.75%*	*0.69*
Chief Executives	*2,198*	*159*	$65.39/hr	*-5.41%*	*1.72*
Computer Occupations, All Other	*1,998*	*266*	$27.86/hr	*+44.44%*	*1.29*
Market Research Analysts and Marketing Specialists	*1,980*	*327*	$28.91/hr	*+49.44%*	*0.63*
Project Management Specialists	*1,898*	*256*	$36.61/hr	*+47.73%*	*0.68*
Marketing Managers	*1,513*	*212*	$49.09/hr	*+41.24%*	*1.15*
Compliance Officers	*1,432*	*144*	$28.60/hr	*+17.39%*	*1.22*
Sales Managers	*960*	*128*	$56.53/hr	*+36.04%*	*1.04*
Medical Scientists, Except Epidemiologists	*551*	*47*	$47.15/hr	*+2.54%*	*0.83*
Social and Human Service Assistants	*501*	*86*	$14.67/hr	*+37.72%*	*0.45*
Lawyers	*498*	*41*	$48.31/hr	*+32.53%*	*0.76*
Environmental Scientists and Specialists, Including Health	*454*	*52*	$30.01/hr	*+10.13%*	*0.89*
Environmental Engineers	*416*	*33*	$48.52/hr	*-1.44%*	*1.17*
Occupational Health and Safety Specialists	*270*	*32*	$37.09/hr	*+36.30%*	*0.99*
Environmental Science and Protection Technicians, Including Health	*51*	*12*	$22.63/hr	*+58.82%*	*1.00*

Job Postings Summary

22,501	2 : 1	31 days
Unique Postings	**Posting Intensity**	**Median Posting Duration**
53,372 Total Postings	Regional Average: 3 : 1	Regional Average: 32 days

There were **53,372** total job postings for your selection from August 2020 to December 2022, of which **22,501** were unique. These numbers give us a Posting Intensity of **2-to-1**, meaning that for every 2 postings there is 1 unique job posting.

This is close to the Posting Intensity for all other occupations and companies in the region (3-to-1), indicating that they are putting average effort toward hiring for this position.

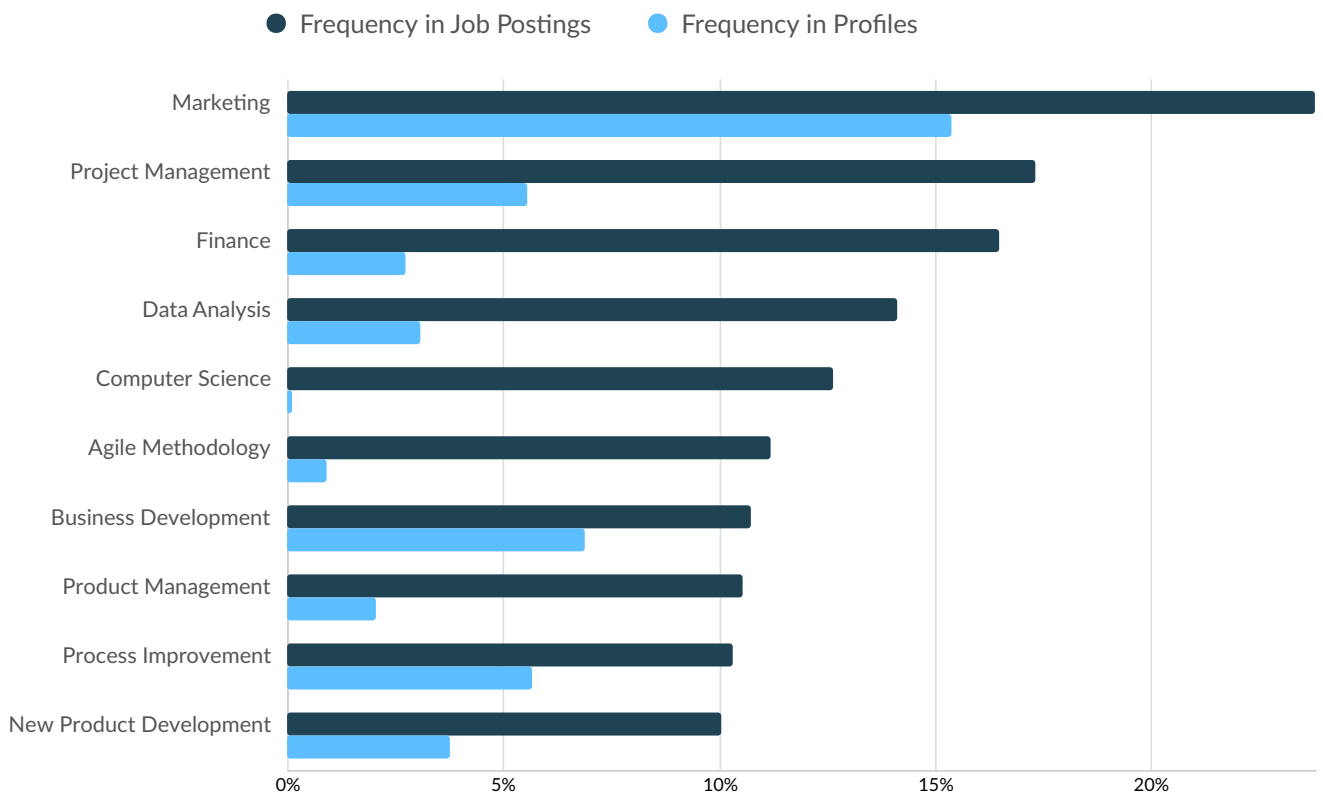
Top Companies Posting

Company	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Amazon	3,382 / 1,217	3 : 1	22 days
Elevance Health	1,345 / 762	2 : 1	27 days
Deloitte	1,195 / 761	2 : 1	29 days
Humana	1,298 / 642	2 : 1	33 days
University of Tennessee	1,191 / 454	3 : 1	33 days
FedEx	1,425 / 443	3 : 1	28 days
HCA Healthcare	1,419 / 397	4 : 1	29 days
St. Jude Children's Research Hospital	1,165 / 368	3 : 1	30 days
Vanderbilt University	954 / 313	3 : 1	32 days
Oak Ridge National Laboratory	684 / 260	3 : 1	36 days

Top Posted Job Titles

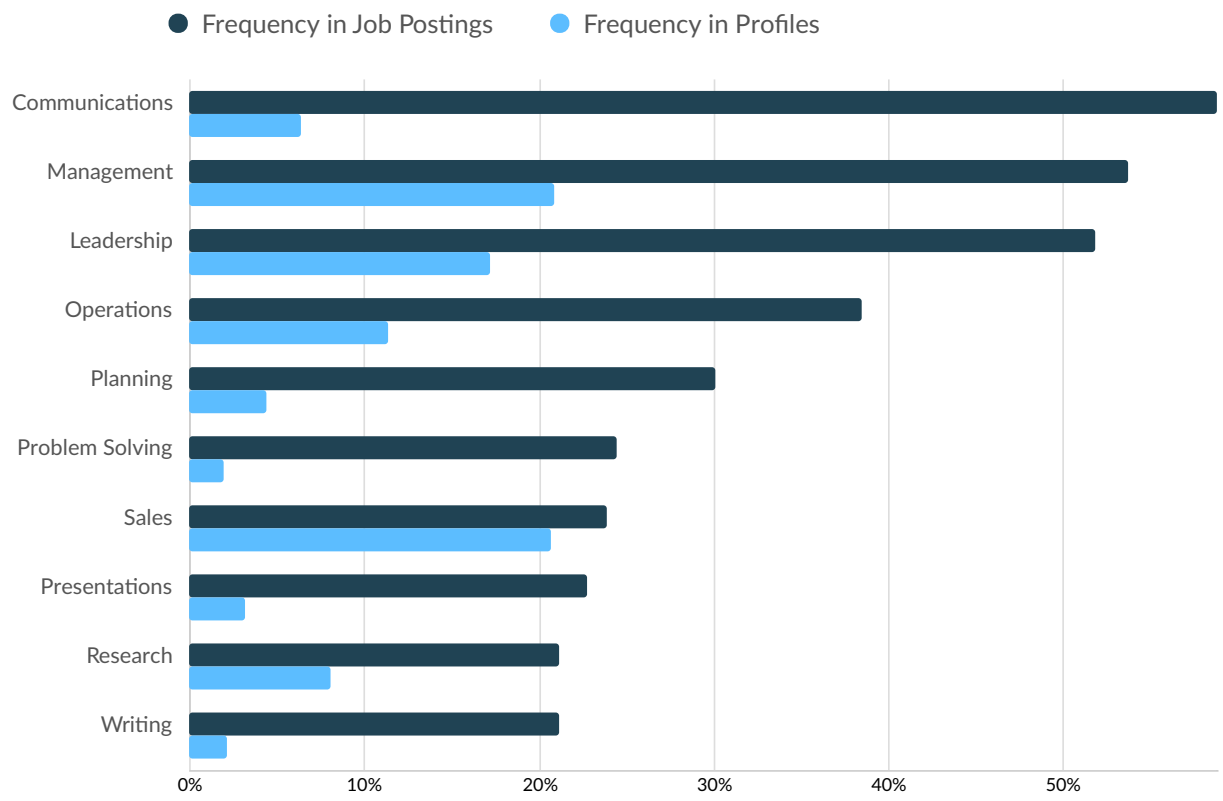
Job Title	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Program Managers	860 / 327	3 : 1	34 days
Product Managers	654 / 325	2 : 1	30 days
Project Managers	586 / 275	2 : 1	31 days
Business Analysts	726 / 244	3 : 1	21 days
Directors of Operations	375 / 128	3 : 1	30 days
Operations Managers	347 / 126	3 : 1	28 days
Systems Engineers	274 / 121	2 : 1	32 days
Solutions Architects	188 / 119	2 : 1	19 days
IT Project Managers	209 / 97	2 : 1	39 days
Product Owners	202 / 93	2 : 1	20 days

Top Specialized Skills



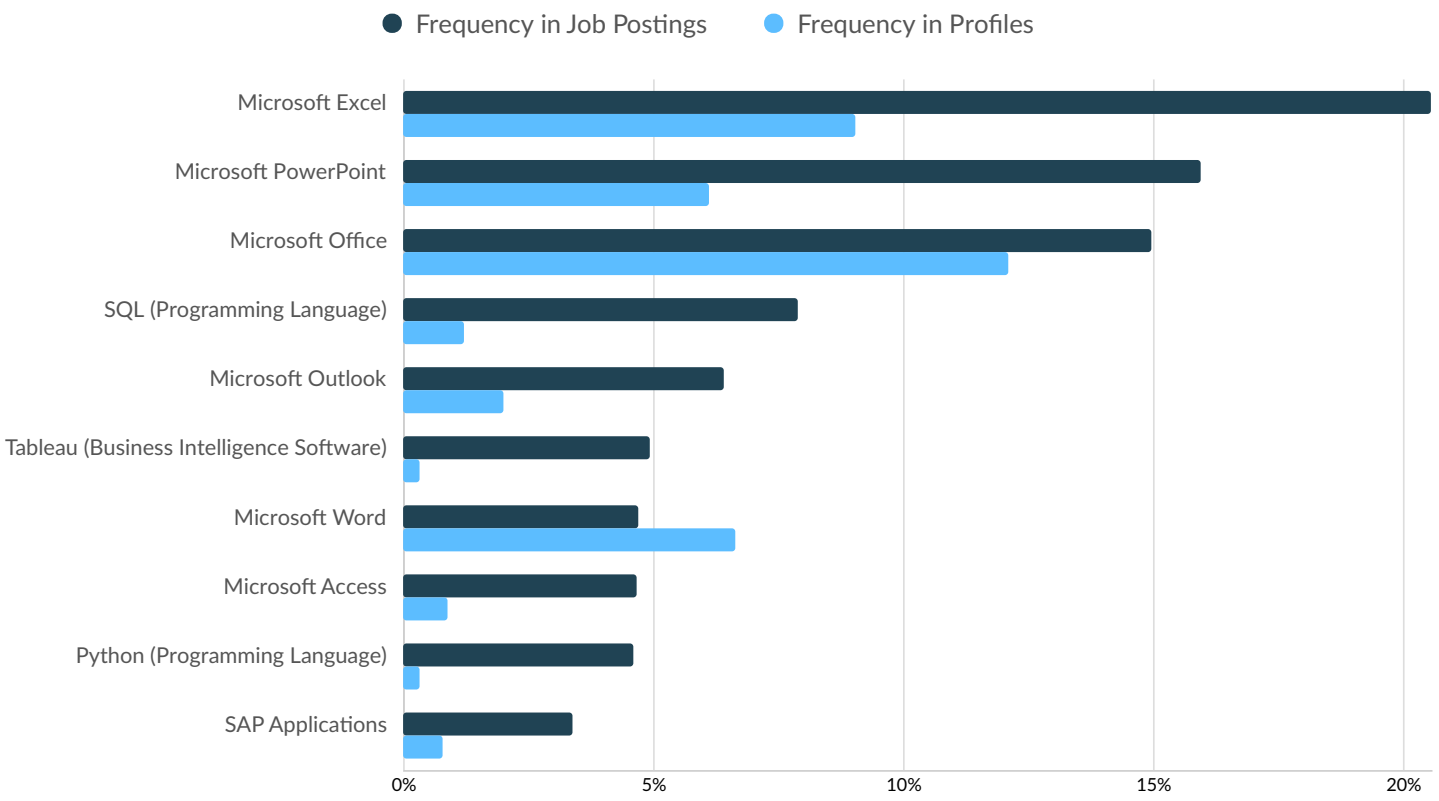
Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Marketing	5,354	24%	73,365	15%
Project Management	3,901	17%	26,460	6%
Finance	3,710	16%	13,118	3%
Data Analysis	3,176	14%	14,706	3%
Computer Science	2,844	13%	564	0%
Agile Methodology	2,516	11%	4,421	1%
Business Development	2,414	11%	32,933	7%
Product Management	2,374	11%	9,859	2%
Process Improvement	2,321	10%	27,173	6%
New Product Development	2,264	10%	17,918	4%

Top Common Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Communications	13,231	59%	30,486	6%
Management	12,080	54%	99,633	21%
Leadership	11,656	52%	82,381	17%
Operations	8,648	38%	54,543	11%
Planning	6,766	30%	21,228	4%
Problem Solving	5,514	25%	9,333	2%
Sales	5,371	24%	99,035	21%
Presentations	5,131	23%	15,077	3%
Research	4,767	21%	38,416	8%
Writing	4,760	21%	10,355	2%

Top Software Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Microsoft Excel	4,626	21%	43,215	9%
Microsoft PowerPoint	3,592	16%	29,248	6%
Microsoft Office	3,369	15%	57,783	12%
SQL (Programming Language)	1,776	8%	5,842	1%
Microsoft Outlook	1,447	6%	9,593	2%
Tableau (Business Intelligence Software)	1,110	5%	1,526	0%
Microsoft Word	1,058	5%	31,733	7%
Microsoft Access	1,049	5%	4,216	1%
Python (Programming Language)	1,034	5%	1,615	0%
SAP Applications	761	3%	3,757	1%

Top Qualifications

Qualification	Postings with Qualification
Master Of Business Administration (MBA)	5,685
Project Management Professional Certification	1,377
Certified Public Accountant	409
Security Clearance	368
Licensed Clinical Social Worker (LCSW)	314
Licensed Professional Counselor (LPC)	263
Licensed Marriage And Family Therapist (LMFT)	213
Certified Information Systems Security Professional	201
Certified Scrum Master	197
Professional Engineer	179

Appendix A

Program Selection Details

CIP Code	Program Name
03.0104	Environmental Science

Appendix B - Data Sources and Calculations

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates are also affected by county-level Emsi earnings by industry.

Lightcast Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

State Data Sources

This report uses state data from the following agencies: Tennessee Department of Labor & Workforce Development

Program Overview

Environmental Science

Lightcast Q4 2022 Data Set

January 2023

Tennessee

Parameters

Completions Year: 2021

Jobs Timeframe: 2020 - 2032

Job Postings Timeframe: Aug 2020 - Dec 2022

Programs:

Code	Description
03.0104	Environmental Science

Regions:

Code	Description	Code	Description
1	Alabama	28	Mississippi
12	Florida	47	Tennessee
13	Georgia	48	Texas
21	Kentucky		

Institutions:

Description
Austin Peay State University

Institution Sectors:

Description	Description
Public	Private not-for-profit
Private for-profit	Other

Education Level:

Description
Master's degree

Tuition Type: Tuition & Fees

Graduate Status: Graduate

Residency: In-State

There are no regional training providers for your selection.

Program Overview

0
Completions

	Completions (2021)	% Completions	Institutions (2021)	% Institutions
All Programs	0	0%	0	0%
Distance Offered Programs	0	0%	0	0%
Non-Distance Offered Programs	0	0%	0	0%

Market Share by Institution Type

There are no regional Completions for your selection.

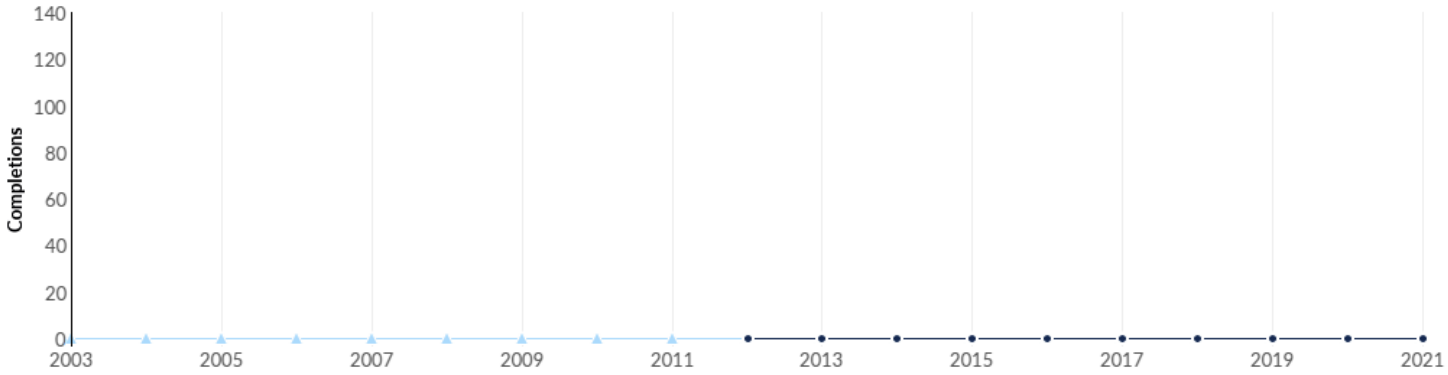
Market Share by Program

There are no regional Completions for your selection.

Completions by Institution

There are no regional training providers for your selection.

Regional Trends



	2012 Completions	2021 Completions	% Change
Distance Offered Programs	0	0	0.0%
Non-Distance Offered Programs	0	0	0.0%
All Programs	0	0	0.0%

Regional Completions by Award Level

Not enough data for this chart.

Similar Programs

13	255
Programs (2021)	Completions (2021)

CIP Code	Program	Master's Degree Completions (2021)
11.0802	Data Modeling/Warehousing and Database Administration	64
24.0102	General Studies	36
44.0701	Social Work	27
09.0102	Mass Communication/Media Studies	25
51.1508	Mental Health Counseling/Counselor	24
51.0701	Health/Health Care Administration/Management	21
52.0201	Business Administration and Management, General	21
42.2804	Industrial and Organizational Psychology	18
26.0101	Biology/Biological Sciences, General	14
54.0101	History, General	4

Target Occupations

*Filtered by the proportion of the national workforce in these occupations with a Master's degree

339,105	+35.4%	$38.95/hr $81.0K/yr	44,337
*Jobs (2020)**	*% Change (2020-2032)**	Median Earnings	*Annual Openings**
*1% below National average**	*Nation: +27.6%**	Nation: $43.97/hr; $91.5K/yr	

Occupation	*2020 Jobs**	*Annual Openings**	Median Earnings	*Growth (2020 - 2032)**	*Location Quotient (2020)**
General and Operations Managers	*68,796*	*10,754*	$39.24/hr	*+51.87%*	*1.14*
Management Analysts	*53,495*	*7,198*	$40.25/hr	*+31.56%*	*0.88*
Managers, All Other	*43,092*	*5,119*	$36.71/hr	*+36.72%*	*1.14*
Project Management Specialists	*34,383*	*4,498*	$40.10/hr	*+42.66%*	*1.07*
Market Research Analysts and Marketing Specialists	*30,339*	*4,888*	$29.08/hr	*+46.22%*	*0.83*
Chief Executives	*19,064*	*1,646*	$77.19/hr	*+8.99%*	*1.29*
Computer Occupations, All Other	*16,185*	*1,781*	$37.04/hr	*+27.69%*	*0.90*
Compliance Officers	*15,208*	*1,518*	$30.15/hr	*+16.54%*	*1.12*
Marketing Managers	*13,083*	*1,664*	$57.45/hr	*+31.95%*	*0.86*
Sales Managers	*10,942*	*1,504*	$55.24/hr	*+38.29%*	*1.02*
Social and Human Service Assistants	*9,310*	*1,411*	$16.67/hr	*+23.61%*	*0.72*
Lawyers	*7,206*	*546*	$52.15/hr	*+26.26%*	*0.95*
Environmental Scientists and Specialists, Including Health	*5,187*	*556*	$29.63/hr	*+2.33%*	*0.88*
Medical Scientists, Except Epidemiologists	*4,865*	*449*	$32.54/hr	*+9.33%*	*0.63*
Occupational Health and Safety Specialists	*3,802*	*413*	$35.71/hr	*+27.28%*	*1.20*
Environmental Engineers	*3,519*	*276*	$42.17/hr	*-5.20%*	*0.85*
Environmental Science and Protection Technicians, Including Health	*631*	*115*	$20.48/hr	*+34.07%*	*1.07*

Job Postings Summary

306,355	2 : 1	27 days
Unique Postings	**Posting Intensity**	**Median Posting Duration**
758,879 Total Postings	Regional Average: 3 : 1	Regional Average: 30 days

There were **758,879** total job postings for your selection from August 2020 to December 2022, of which **306,355** were unique. These numbers give us a Posting Intensity of **2-to-1**, meaning that for every 2 postings there is 1 unique job posting.

This is close to the Posting Intensity for all other occupations and companies in the region (3-to-1), indicating that they are putting average effort toward hiring for this position.

Top Companies Posting

Company	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Elevance Health	17,384 / 9,441	2 : 1	30 days
Citigroup	20,397 / 7,490	3 : 1	22 days
Deloitte	11,992 / 7,159	2 : 1	21 days
Humana	12,459 / 4,874	3 : 1	32 days
Amazon	11,337 / 4,603	2 : 1	23 days
USAA	10,564 / 3,536	3 : 1	24 days
KPMG	10,403 / 2,773	4 : 1	20 days
Dell Technologies	5,604 / 2,515	2 : 1	22 days
UnitedHealth Group	5,938 / 2,233	3 : 1	23 days
Visa	5,451 / 2,170	3 : 1	30 days
Northrop Grumman	8,408 / 2,016	4 : 1	24 days
L3Harris Technologies	4,171 / 2,003	2 : 1	37 days
State of Florida	5,549 / 1,991	3 : 1	27 days
Guidehouse	3,084 / 1,901	2 : 1	27 days
PricewaterhouseCoopers	4,042 / 1,887	2 : 1	28 days
Raytheon Technologies	5,487 / 1,852	3 : 1	27 days
Verizon Communications	4,809 / 1,455	3 : 1	23 days
Randstad	2,310 / 1,419	2 : 1	24 days
Boeing	3,677 / 1,371	3 : 1	18 days
Centene	2,731 / 1,243	2 : 1	22 days
HCA Healthcare	4,167 / 1,210	3 : 1	26 days
Lumen	1,547 / 1,108	1 : 1	22 days
Southwestern Medical Center	4,114 / 1,099	4 : 1	32 days
Siemens	2,280 / 1,096	2 : 1	35 days
Accenture	2,213 / 1,074	2 : 1	28 days
Cox Communications	2,882 / 1,073	3 : 1	28 days

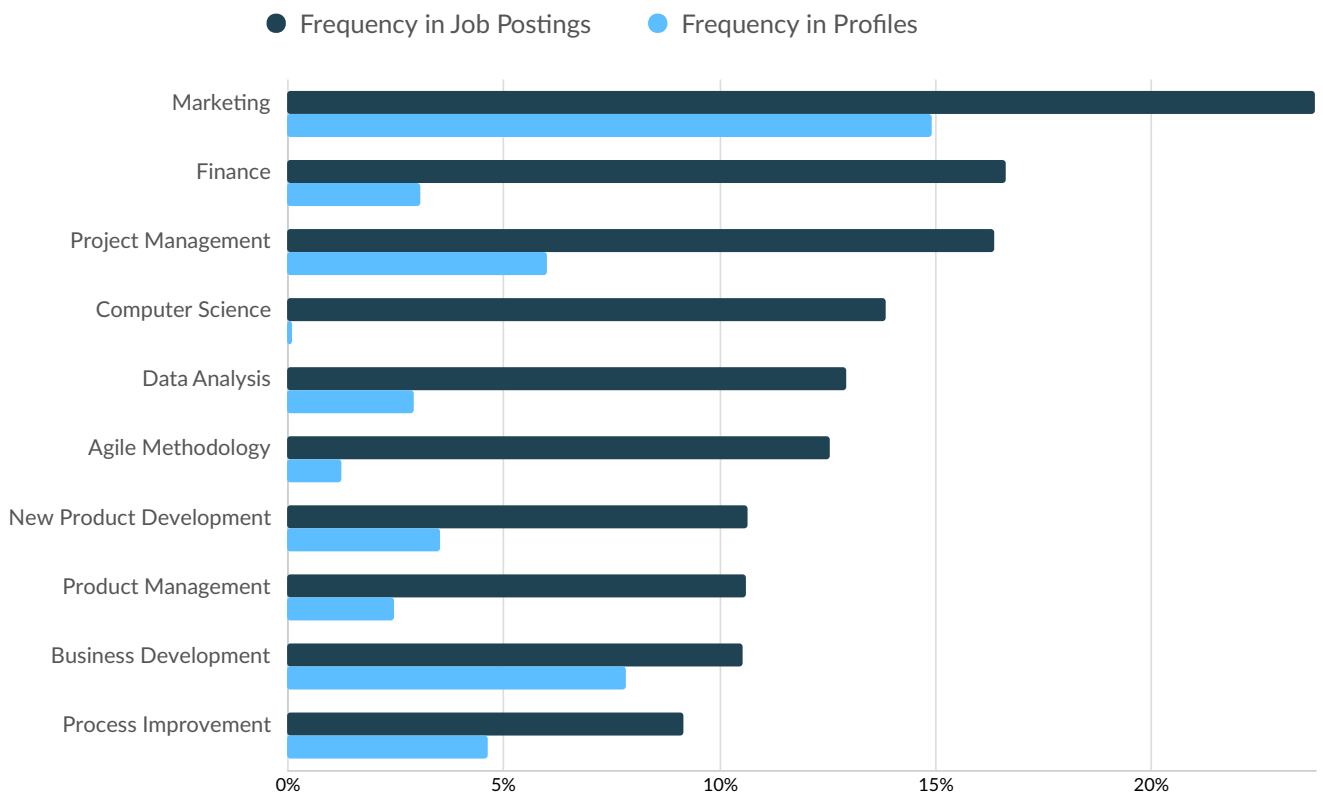
ExecuNet	3,116 / 1,072	3 : 1	38 days
Danaher	1,675 / 1,054	2 : 1	41 days
JPMorgan Chase	5,986 / 1,041	6 : 1	32 days
Johnson & Johnson	1,897 / 954	2 : 1	23 days
Bayer	1,220 / 942	1 : 1	31 days
NextEra Energy	4,545 / 905	5 : 1	32 days
Kforce	2,696 / 866	3 : 1	20 days
Honeywell International	2,591 / 843	3 : 1	22 days
General Motors	2,343 / 815	3 : 1	26 days
Emory Healthcare	1,767 / 801	2 : 1	35 days
Samsung	4,255 / 800	5 : 1	24 days
Pearson Education	1,294 / 789	2 : 1	31 days
AMD	1,944 / 772	3 : 1	19 days
CTG	927 / 772	1 : 1	26 days
Disney	2,795 / 748	4 : 1	24 days
HP	1,713 / 747	2 : 1	25 days
FedEx	2,529 / 740	3 : 1	29 days
Black & Veatch	833 / 700	1 : 1	24 days
State Of Texas	868 / 698	1 : 1	37 days
Ryder	1,372 / 691	2 : 1	37 days
Ernst & Young	1,659 / 687	2 : 1	27 days
Capital One	2,412 / 685	4 : 1	23 days
Lockheed Martin	2,330 / 671	3 : 1	20 days
University of Texas	1,370 / 651	2 : 1	31 days

Top Posted Job Titles

Job Title	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Program Managers	11,197 / 4,616	2 : 1	28 days
Project Managers	9,879 / 4,062	2 : 1	28 days
Product Managers	9,379 / 4,024	2 : 1	27 days
Systems Engineers	9,469 / 3,483	3 : 1	26 days
Business Analysts	7,225 / 2,874	3 : 1	23 days
Solutions Architects	3,762 / 1,808	2 : 1	21 days
Principal Systems Engineers	4,286 / 1,324	3 : 1	24 days
Marketing Managers	3,070 / 1,310	2 : 1	31 days
Directors of Product Management	3,010 / 1,296	2 : 1	25 days
Business Development Managers	2,896 / 1,255	2 : 1	27 days
Operations Managers	3,245 / 1,246	3 : 1	31 days
IT Project Managers	2,764 / 1,220	2 : 1	23 days
Behavioral Health Care Managers	2,893 / 1,180	2 : 1	27 days
Marketing Product Managers	2,757 / 1,173	2 : 1	30 days
Directors of Operations	4,465 / 1,090	4 : 1	28 days
Analytics Managers	2,560 / 1,047	2 : 1	29 days
Scrum Masters	2,295 / 1,038	2 : 1	25 days
Principal Architects	2,317 / 1,019	2 : 1	23 days
Product Owners	2,352 / 999	2 : 1	28 days
Human Resources Project Managers	1,879 / 966	2 : 1	25 days
Risk and Controls Managers	2,573 / 949	3 : 1	24 days
Directors of Marketing	2,463 / 906	3 : 1	30 days
Program Directors	1,809 / 830	2 : 1	29 days
Vice Presidents of Operations	2,712 / 822	3 : 1	27 days
Digital Product Managers	1,692 / 719	2 : 1	21 days
Medical Science Liaisons	1,279 / 687	2 : 1	37 days

General Managers	1,880 / 667	3 : 1	36 days
Technical Project Managers	1,535 / 667	2 : 1	26 days
Environmental Specialists	1,623 / 662	2 : 1	25 days
Regional Sales Managers	1,222 / 605	2 : 1	31 days
Enterprise Architects	1,236 / 547	2 : 1	30 days
Technical Program Managers	1,105 / 546	2 : 1	25 days
Decision Science Analysts	1,468 / 536	3 : 1	27 days
Program Coordinators	1,516 / 527	3 : 1	34 days
Chief Executive Officers	1,996 / 519	4 : 1	31 days
Compliance Managers	1,605 / 516	3 : 1	27 days
Regulatory Affairs Managers	1,181 / 513	2 : 1	32 days
Category Managers	1,249 / 497	3 : 1	32 days
Chief Operating Officers	1,955 / 491	4 : 1	24 days
Vice Presidents of Sales	1,097 / 488	2 : 1	31 days
IT Managers	1,308 / 486	3 : 1	26 days
Technical Product Managers	1,119 / 480	2 : 1	30 days
Environmental Scientists	1,024 / 468	2 : 1	31 days
Sales Managers	948 / 468	2 : 1	22 days
Project Coordinators	1,240 / 454	3 : 1	28 days
Management Analysts	1,185 / 440	3 : 1	30 days
Principal Product Managers	881 / 440	2 : 1	23 days
Business Strategy Analysts	1,818 / 436	4 : 1	24 days
Data Analytics Managers	989 / 414	2 : 1	20 days
Compliance Directors	1,031 / 410	3 : 1	25 days

Top Specialized Skills

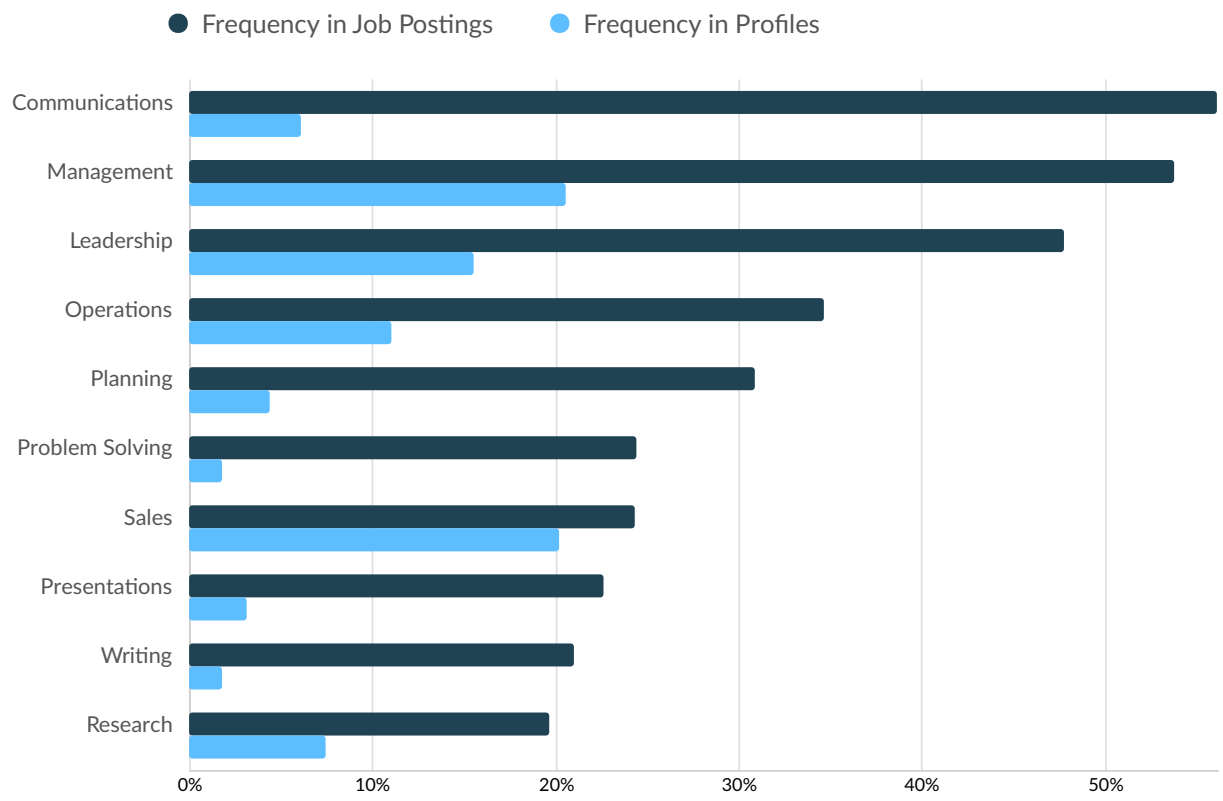


Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Marketing	72,892	24%	941,421	15%
Finance	51,002	17%	193,990	3%
Project Management	50,135	16%	380,034	6%
Computer Science	42,419	14%	8,048	0%
Data Analysis	39,704	13%	184,732	3%
Agile Methodology	38,435	13%	79,110	1%
New Product Development	32,701	11%	223,954	4%
Product Management	32,597	11%	156,562	2%
Business Development	32,288	11%	495,271	8%
Process Improvement	28,098	9%	294,013	5%
Auditing	27,772	9%	151,897	2%
Presentation Skills	27,514	9%	12,903	0%
Accounting	24,736	8%	172,612	3%
Key Performance Indicators (KPIs)	24,459	8%	46,153	1%
Business Strategies	23,443	8%	239,058	4%

SQL (Programming Language)	22,693	7%	90,826	1%
Risk Management	21,853	7%	130,298	2%
Business Process	21,816	7%	83,490	1%
Automation	21,133	7%	68,831	1%
Workflow Management	19,343	6%	61,253	1%
Change Management	18,873	6%	133,099	2%
Customer Relationship Management	18,252	6%	235,731	4%
Scrum (Software Development)	17,677	6%	60,389	1%
Python (Programming Language)	17,549	6%	26,384	0%
Thought Leadership	17,039	6%	14,830	0%
Business Requirements	16,888	6%	26,141	0%
Economics	16,848	5%	43,012	1%
Financial Services	16,075	5%	97,309	2%
Supply Chain	15,636	5%	96,121	2%
Systems Engineering	14,832	5%	42,081	1%
Go-to-Market Strategy	14,757	5%	39,153	1%
Tableau (Business Intelligence Software)	14,277	5%	20,557	0%
Software Development	13,832	5%	75,819	1%
Milestones (Project Management)	13,450	4%	11,141	0%
Procurement	13,214	4%	112,896	2%
Dashboard	12,816	4%	23,585	0%
Risk Analysis	12,756	4%	43,352	1%
Healthcare Industry Knowledge	12,723	4%	24,121	0%
Analytics	12,571	4%	41,658	1%
Management Consulting	12,499	4%	117,492	2%
Value Propositions	12,395	4%	11,362	0%
Selling Techniques	12,228	4%	190,635	3%
Marketing Strategies	12,203	4%	408,004	6%

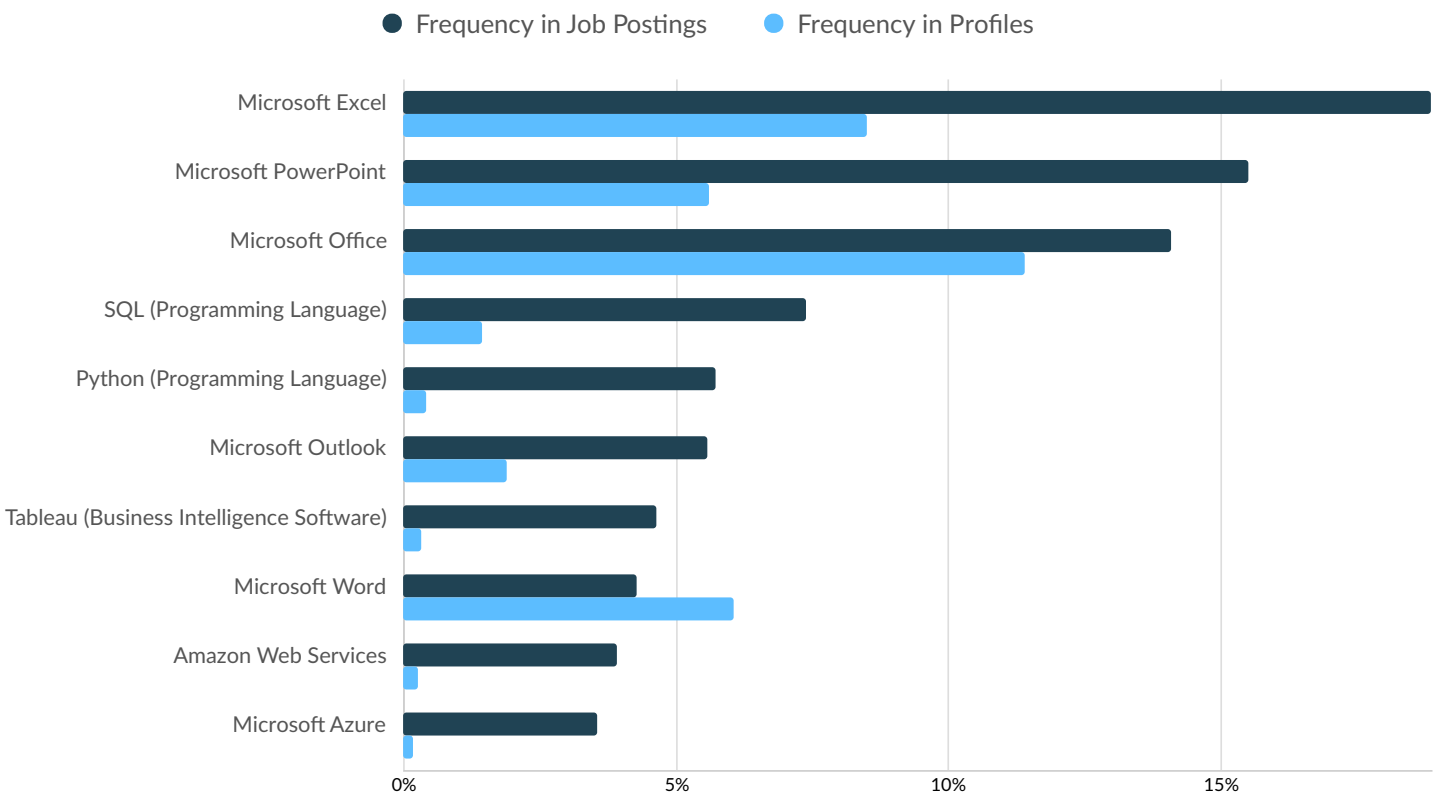
Scalability	12,100	4%	15,330	0%
Amazon Web Services	12,065	4%	17,408	0%
Product Strategy	12,016	4%	10,994	0%
Salesforce	12,003	4%	117,819	2%
Information Systems	11,642	4%	22,878	0%
Market Research	11,447	4%	97,094	2%
Project Planning	11,369	4%	212,873	3%

Top Common Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Communications	171,961	56%	383,232	6%
Management	164,740	54%	1,295,872	21%
Leadership	146,389	48%	979,935	16%
Operations	106,186	35%	699,426	11%
Planning	94,724	31%	280,360	4%
Problem Solving	74,834	24%	112,856	2%
Sales	74,628	24%	1,276,032	20%
Presentations	69,259	23%	200,856	3%
Writing	64,290	21%	115,239	2%
Research	60,129	20%	471,056	7%

Top Software Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Microsoft Excel	57,822	19%	537,693	9%
Microsoft PowerPoint	47,569	16%	355,306	6%
Microsoft Office	43,178	14%	719,922	11%
SQL (Programming Language)	22,693	7%	90,826	1%
Python (Programming Language)	17,549	6%	26,384	0%
Microsoft Outlook	17,102	6%	120,487	2%
Tableau (Business Intelligence Software)	14,277	5%	20,557	0%
Microsoft Word	13,103	4%	384,034	6%
Amazon Web Services	12,065	4%	17,408	0%
Microsoft Azure	10,933	4%	10,526	0%

Top Qualifications

Qualification	Postings with Qualification
Master Of Business Administration (MBA)	74,930
Project Management Professional Certification	17,732
Security Clearance	9,552
Secret Clearance	7,121
Certified Public Accountant	5,647
Licensed Clinical Social Worker (LCSW)	4,351
Top Secret-Sensitive Compartmented Information (TS/SCI Clearance)	4,016
Certified Information Systems Security Professional	3,723
Licensed Professional Counselor (LPC)	3,176
Licensed Marriage And Family Therapist (LMFT)	2,726
Certified Scrum Master	2,560
Professional Engineer	2,457
Chartered Financial Analyst	2,428
Certified Information System Auditor (CISA)	2,405
Top Secret Clearance	2,160
Licensed Master Social Worker	2,002
Six Sigma Certification	1,724
Agile Certification	1,527
Certified Internal Auditor	1,495
Six Sigma Green Belt	1,331
Certified Information Security Manager	1,307
CompTIA Security+	1,281
GIAC Certifications	1,245
Basic Life Support (BLS) Certification	1,230
Certified Safety Professional	1,126
Program Management Professional	1,125
Licensed Professional Engineer	1,078

Bachelor Of Science In Business	1,066
ITIL Certifications	1,042
Certified Associate In Project Management	1,031
Six Sigma Black Belt	1,025
PMI Agile Certified Practitioner	1,014
Board Certified/Board Eligible	877
Functional Skills Qualification	836
Certified Regulatory Compliance Manager	789
Cisco Certified Network Associate	775
Certified Scrum Product Owner	747
Certified Fraud Examiner	687
Enterprise Desktop Administrator (Microsoft Certified IT Professional)	686
Certified Power Quality Professional	673
Certified Industrial Hygienist (CIH)	668
Lean Six Sigma Certification	665
IAT Level II Certification	661
Nurse Practitioner (APRN-CNP)	651
American Institute Of Certified Planners (AICP) Certification	620
Engineer in Training	617
American Society For Clinical Pathology (ASCP) Certification	592
Change Management Certification	559
Board Certified Behavior Analyst	554
Microsoft Certified Professional	543

Appendix A

Program Selection Details

CIP Code	Program Name
03.0104	Environmental Science

Appendix B - Data Sources and Calculations

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates are also affected by county-level Emsi earnings by industry.

Lightcast Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

State Data Sources

This report uses state data from the following agencies: Alabama Department of Labor; Florida Department of Economic Opportunity; Georgia Labor Market Explorer; Kentucky Center for Statistics; Mississippi Department of Employment Security; Tennessee Department of Labor & Workforce Development; Texas Workforce Commission

Environmental Science (03.0104)

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Program Definition 2
Competitive Landscape 3
Labor Market Demand 6
Relevant Skills 16

About Lightcast

Lightcast is a labor market analytics firm that is passionate about providing meaningful data for colleges and their students.

Our data is trusted by a breadth of users including researchers at colleges and universities, economic development organizations, and Fortune 500 companies.

Lightcast data offers a three-pronged approach to labor market information:

1. Our traditional LMI combines dozens of government sources from agencies like the Bureau of Economic Analysis, U.S. Census Bureau, and Bureau of Labor Statistics into one dataset that details industries, occupations, demographics, academic programs, and more.

2. Lightcast's job posting analytics give a real-time look into the needs of employers in today's labor market. Each month, millions of postings are scraped from employer sites and job boards, de-duplicated, and compiled into an actionable dataset.

3. Lightcast also leverages workforce profiles—an innovative database of more than 100 million resumés and professional profiles that are aggregated from the open web. These profiles unify information for workers—such as education, employment history, skills, and more—to reveal robust detail on what is happening in today's workforce.

Together, these data related to labor market demand, relevant skills, and the competitive landscape help colleges and universities make informed decisions about their program offerings.

Program Definition

Institution:

Code	Description
219602	Austin Peay State University

Program in Question:

Code	Description
03.0104	Environmental Science

Competitive Landscape

Institution Sectors:

Description	Description
Administrative Unit Only	Private not-for-profit, 2-year
Public, 4-year or above	Private for-profit, 2-year
Private not-for-profit, 4-year or above	Public, less-than-2-year
Private for-profit, 4-year or above	Private not-for-profit, less-than-2-year
Public, 2-year	Private for-profit, less-than-2-year

Education Levels:

Description
Master's Degree

Program Type:

Description	Description
Distance Offered (Includes Hybrid & Mixed Modality Programs)	Non-Distance Offered Programs

Region:

Code	Description
47	Tennessee

Student Charges Type: Tuition & Fees

Student Charges Grad Status: Graduate

Student Charges Residency: In-State

Program Overview

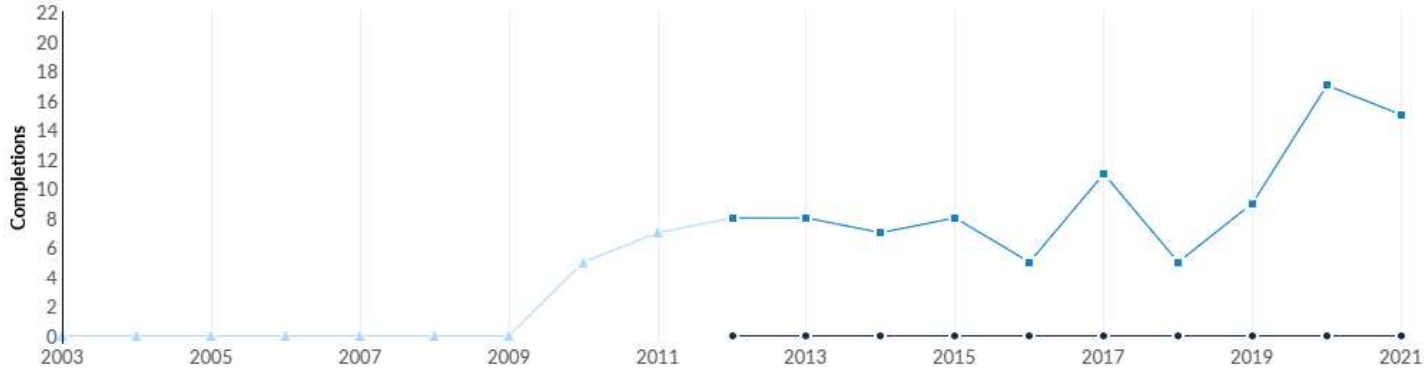


	Completions (2021)	% Completions	Institutions (2021)	% Institutions
All Programs	15	100%	2	100%
Distance Offered Programs	0	0%	0	0%
Non-Distance Offered Programs	15	100%	2	100%

Completions by Institution

Institution	Master's Degree Completions (2021)	Growth % YOY (2021)	Market Share (2021)	IPEDS Tuition & Fees (2021)	Completions Trend (2017-2021)
The University of Tennessee-Chattanooga	12	-29.4%	80.0%	$10,474	
Tennessee State University	3	Insf. Data	20.0%	$10,732	

Regional Trends



	2012 Completions	2021 Completions	% Change
Distance Offered Programs	0	0	0.0%
Non-Distance Offered Programs	8	15	+87.5%
All Programs	8	15	+87.5%

Labor Market Demand

Labor Market Area Selection:

Code	Description
47	Tennessee

Target Occupations:

Code	Description
17-2081	Environmental Engineers
19-2041	Environmental Scientists and Specialists, Including Health
19-4042	Environmental Science and Protection Technicians, Including Health

Code	Description
19-2042	Geoscientists, Except Hydrologists and Geographers
17-3025	Environmental Engineering Technologists and Technicians
11-9041	Architectural and Engineering Managers

Degree Levels:

Description
Bachelor's degree

Description
Master's degree

Completions Year (default):2021

Jobs Year (default):2021

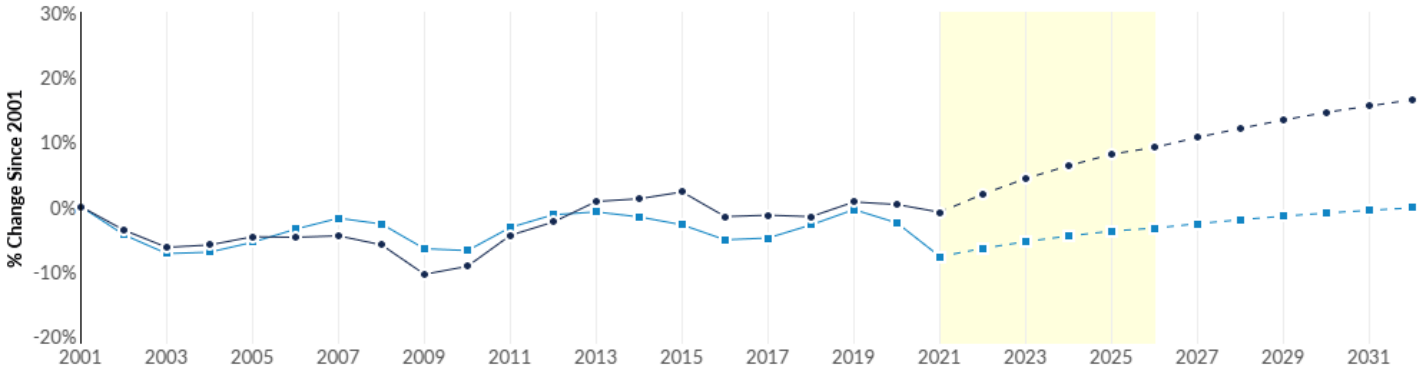
Target Occupations

*Filtered by the proportion of the national workforce in these occupations with a Bachelor's degree or Master's degree

5,262	+10.1%	$45.02/hr $93.7K/yr	558
*Jobs (2021)**	*% Change (2021-2026)**	Median Earnings	*Annual Openings**
*11% below National average**	*Nation: +4.7%**	Nation: $53.93/hr; $112.2K/yr	

Occupation	*2021 Jobs**	*Annual Openings**	Median Earnings	*Growth (2021 - 2026)**
Architectural and Engineering Managers	*2,531*	*233*	$61.17/hr	*+9.84%*
Environmental Scientists and Specialists, Including Health	*1,252*	*157*	$30.01/hr	*+11.42%*
Environmental Engineers	*850*	*78*	$48.52/hr	*+7.41%*
Environmental Science and Protection Technicians, Including Health	*367*	*55*	$22.63/hr	*+10.90%*
Geoscientists, Except Hydrologists and Geographers	*178*	*25*	$39.14/hr	*+18.54%*
Environmental Engineering Technologists and Technicians	*82*	*10*	$21.64/hr	*+9.76%*

Regional Trends



Region	2021 Jobs	2026 Jobs	Change	% Change
Region	7,098	7,815	717	10.1%
Nation	398,079	417,027	18,948	4.8%

Occupation Gender Breakdown



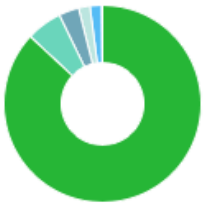
Gender	2021 Jobs	2021 Percent
Males	5,391	76.0%
Females	1,707	24.0%

Occupation Age Breakdown



Age	2021 Jobs	2021 Percent
14-18	17	0.2%
19-24	321	4.5%
25-34	1,369	19.3%
35-44	1,641	23.1%
45-54	1,810	25.5%
55-64	1,498	21.1%
65+	442	6.2%

Occupation Race/Ethnicity Breakdown



Race/Ethnicity	2021 Jobs	2021 Percent
White	6,170	86.9%
Black or African American	416	5.9%
Asian	235	3.3%
Hispanic or Latino	132	1.9%
Two or More Races	132	1.9%
American Indian or Alaska Native	13	0.2%
Native Hawaiian or Other Pacific Islander	1	0.0%

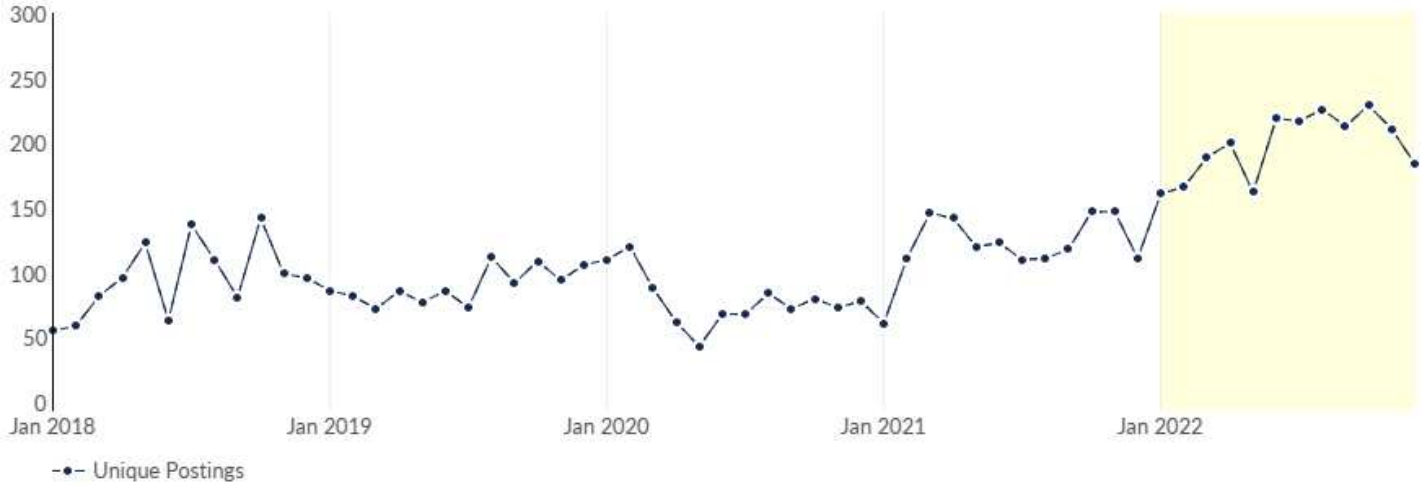
Job Postings Summary

2,377	2 : 1	29 days
Unique Postings	**Posting Intensity**	**Median Posting Duration**
5,078 Total Postings	Regional Average: 3 : 1	Regional Average: 30 days

There were **5,078** total job postings for your selection from January 2022 to December 2022, of which **2,377** were unique. These numbers give us a Posting Intensity of **2-to-1**, meaning that for every 2 postings there is 1 unique job posting.

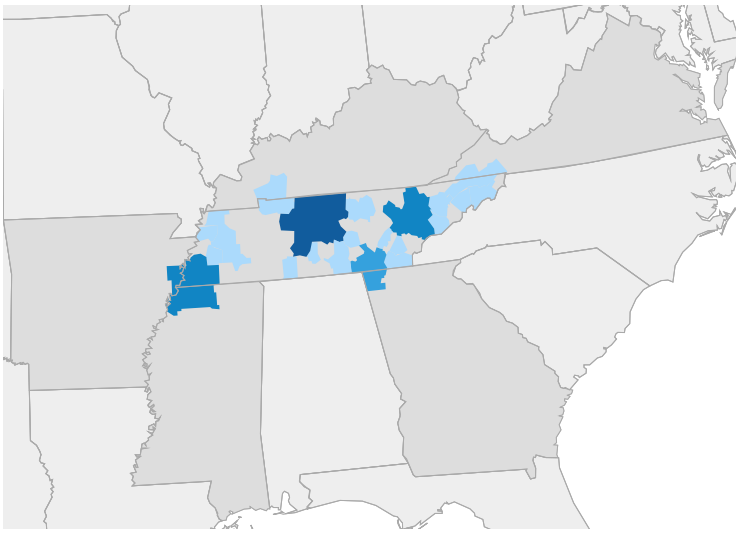
This is close to the Posting Intensity for all other occupations and companies in the region (3-to-1), indicating that they are putting average effort toward hiring for this position.

Unique Postings Trend



Month	Unique Postings	Posting Intensity
Dec 2022	184	2 : 1
Nov 2022	211	2 : 1
Oct 2022	229	2 : 1
Sep 2022	213	2 : 1
Aug 2022	226	2 : 1
Jul 2022	217	2 : 1
Jun 2022	219	2 : 1
May 2022	162	2 : 1
Apr 2022	200	2 : 1
Mar 2022	189	2 : 1
Feb 2022	166	2 : 1
Jan 2022	161	2 : 1

Job Postings Regional Breakdown



MSA	Unique Postings (Jan 2022 - Dec 2022)
Nashville-Davidson--Murfreesboro--Franklin, TN	946
Memphis, TN-MS-AR	432
Knoxville, TN	422
Chattanooga, TN-GA	165
Cleveland, TN	35

Top Companies Posting

Company	Total/Unique (Jan 2022 - Dec 2022)	Posting Intensity	Median Posting Duration
KPMG	245 / 71	3 : 1	12 days
Oak Ridge National Laboratory	194 / 62	3 : 1	27 days
Black & Veatch	63 / 53	1 : 1	29 days
State of Tennessee	141 / 49	3 : 1	27 days
FedEx	89 / 36	2 : 1	17 days
Barge Waggoner Sumner & Cannon	38 / 34	1 : 1	45 days
University of Tennessee	91 / 31	3 : 1	15 days
WSP Global	35 / 29	1 : 1	19 days
Randstad	48 / 27	2 : 1	19 days
Consolidated Nuclear Security	39 / 26	2 : 1	32 days

Top Cities Posting

City	Total/Unique (Jan 2022 - Dec 2022)	Posting Intensity	Median Posting Duration
Nashville, TN	1,423 / 652	2 : 1	30 days
Memphis, TN	902 / 392	2 : 1	28 days
Oak Ridge, TN	430 / 205	2 : 1	30 days
Knoxville, TN	527 / 189	3 : 1	26 days
Chattanooga, TN	265 / 151	2 : 1	36 days
Franklin, TN	203 / 89	2 : 1	40 days
Brentwood, TN	92 / 42	2 : 1	29 days
Mount Juliet, TN	120 / 35	3 : 1	21 days
Clarksville, TN	60 / 25	2 : 1	19 days
Cleveland, TN	38 / 19	2 : 1	34 days

Top Posted Occupations

Occupation (SOC)	Total/Unique (Jan 2022 - Dec 2022)	Posting Intensity	Median Posting Duration
Architectural and Engineering Managers	3,476 / 1,627	2 : 1	29 days
Environmental Scientists and Specialists, Including Health	673 / 279	2 : 1	27 days
Environmental Engineers	470 / 265	2 : 1	30 days
Environmental Science and Protection Technicians, Including Health	287 / 109	3 : 1	31 days
Geoscientists, Except Hydrologists and Geographers	163 / 92	2 : 1	37 days
Environmental Engineering Technologists and Technicians	9 / 5	2 : 1	33 days

Top Posted Job Titles

Job Title	Total/Unique (Jan 2022 - Dec 2022)	Posting Intensity	Median Posting Duration
Engineering Managers	262 / 141	2 : 1	31 days
Project Engineers	246 / 118	2 : 1	18 days
Environmental Scientists	272 / 103	3 : 1	26 days
Environmental Engineers	128 / 81	2 : 1	27 days
Directors of Engineering	99 / 55	2 : 1	32 days
Chief Engineers	85 / 46	2 : 1	23 days
Geologists	49 / 29	2 : 1	29 days
Environmental Project Managers	48 / 26	2 : 1	18 days
Data Engineering Managers	69 / 24	3 : 1	16 days
Civil Engineering Managers	27 / 23	1 : 1	45 days

Rank as a Talent Provider

Lightcast's workforce profile data shows Austin Peay State University has 126 alumni working regionally in the occupations *Environmental Engineers*, *Environmental Scientists and Specialists, Including Health*, *Environmental Science and Protection Technicians, Including Health*, *Geoscientists, Except Hydrologists and Geographers*, *Environmental Engineering Technologists and Technicians*, and *Architectural and Engineering Managers*. These 126 alumni represent 0.90% of regional profiles working in these occupations, which ranks your institution 11th among regional talent providers.

126	0.90%	11
Your Alumni in Region Working in Target Occupations	**Percent of Regional Profiles** Working in Target Occupations	**Your Rank as a** Regional Talent Provider

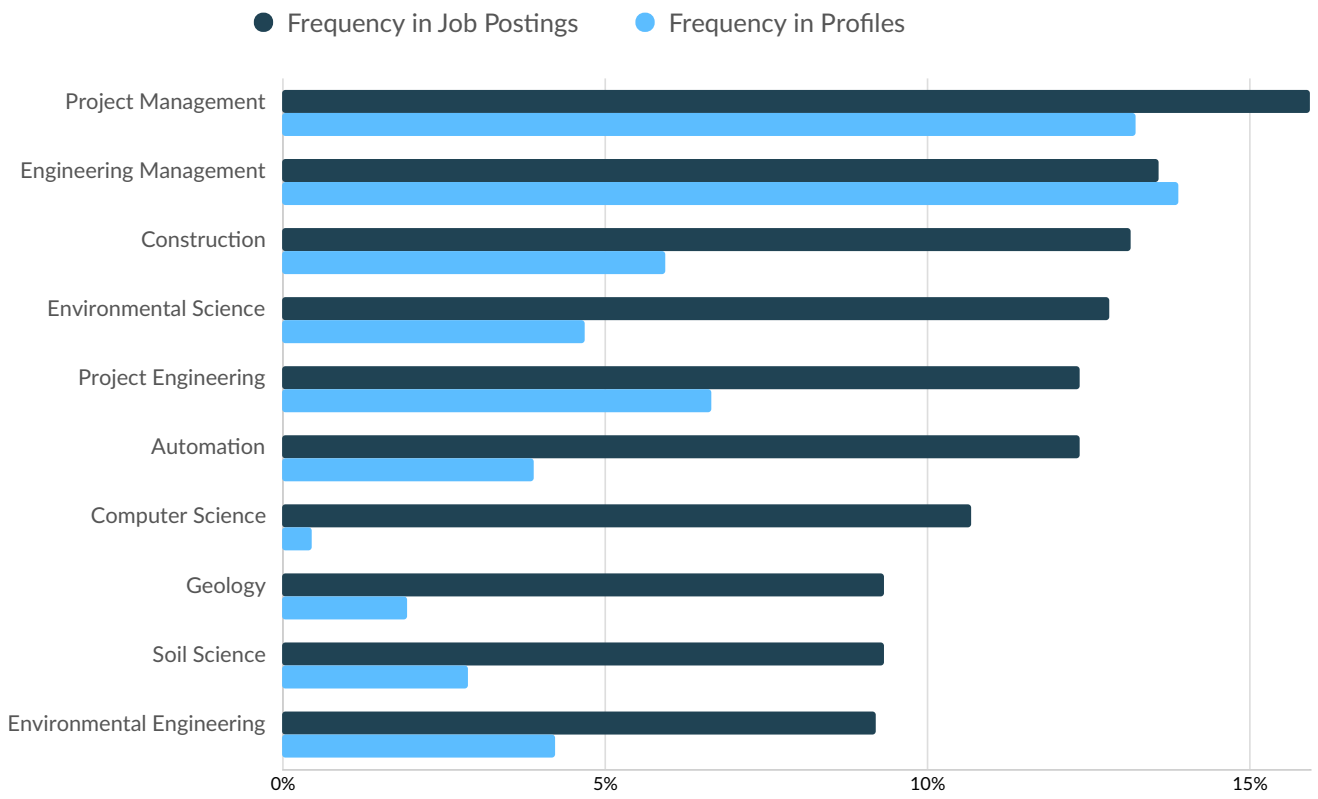
Top Talent Providers

The top regional institutions supplying the labor market with workers employed in the target occupations listed above, based on Lightcast's workforce profile data.

School	Profiles	Percent
The University of Tennessee-Knoxville	1,145	8.13%
Tennessee Technological University	620	4.40%
Middle Tennessee State University	410	2.91%
University of Memphis	361	2.56%
The University of Tennessee-Chattanooga	288	2.05%
Vanderbilt University	251	1.78%
East Tennessee State University	231	1.64%
Georgia Institute of Technology-Main Campus	148	1.05%
Auburn University	140	0.99%
Austin Peay State University	126	0.90%

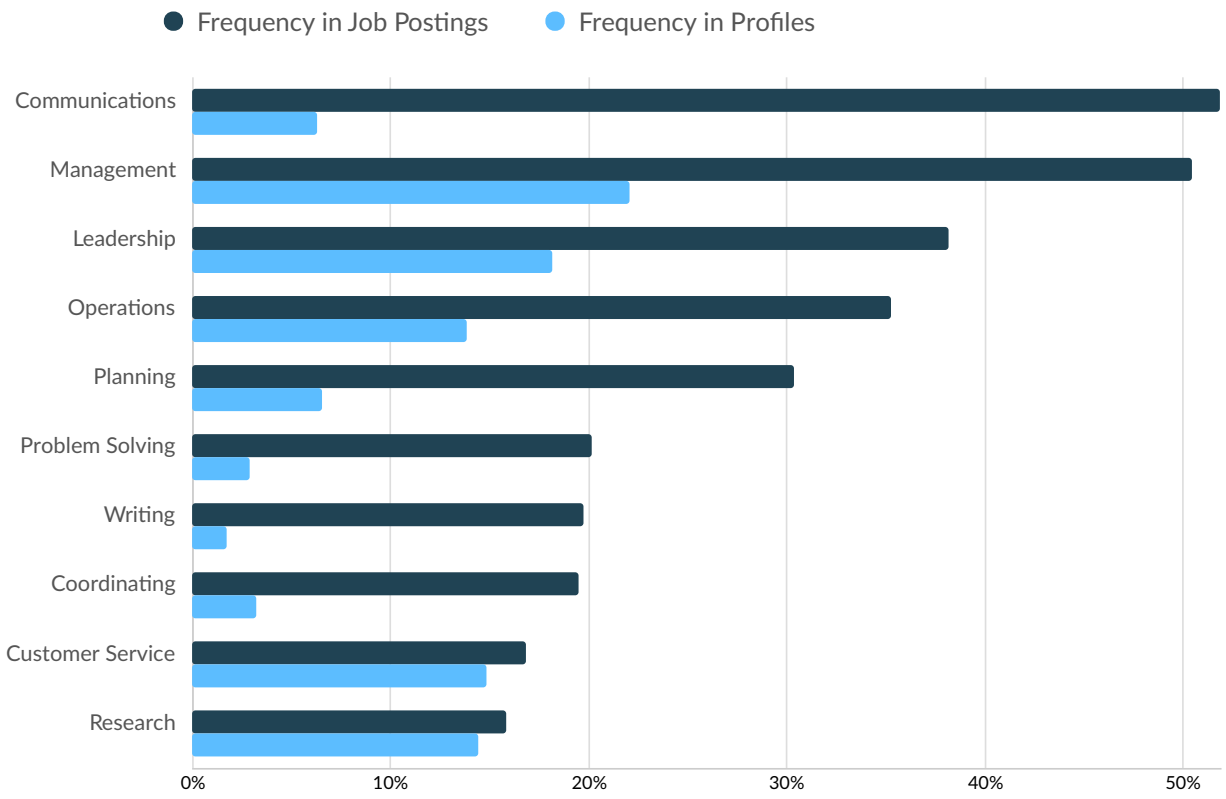
Relevant Skills

Top Specialized Skills



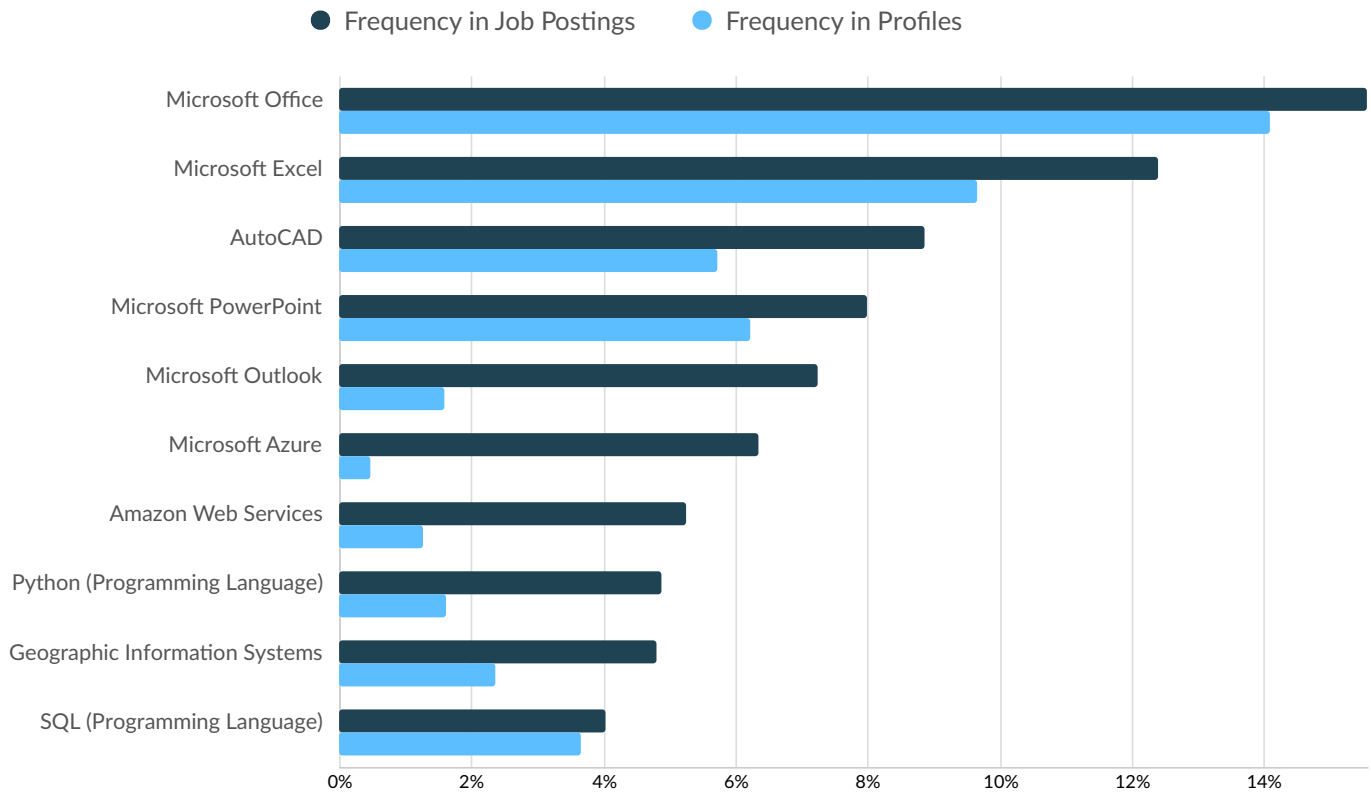
Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Project Management	379	16%	1,712	13%
Engineering Management	323	14%	1,796	14%
Construction	313	13%	768	6%
Environmental Science	305	13%	607	5%
Project Engineering	294	12%	859	7%
Automation	294	12%	503	4%
Computer Science	254	11%	60	0%
Geology	222	9%	250	2%
Soil Science	222	9%	372	3%
Environmental Engineering	219	9%	546	4%

Top Common Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Communications	1,234	52%	814	6%
Management	1,200	50%	2,850	22%
Leadership	909	38%	2,349	18%
Operations	839	35%	1,790	14%
Planning	722	30%	852	7%
Problem Solving	480	20%	377	3%
Writing	470	20%	226	2%
Coordinating	464	20%	418	3%
Customer Service	401	17%	1,917	15%
Research	378	16%	1,863	14%

Top Software Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Microsoft Office	370	16%	1,821	14%
Microsoft Excel	295	12%	1,250	10%
AutoCAD	211	9%	741	6%
Microsoft PowerPoint	190	8%	805	6%
Microsoft Outlook	172	7%	205	2%
Microsoft Azure	151	6%	60	0%
Amazon Web Services	125	5%	163	1%
Python (Programming Language)	116	5%	209	2%
Geographic Information Systems	114	5%	307	2%
SQL (Programming Language)	96	4%	474	4%

Top Qualifications

Qualification	Postings with Qualification
Professional Engineer	161
Licensed Professional Engineer	88
Project Management Professional Certification	87
Security Clearance	61
Master Of Business Administration (MBA)	61
Engineer in Training	42
HAZWOPER Certification	24
Asbestos Inspector License/Certification	15
Certified Industrial Hygienist (CIH)	13
Certified Information Systems Security Professional	12

Environmental Science (03.0104)

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About Lightcast

Lightcast is a labor market analytics firm that is passionate about providing meaningful data for colleges and their students.

Our data is trusted by a breadth of users including researchers at colleges and universities, economic development organizations, and Fortune 500 companies.

Lightcast data offers a three-pronged approach to labor market information:

1. Our traditional LMI combines dozens of government sources from agencies like the Bureau of Economic Analysis, U.S. Census Bureau, and Bureau of Labor Statistics into one dataset that details industries, occupations, demographics, academic programs, and more.

2. Lightcast's job posting analytics give a real-time look into the needs of employers in today's labor market. Each month, millions of postings are scraped from employer sites and job boards, de-duplicated, and compiled into an actionable dataset.

3. Lightcast also leverages workforce profiles—an innovative database of more than 100 million resumés and professional profiles that are aggregated from the open web. These profiles unify information for workers—such as education, employment history, skills, and more—to reveal robust detail on what is happening in today's workforce.

Together, these data related to labor market demand, relevant skills, and the competitive landscape help colleges and universities make informed decisions about their program offerings.

Program Definition

Institution:

Code	Description
219602	Austin Peay State University

Program in Question:

Code	Description
03.0104	Environmental Science

Competitive Landscape

Institution Sectors:

Description	Description
Administrative Unit Only	Private not-for-profit, 2-year
Public, 4-year or above	Private for-profit, 2-year
Private not-for-profit, 4-year or above	Public, less-than-2-year
Private for-profit, 4-year or above	Private not-for-profit, less-than-2-year
Public, 2-year	Private for-profit, less-than-2-year

Education Levels:

Description
Master's Degree

Program Type:

Description	Description
Distance Offered (Includes Hybrid & Mixed Modality Programs)	Non-Distance Offered Programs

Region:

Code	Description	Code	Description
1	Alabama	28	Mississippi
12	Florida	47	Tennessee
13	Georgia	48	Texas
21	Kentucky		

Student Charges Type:Tuition & Fees

Student Charges Grad Status:Graduate

Student Charges Residency:In-State

Program Overview

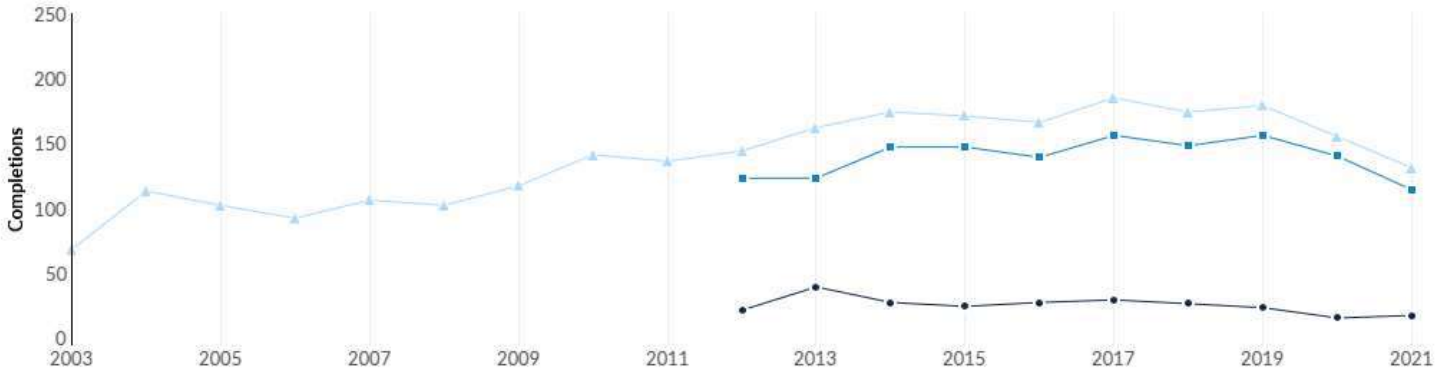


	Completions (2021)	% Completions	Institutions (2021)	% Institutions
All Programs	131	100%	24	100%
Distance Offered Programs	17	13%	4	17%
Non-Distance Offered Programs	114	87%	20	83%

Completions by Institution

Institution	Master's Degree Completions (2021)	Growth % YOY (2021)	Market Share (2021)	IPEDS Tuition & Fees (2021)	Completions Trend (2017-2021)
The University of Texas at Arlington	14	7.7%	10.7%	$10,853	
The University of Tennessee-Chattanooga	12	-29.4%	9.2%	$10,474	
The University of West Florida	11	-26.7%	8.4%	$9,062	
University of Houston-Clear Lake	10	11.1%	7.6%	$9,594	
Florida Gulf Coast University	9	-30.8%	6.9%	$8,971	
University of South Florida	9	-43.8%	6.9%	$10,428	
Stephen F Austin State University	7	75.0%	5.3%	$7,433	
Texas State University	7	-12.5%	5.3%	$9,060	
West Texas A & M University	7	0.0%	5.3%	$7,282	
Texas A & M University-Corpus Christi	5	-28.6%	3.8%	$7,179	

Regional Trends



		2012 Completions	2021 Completions	% Change
●	Distance Offered Programs	21	17	-19.0%
■	Non-Distance Offered Programs	123	114	-7.3%
▲	All Programs	144	131	-9.0%

Labor Market Demand

Labor Market Area Selection:

Code	Description
1	Alabama
12	Florida
13	Georgia
21	Kentucky

Code	Description
28	Mississippi
47	Tennessee
48	Texas

Target Occupations:

Code	Description
17-2081	Environmental Engineers
19-2041	Environmental Scientists and Specialists, Including Health
19-4042	Environmental Science and Protection Technicians, Including Health

Code	Description
19-2042	Geoscientists, Except Hydrologists and Geographers
17-3025	Environmental Engineering Technologists and Technicians
11-9041	Architectural and Engineering Managers

Degree Levels:

Description
Bachelor's degree

Description
Master's degree

Completions Year (default):2021

Jobs Year (default):2021

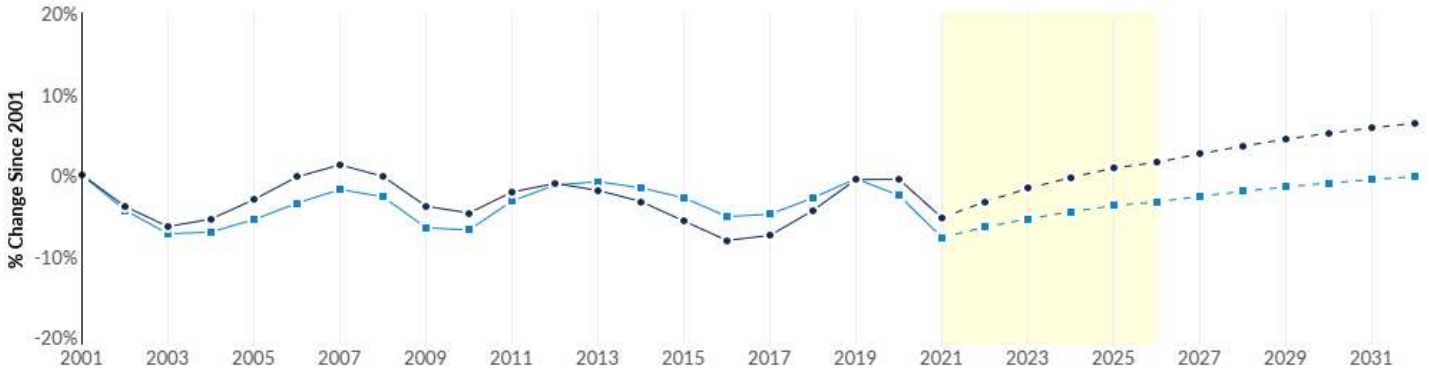
Target Occupations

*Filtered by the proportion of the national workforce in these occupations with a Bachelor's degree or Master's degree

60,366	+7.2%	$47.49/hr $98.8K/yr	6,202
*Jobs (2021)**	*% Change (2021-2026)**	Median Earnings	*Annual Openings**
*13% below National average**	*Nation: +4.7%**	Nation: $53.93/hr; $112.2K/yr	

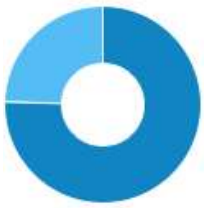
Occupation	*2021 Jobs**	*Annual Openings**	Median Earnings	*Growth (2021 - 2026)**
Architectural and Engineering Managers	*27,715*	*2,459*	$69.78/hr	*+7.19%*
Environmental Scientists and Specialists, Including Health	*14,013*	*1,654*	$29.63/hr	*+8.29%*
Environmental Engineers	*7,023*	*641*	$42.17/hr	*+6.85%*
Geoscientists, Except Hydrologists and Geographers	*6,832*	*784*	$50.21/hr	*+4.48%*
Environmental Science and Protection Technicians, Including Health	*3,925*	*569*	$20.48/hr	*+8.84%*
Environmental Engineering Technologists and Technicians	*858*	*95*	$20.29/hr	*+5.94%*

Regional Trends



Region	2021 Jobs	2026 Jobs	Change	% Change
Region	80,583	86,405	5,822	7.2%
Nation	398,079	417,027	18,948	4.8%

Occupation Gender Breakdown



Gender	2021 Jobs	2021 Percent
Males	60,778	75.4%
Females	19,805	24.6%

Occupation Age Breakdown



Age	2021 Jobs	2021 Percent
14-18	145	0.2%
19-24	3,720	4.6%
25-34	15,179	18.8%
35-44	19,450	24.1%
45-54	20,352	25.3%
55-64	16,935	21.0%
65+	4,802	6.0%

Occupation Race/Ethnicity Breakdown



Race/Ethnicity	2021 Jobs	2021 Percent
White	59,105	73.3%
Hispanic or Latino	8,783	10.9%
Asian	5,707	7.1%
Black or African American	5,298	6.6%
Two or More Races	1,458	1.8%
American Indian or Alaska Native	190	0.2%
Native Hawaiian or Other Pacific Islander	41	0.1%

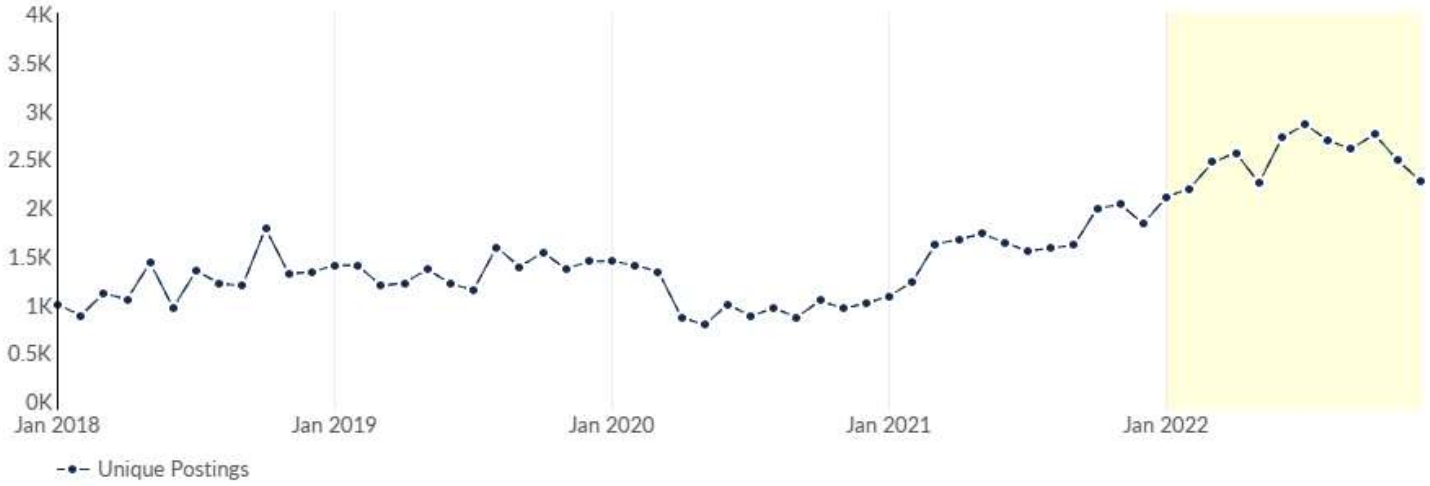
Job Postings Summary

29,940	2 : 1	26 days
Unique Postings	**Posting Intensity**	**Median Posting Duration**
66,179 Total Postings	Regional Average: 3 : 1	Regional Average: 29 days

There were **66,179** total job postings for your selection from January 2022 to December 2022, of which **29,940** were unique. These numbers give us a Posting Intensity of **2-to-1**, meaning that for every 2 postings there is 1 unique job posting.

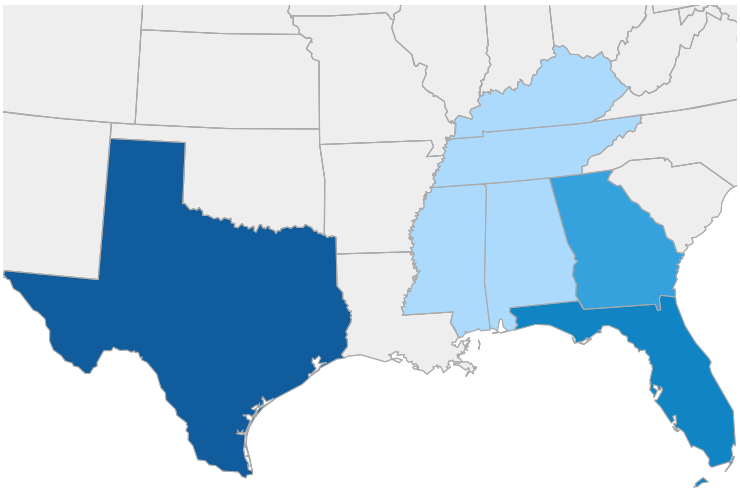
This is close to the Posting Intensity for all other occupations and companies in the region (3-to-1), indicating that they are putting average effort toward hiring for this position.

Unique Postings Trend



Month	Unique Postings	Posting Intensity
Dec 2022	2,271	2 : 1
Nov 2022	2,482	2 : 1
Oct 2022	2,754	2 : 1
Sep 2022	2,601	2 : 1
Aug 2022	2,687	2 : 1
Jul 2022	2,855	2 : 1
Jun 2022	2,717	3 : 1
May 2022	2,249	2 : 1
Apr 2022	2,562	2 : 1
Mar 2022	2,463	2 : 1
Feb 2022	2,193	2 : 1
Jan 2022	2,106	2 : 1

Job Postings Regional Breakdown



State	Unique Postings (Jan 2022 - Dec 2022)
Texas	12,329
Florida	7,058
Georgia	4,690
Tennessee	2,377
Alabama	1,657

Top Companies Posting

Company	Total/Unique (Jan 2022 - Dec 2022)	Posting Intensity	Median Posting Duration
State of Florida	1,627 / 695	2 : 1	27 days
KPMG	2,155 / 577	4 : 1	18 days
Black & Veatch	600 / 451	1 : 1	29 days
WSP Global	547 / 403	1 : 1	27 days
L3Harris Technologies	442 / 306	1 : 1	37 days
Randstad	430 / 282	2 : 1	23 days
Lockheed Martin	1,021 / 279	4 : 1	17 days
Raytheon Technologies	485 / 210	2 : 1	32 days
Deloitte	253 / 192	1 : 1	19 days
Citigroup	607 / 189	3 : 1	24 days

Top Cities Posting

City	Total/Unique (Jan 2022 - Dec 2022)	Posting Intensity	Median Posting Duration
Houston, TX	5,636 / 2,603	2 : 1	25 days
Atlanta, GA	3,925 / 2,188	2 : 1	26 days
Austin, TX	4,611 / 1,910	2 : 1	26 days
Dallas, TX	3,073 / 1,347	2 : 1	27 days
Tampa, FL	2,246 / 911	2 : 1	25 days
Orlando, FL	2,155 / 829	3 : 1	23 days
San Antonio, TX	1,618 / 688	2 : 1	29 days
Nashville, TN	1,423 / 652	2 : 1	30 days
Jacksonville, FL	1,632 / 636	3 : 1	30 days
Miami, FL	1,490 / 591	3 : 1	24 days

Top Posted Occupations

Occupation (SOC)	Total/Unique (Jan 2022 - Dec 2022)	Posting Intensity	Median Posting Duration
Architectural and Engineering Managers	44,720 / 20,328	2 : 1	25 days
Environmental Engineers	7,389 / 3,333	2 : 1	27 days
Environmental Scientists and Specialists, Including Health	7,699 / 3,319	2 : 1	28 days
Environmental Science and Protection Technicians, Including Health	3,398 / 1,635	2 : 1	27 days
Geoscientists, Except Hydrologists and Geographers	2,772 / 1,205	2 : 1	31 days
Environmental Engineering Technologists and Technicians	201 / 120	2 : 1	25 days

Top Posted Job Titles

Job Title	Total/Unique (Jan 2022 - Dec 2022)	Posting Intensity	Median Posting Duration
Engineering Managers	3,310 / 1,654	2 : 1	27 days
Project Engineers	2,862 / 1,480	2 : 1	23 days
Environmental Specialists	2,831 / 1,227	2 : 1	27 days
Environmental Scientists	2,351 / 950	2 : 1	30 days
Environmental Engineers	1,552 / 798	2 : 1	24 days
Directors of Engineering	1,512 / 722	2 : 1	24 days
Chief Engineers	833 / 491	2 : 1	25 days
Environmental Project Managers	823 / 385	2 : 1	30 days
Geologists	774 / 358	2 : 1	31 days
Project Engineering Managers	882 / 347	3 : 1	23 days

Rank as a Talent Provider

Lightcast's workforce profile data shows Austin Peay State University has 179 alumni working regionally in the occupations *Environmental Engineers*, *Environmental Scientists and Specialists, Including Health*, *Environmental Science and Protection Technicians, Including Health*, *Geoscientists, Except Hydrologists and Geographers*, *Environmental Engineering Technologists and Technicians*, and *Architectural and Engineering Managers*. These 179 alumni represent 0.09% of regional profiles working in these occupations, which ranks your institution 180th among regional talent providers.

179	0.09%	180
Your Alumni in Region Working in Target Occupations	**Percent of Regional Profiles** Working in Target Occupations	**Your Rank as a** Regional Talent Provider

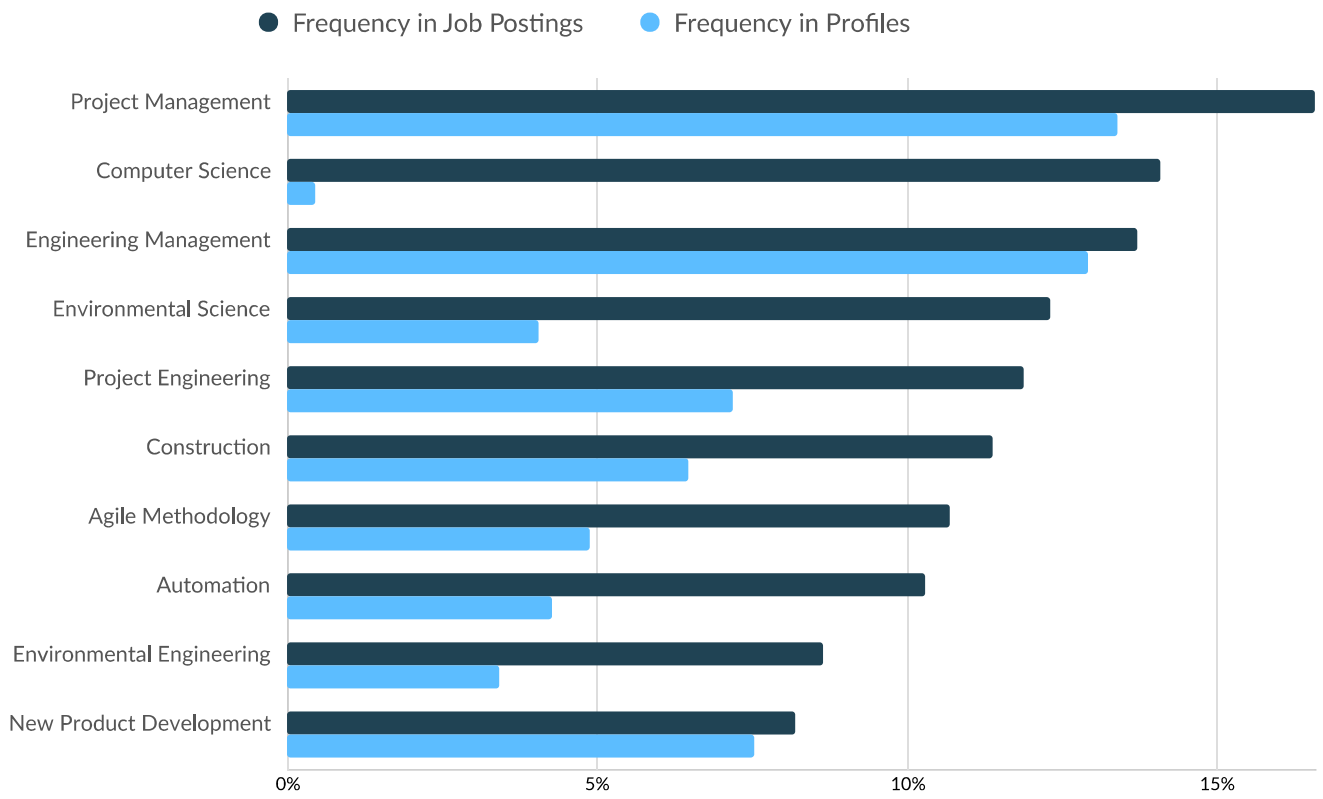
Top Talent Providers

The top regional institutions supplying the labor market with workers employed in the target occupations listed above, based on Lightcast's workforce profile data.

School	Profiles	Percent
Texas A & M University-College Station	5,758	3.00%
The University of Texas at Austin	4,661	2.42%
Georgia Institute of Technology-Main Campus	3,246	1.69%
University of Florida	3,159	1.64%
University of Houston	2,713	1.41%
University of South Florida	2,063	1.07%
University of Central Florida	1,874	0.97%
Auburn University	1,850	0.96%
Texas Tech University	1,817	0.95%
The University of Tennessee-Knoxville	1,665	0.87%

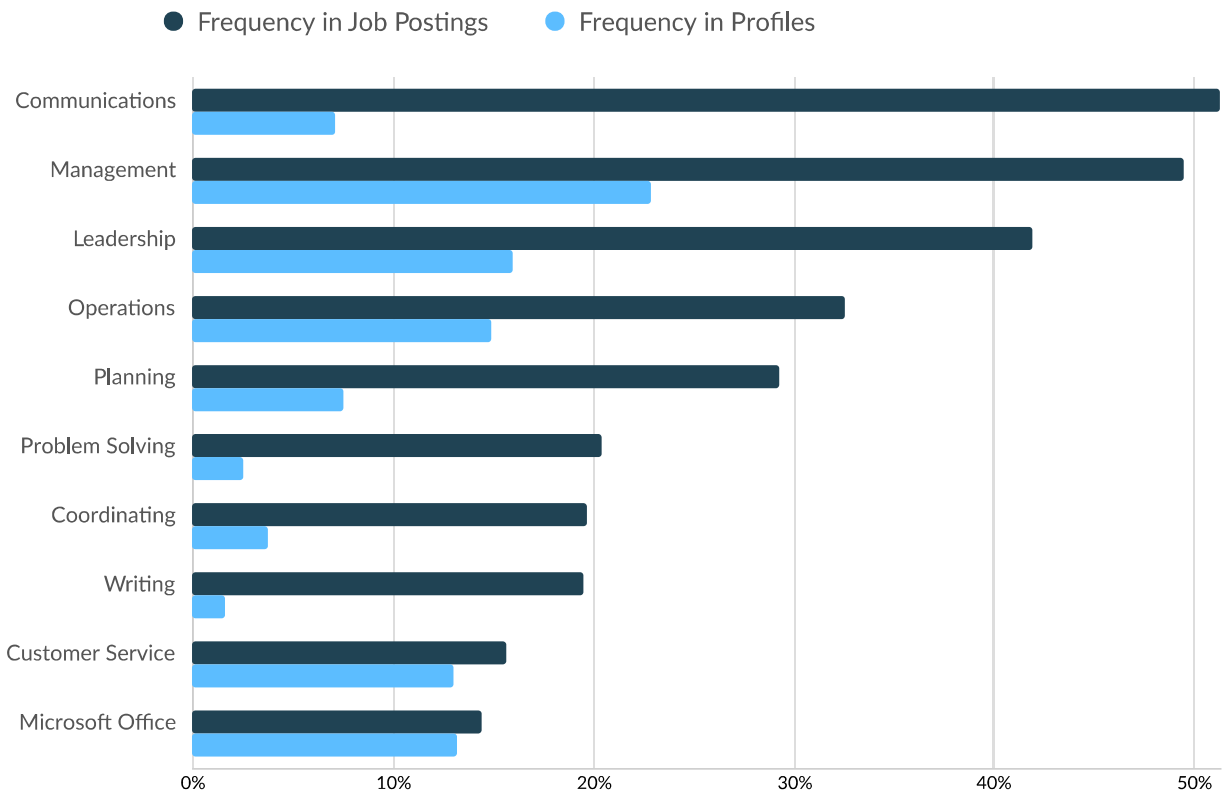
Relevant Skills

Top Specialized Skills



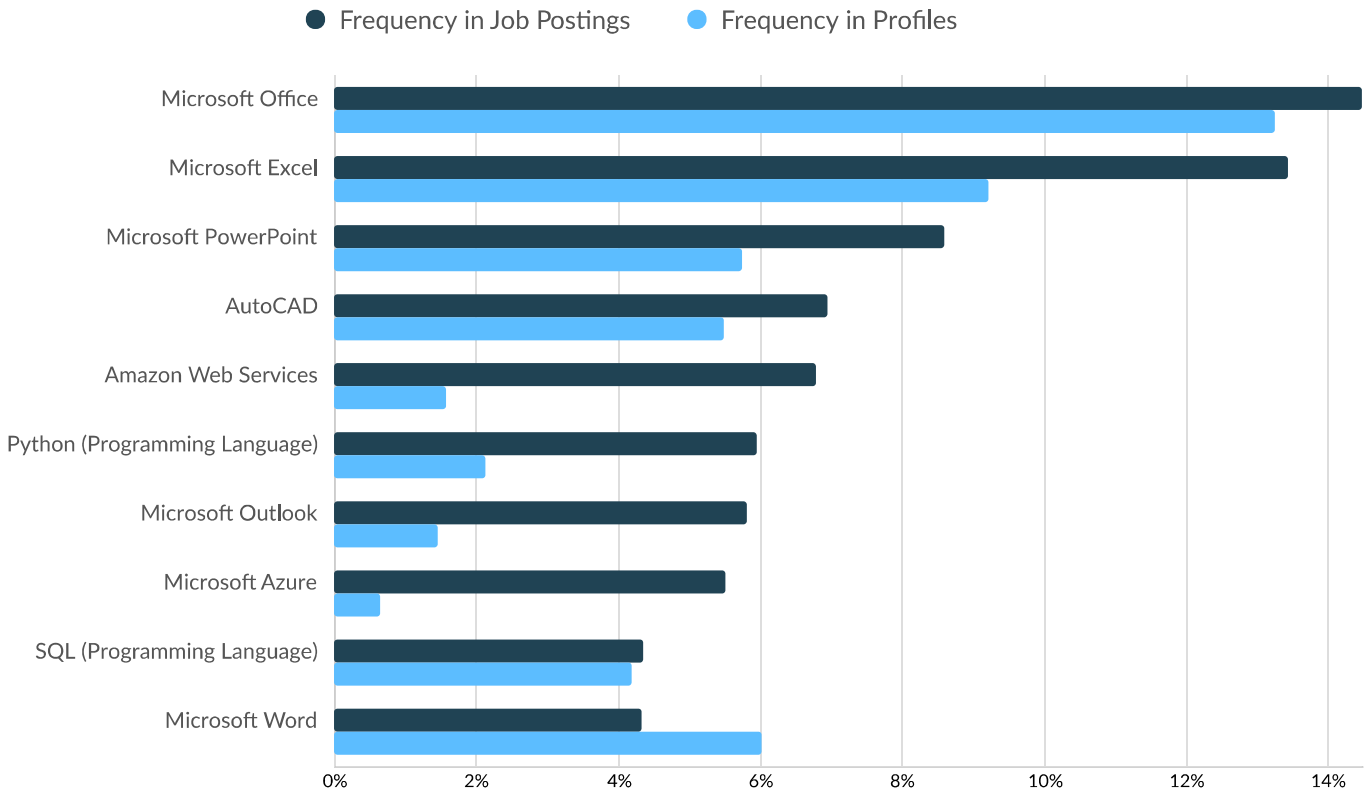
Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Project Management	4,969	17%	23,211	13%
Computer Science	4,225	14%	765	0%
Engineering Management	4,109	14%	22,363	13%
Environmental Science	3,692	12%	7,053	4%
Project Engineering	3,565	12%	12,438	7%
Construction	3,408	11%	11,219	6%
Agile Methodology	3,206	11%	8,459	5%
Automation	3,083	10%	7,382	4%
Environmental Engineering	2,594	9%	5,926	3%
New Product Development	2,456	8%	13,027	8%

Top Common Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Communications	15,355	51%	12,401	7%
Management	14,811	49%	39,585	23%
Leadership	12,543	42%	27,650	16%
Operations	9,756	33%	25,796	15%
Planning	8,775	29%	13,060	8%
Problem Solving	6,128	20%	4,458	3%
Coordinating	5,899	20%	6,579	4%
Writing	5,838	19%	2,866	2%
Customer Service	4,683	16%	22,646	13%
Microsoft Office	4,335	14%	22,925	13%

Top Software Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Microsoft Office	4,335	14%	22,925	13%
Microsoft Excel	4,024	13%	15,947	9%
Microsoft PowerPoint	2,575	9%	9,955	6%
AutoCAD	2,079	7%	9,482	5%
Amazon Web Services	2,031	7%	2,709	2%
Python (Programming Language)	1,782	6%	3,671	2%
Microsoft Outlook	1,744	6%	2,522	1%
Microsoft Azure	1,654	6%	1,129	1%
SQL (Programming Language)	1,307	4%	7,275	4%
Microsoft Word	1,296	4%	10,430	6%

Top Qualifications

Qualification	Postings with Qualification
Professional Engineer	1,454
Security Clearance	1,137
Project Management Professional Certification	1,090
Licensed Professional Engineer	811
Master Of Business Administration (MBA)	721
Secret Clearance	647
Engineer in Training	421
Top Secret-Sensitive Compartmented Information (TS/SCI Clearance)	321
HAZWOPER Certification	304
Certified Information Systems Security Professional	163



6 Occupations
in Tennessee

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What is Lightcast Data?

Lightcast data is a hybrid dataset derived from official government sources such as the US Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics. Leveraging the unique strengths of each source, our data modeling team creates an authoritative dataset that captures more than 99% of all workers in the United States. This core offering is then enriched with data from online social profiles, resumés, and job postings to give you a complete view of the workforce.

Lightcast data is frequently cited in major publications such as *The Atlantic*, *Forbes*, *Harvard Business Review*, *The New York Times*, *The Wall Street Journal*, and *USA Today*.

Report Parameters

6 Occupations

11-9041	Architectural and Engineering Managers
17-2081	Environmental Engineers
17-3025	Environmental Engineering Technologists and Technicians
19-2041	Environmental Scientists and Specialists, Including Health
19-4042	Environmental Science and Protection Technicians, Including Health
19-2042	Geoscientists, Except Hydrologists and Geographers

1 State

47	Tennessee

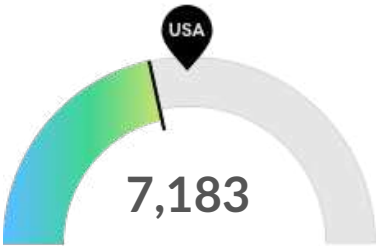
Class of Worker

QCEW Employees, Non-QCEW Employees, and Self-Employed

The information in this report pertains to the chosen occupations and geographical area.

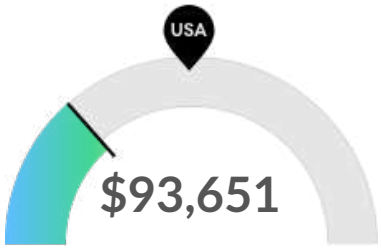
Executive Summary

Light Job Posting Demand Over a Thin Supply of Regional Jobs



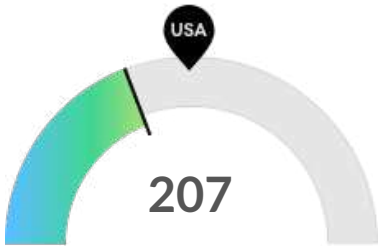
Jobs (2020)

Tennessee is not a hotspot for this kind of job. The national average for an area this size is 8,841* employees, while there are 7,183 here.



Compensation

Earnings are low in Tennessee. The national median salary for your occupations is $112,176, compared to $93,651 here.



Job Posting Demand

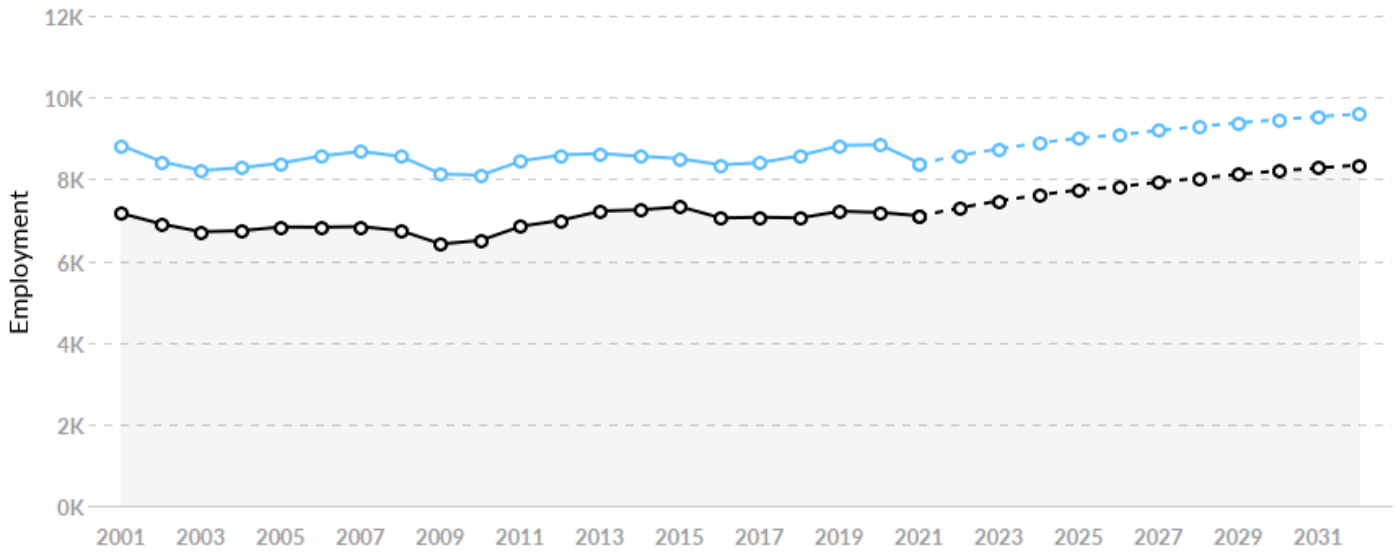
Job posting activity is low in Tennessee. The national average for an area this size is 296* job postings/mo, while there are 207 here.

*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and Tennessee. In other words, the values represent the national average adjusted for region size.

Jobs

Regional Employment Is Lower Than the National Average

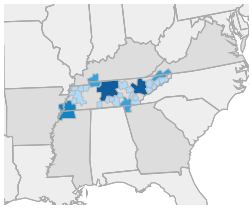
An average area of this size typically has 8,841* jobs, while there are 7,183 here. This lower than average supply of jobs may make it more difficult for workers in this field to find employment in your area.



	Region	2020 Jobs	2032 Jobs	Change	% Change
●	Tennessee	7,183	8,343	1,160	16.1%
●	National Average	8,841	9,594	753	8.5%

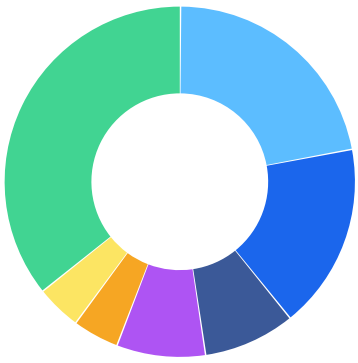
*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and Tennessee. In other words, the values represent the national average adjusted for region size.

Regional Breakdown



MSA	2020 Jobs
Nashville-Davidson--Murfreesboro--Franklin, TN	2,149
Knoxville, TN	1,965
Memphis, TN-MS-AR	1,068
Chattanooga, TN-GA	558
Kingsport-Bristol, TN-VA	339

Most Jobs are Found in the Architectural, Engineering, and Related Services Industry Sector

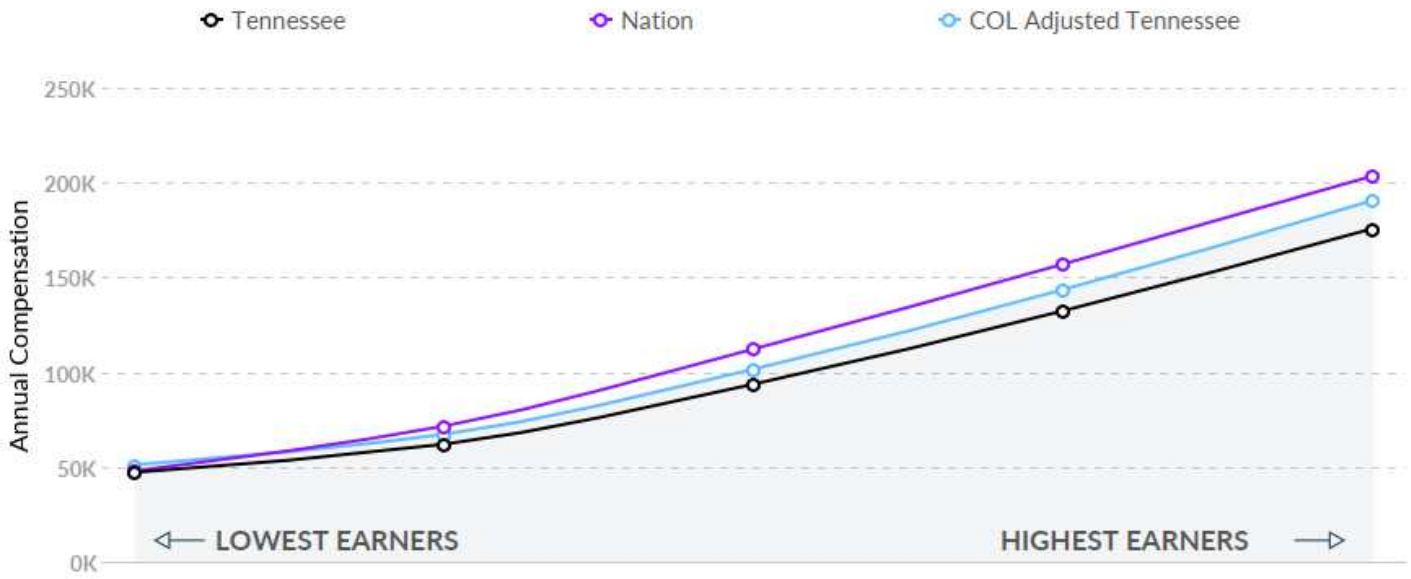


Industry	% of Occupation in Industry (2020)
Architectural, Engineering, and Related Services	22.0%
Management, Scientific, and Technical Consulting Services	17.1%
State Government, Excluding Education and Hospitals	8.5%
Local Government, Excluding Education and Hospitals	8.2%
Management of Companies and Enterprises	4.3%
Federal Government, Civilian	4.2%
Other	35.8%

Compensation

Regional Compensation Is 17% Lower Than National Compensation

For your occupations, the 2021 median wage in Tennessee is $93,651, while the national median wage is $112,176.



Job Posting Activity



7,447 Unique Job Postings

The number of unique postings for this job from Jan 2020 to Dec 2022.



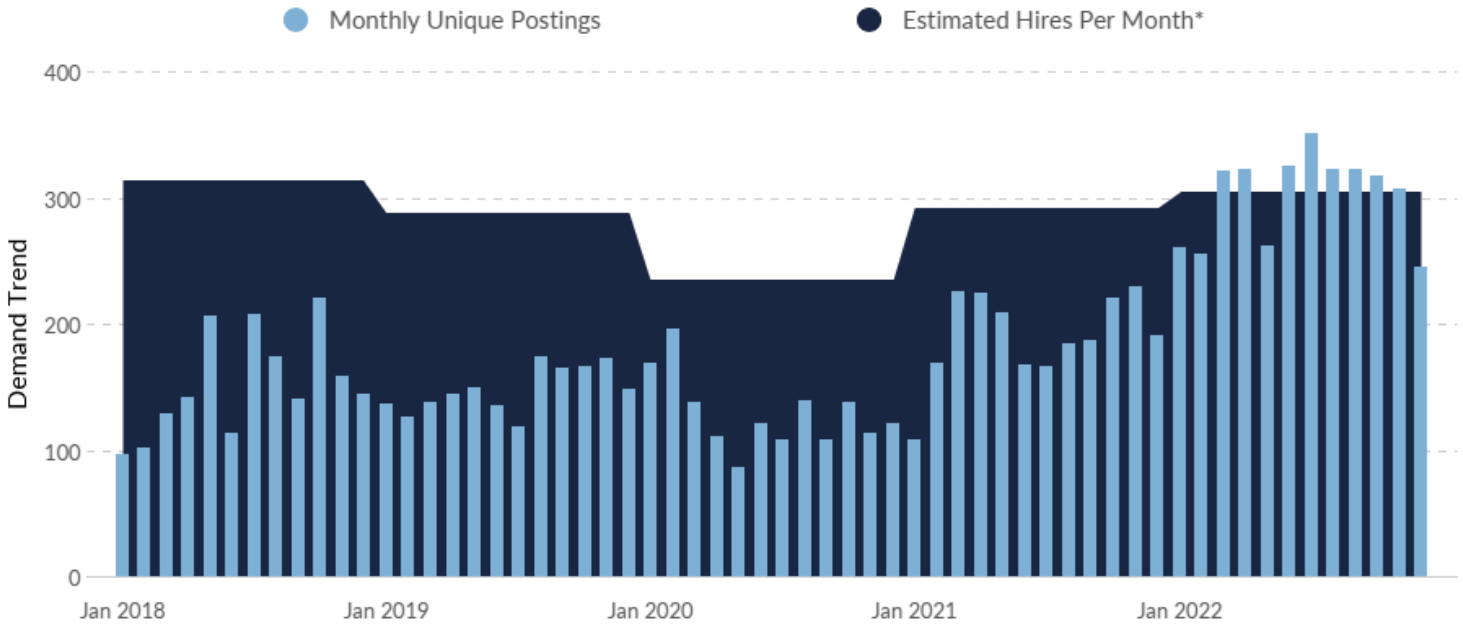
1,467 Employers Competing

All employers in the region who posted for this job from Jan 2020 to Dec 2022.



29 Day Median Duration

Posting duration is 1 day shorter than what's typical in the region.



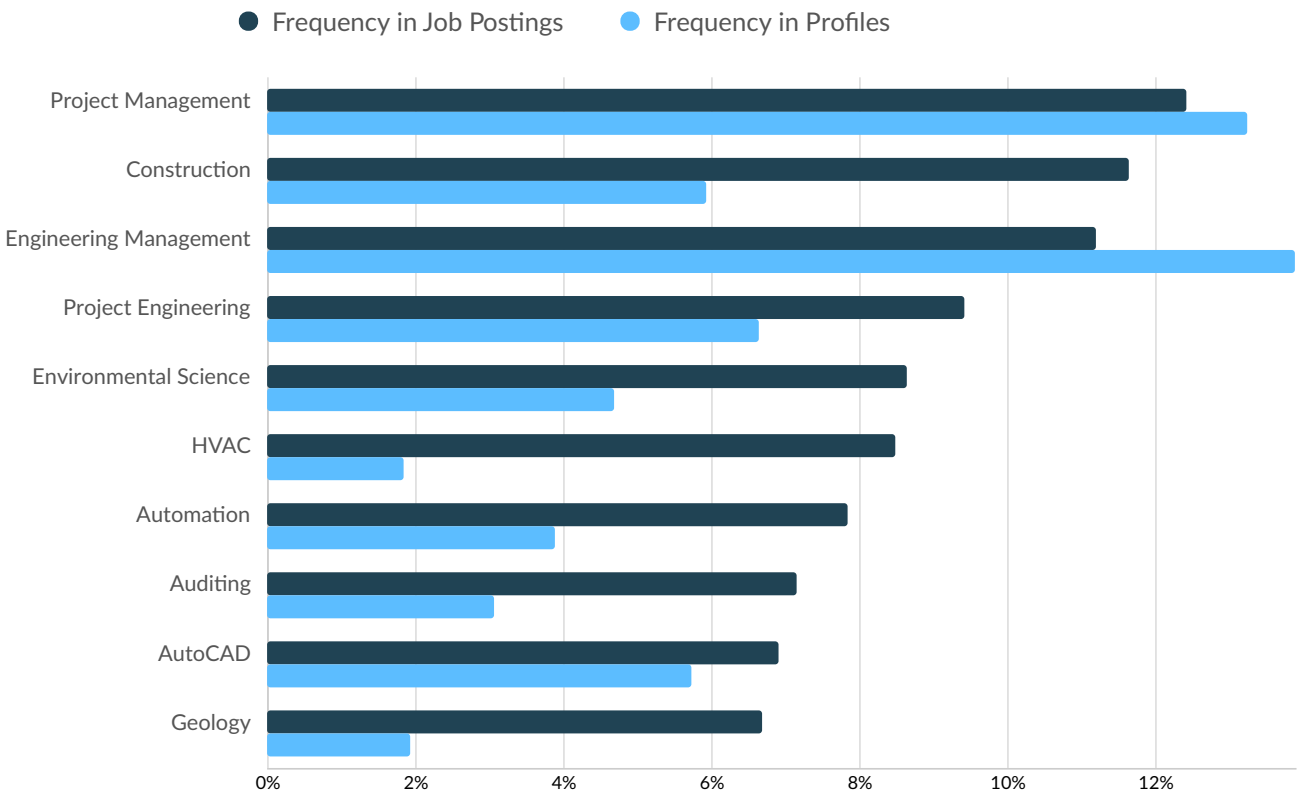
Occupation	Avg Monthly Postings (Jan 2020 - Dec 2022)	Avg Monthly Hires (Jan 2020 - Dec 2022)
Architectural and Engineering Managers	133	86
Environmental Science and Protection Technicians, Including Health	26	65
Environmental Engineers	20	35
Environmental Scientists and Specialists, Including Health	21	57
Geoscientists, Except Hydrologists and Geographers	6	11
Environmental Engineering Technologists and Technicians	1	22

*A hire is reported by the Quarterly Workforce Indicators when an individual's Social Security Number appears on a company's payroll and was not there the quarter before. Lightcast hires are calculated using a combination of Lightcast jobs data, information on separation rates from the Bureau of Labor Statistics (BLS), and industry-based hires data from the Census Bureau.

Top Companies	Unique Postings
CBRE	187
Oak Ridge National Laboratory	151
GPAC	139
Marriott International	103
KPMG	101
State of Tennessee	95
Vanderbilt University	91
CyberCoders	88
FedEx	86
Clean Harbors	71

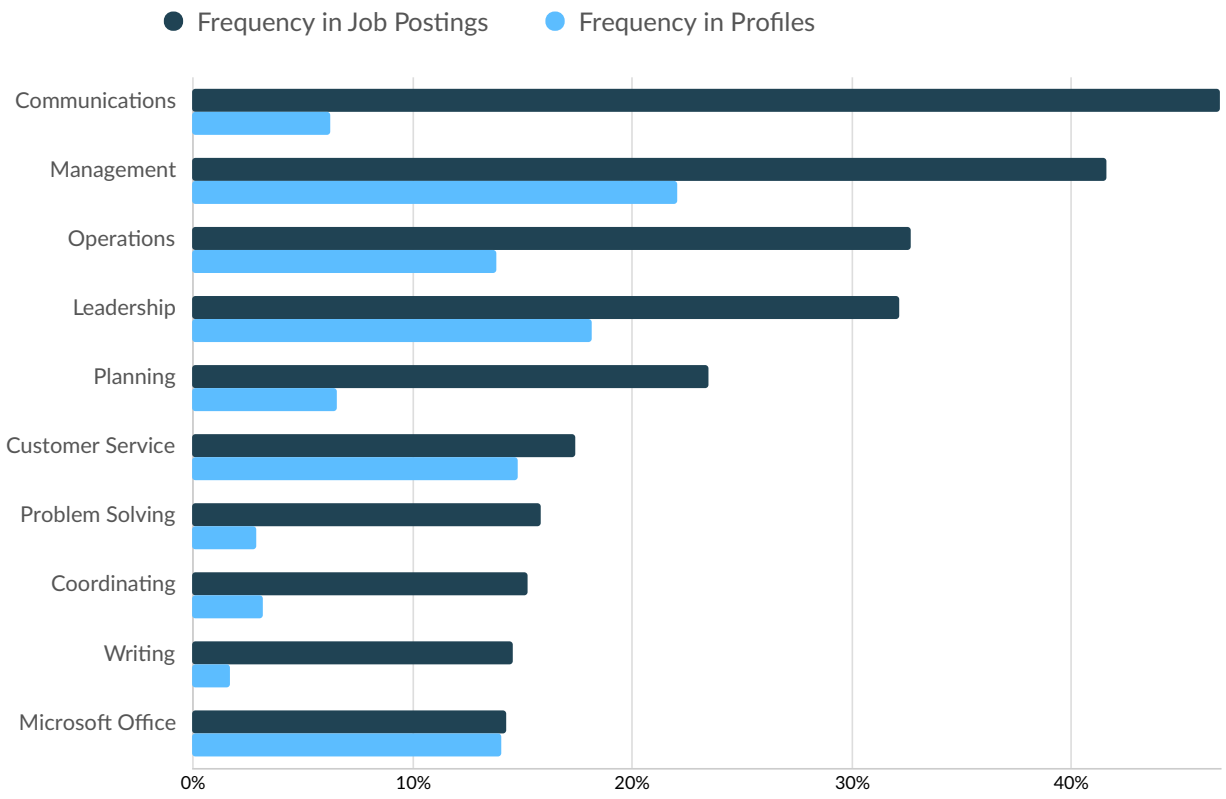
Top Job Titles	Unique Postings
Engineering Managers	364
Project Engineers	337
Chief Engineers	327
Environmental Technicians	207
Directors of Engineering	189
Environmental Scientists	168
Environmental Engineers	151
Environmental Field Technicians	92
Architectural Project Managers	89
Environmental Specialists	81

Top Specialized Skills



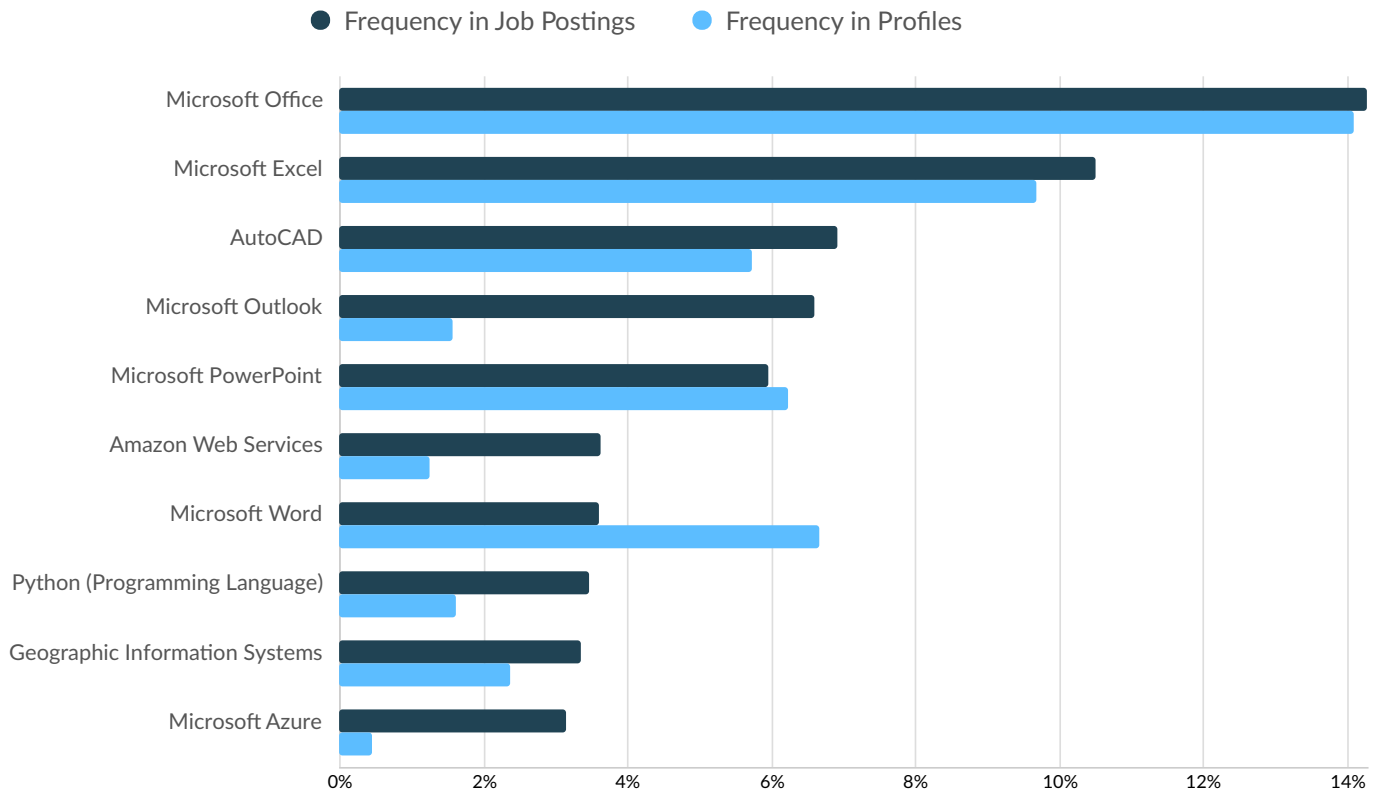
Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Project Management	926	12%	1,712	13%
Construction	868	12%	768	6%
Engineering Management	834	11%	1,796	14%
Project Engineering	702	9%	859	7%
Environmental Science	644	9%	607	5%
HVAC	632	8%	238	2%
Automation	584	8%	503	4%
Auditing	534	7%	396	3%
AutoCAD	515	7%	741	6%
Geology	498	7%	250	2%

Top Common Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Communications	3,485	47%	814	6%
Management	3,103	42%	2,850	22%
Operations	2,435	33%	1,790	14%
Leadership	2,398	32%	2,349	18%
Planning	1,751	24%	852	7%
Customer Service	1,297	17%	1,917	15%
Problem Solving	1,184	16%	377	3%
Coordinating	1,140	15%	418	3%
Writing	1,088	15%	226	2%
Microsoft Office	1,063	14%	1,821	14%

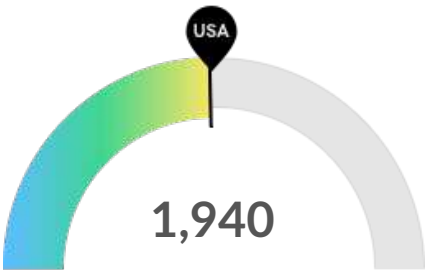
Top Software Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Microsoft Office	1,063	14%	1,821	14%
Microsoft Excel	783	11%	1,250	10%
AutoCAD	515	7%	741	6%
Microsoft Outlook	491	7%	205	2%
Microsoft PowerPoint	444	6%	805	6%
Amazon Web Services	271	4%	163	1%
Microsoft Word	268	4%	863	7%
Python (Programming Language)	258	3%	209	2%
Geographic Information Systems	250	3%	307	2%
Microsoft Azure	234	3%	60	0%

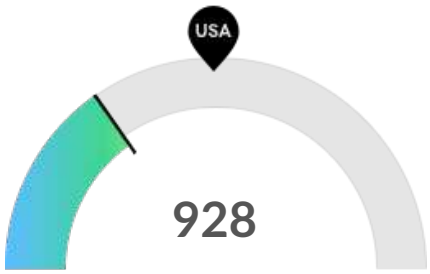
Demographics

Retirement Risk Is About Average, While Overall Diversity Is Low



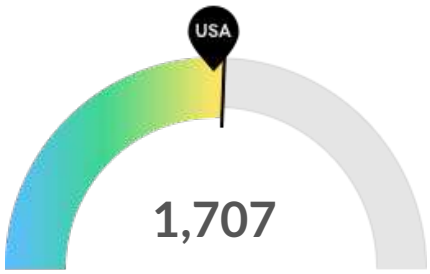
Retiring Soon

Retirement risk is about average in Tennessee. The national average for an area this size is 1,975* employees 55 or older, while there are 1,940 here.



Racial Diversity

Racial diversity is low in Tennessee. The national average for an area this size is 1,764* racially diverse employees, while there are 928 here.

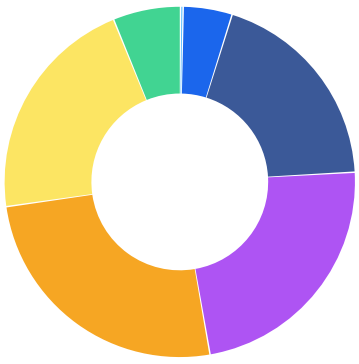


Gender Diversity

Gender diversity is about average in Tennessee. The national average for an area this size is 1,642* female employees, while there are 1,707 here.

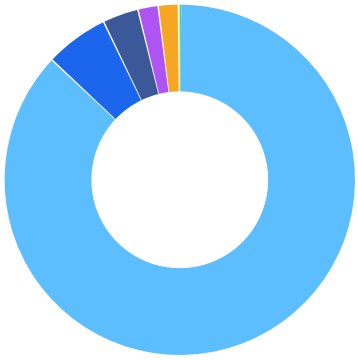
*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and Tennessee. In other words, the values represent the national average adjusted for region size.

Occupation Age Breakdown



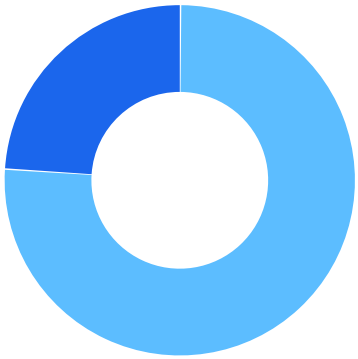
	% of Jobs	Jobs
14-18	0.2%	17
19-24	4.5%	321
25-34	19.3%	1,369
35-44	23.1%	1,641
45-54	25.5%	1,810
55-64	21.1%	1,498
65+	6.2%	442

Occupation Race/Ethnicity Breakdown



	% of Jobs	Jobs
White	86.9%	6,170
Black or African American	5.9%	416
Asian	3.3%	235
Hispanic or Latino	1.9%	132
Two or More Races	1.9%	132
American Indian or Alaska Native	0.2%	13
Native Hawaiian or Other Pacific Islander	0.0%	1

Occupation Gender Breakdown



	% of Jobs	Jobs
Males	76.0%	5,391
Females	24.0%	1,707

Occupational Programs



58 Programs

Of the programs that can train for this job, 58 have produced completions in the last 5 years.



6,687 Completions (2021)

The completions from all regional institutions for all degree types.



798 Openings (2021)

The average number of openings for an occupation in the region is 585.

CIP Code	Top Programs	Completions (2021)
26.0101	Biology/Biological Sciences, General	1,452
45.1001	Political Science and Government, General	698
14.1901	Mechanical Engineering	603
45.1101	Sociology, General	428
40.0501	Chemistry, General	366
14.0801	Civil Engineering, General	326
45.0101	Social Sciences, General	269
14.0701	Chemical Engineering	265
14.1001	Electrical and Electronics Engineering	253
40.0601	Geology/Earth Science, General	189

Top Schools	Completions (2021)
The University of Tennessee-Knoxville	1,728
Vanderbilt University	874
Tennessee Technological University	607
The University of Tennessee-Chattanooga	547
University of Memphis	481
Middle Tennessee State University	448
East Tennessee State University	235
Tennessee State University	205
The University of the South	181
Austin Peay State University	167

Appendix A - Data Sources and Calculations

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates are also affected by county-level Emsi earnings by industry.

Staffing Patterns Data

The staffing pattern data in this report are compiled from several sources using a specialized process. For QCEW and Non-QCEW Employees classes of worker, sources include Occupational Employment Statistics, the National Industry-Occupation Employment Matrix, and the American Community Survey. For the Self-Employed and Extended Proprietors classes of worker, the primary source is the American Community Survey, with a small amount of information from Occupational Employment Statistics.

Cost of Living Data

Lightcast's cost of living data is based on the Cost of Living Index published by the Council for Community and Economic Research (C2ER).

Lightcast Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.



6 Occupations
in 7 States

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Report Parameters

6 Occupations

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17-2081	Environmental Engineers
17-3025	Environmental Engineering Technologists and Technicians
19-2041	Environmental Scientists and Specialists, Including Health
19-4042	Environmental Science and Protection Technicians, Including Health
19-2042	Geoscientists, Except Hydrologists and Geographers

7 States

1	Alabama
12	Florida
13	Georgia
21	Kentucky
28	Mississippi
47	Tennessee
48	Texas

Class of Worker

QCEW Employees, Non-QCEW Employees, and Self-Employed

The information in this report pertains to the chosen occupations and geographical areas.

Executive Summary

Light Job Posting Demand Over a Thin Supply of Regional Jobs



Jobs (2020)

Your area is not a hotspot for this kind of job. The national average for an area this size is 98,954* employees, while there are 84,623 here.



Compensation

Earnings are low in your area. The national median salary for your occupations is $112,176, compared to $98,786 here.



Job Posting Demand

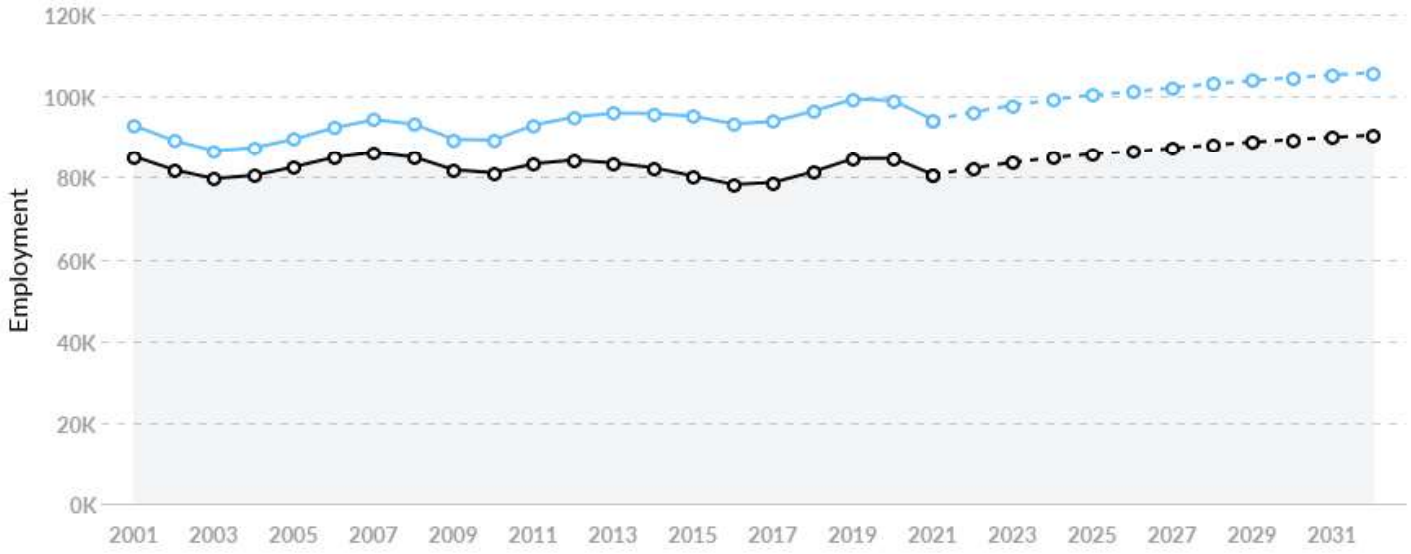
Job posting activity is low in your area. The national average for an area this size is 3,318* job postings/mo, while there are 2,780 here.

*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

Jobs

Regional Employment Is Lower Than the National Average

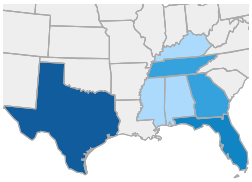
An average area of this size typically has 98,954* jobs, while there are 84,623 here. This lower than average supply of jobs may make it more difficult for workers in this field to find employment in your area.



	Region	2020 Jobs	2032 Jobs	Change	% Change
●	7 States	84,623	90,513	5,890	7.0%
●	National Average	98,954	105,801	6,846	6.9%

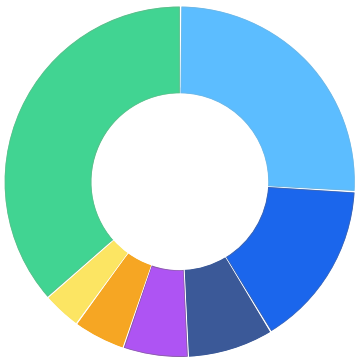
*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

Regional Breakdown



State	2020 Jobs
Texas	37,131
Florida	18,986
Georgia	9,678
Tennessee	7,183
Alabama	5,307

Most Jobs are Found in the Architectural, Engineering, and Related Services Industry Sector

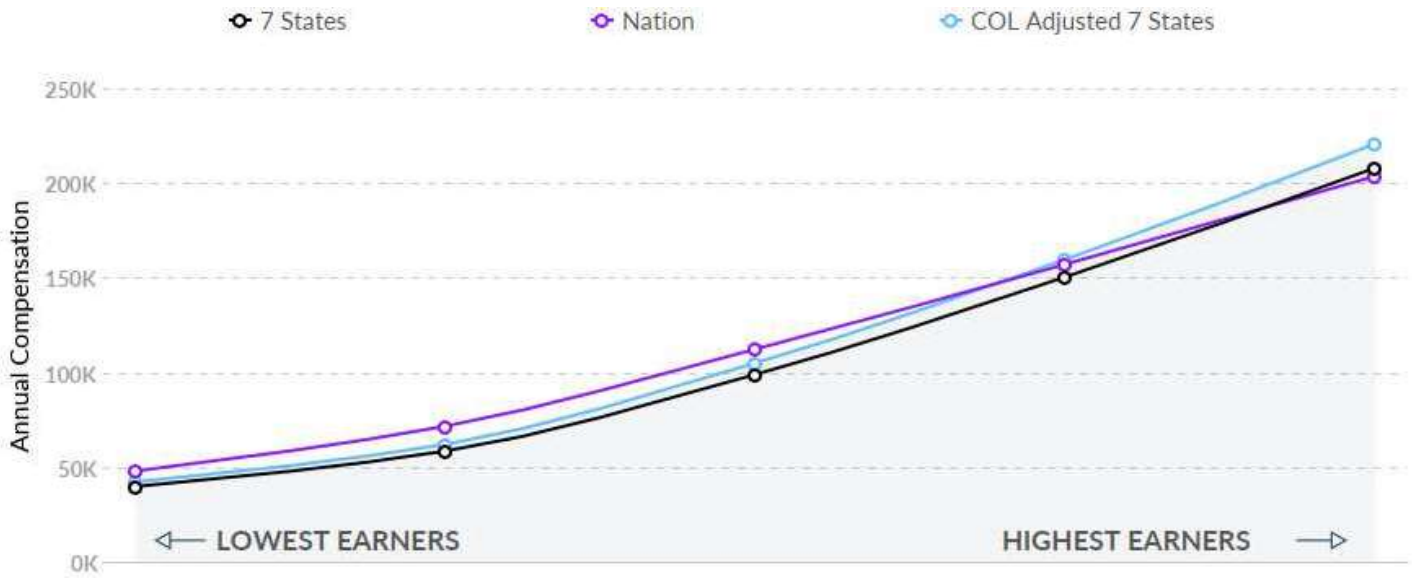


Industry	% of Occupation in Industry (2020)
Architectural, Engineering, and Related Services	25.8%
Management, Scientific, and Technical Consulting Services	15.4%
State Government, Excluding Education and Hospitals	7.9%
Local Government, Excluding Education and Hospitals	6.0%
Federal Government, Civilian	4.8%
Oil and Gas Extraction	3.5%
Other	36.5%

Compensation

Regional Compensation Is 12% Lower Than National Compensation

For your occupations, the 2021 median wage in your area is $98,786, while the national median wage is $112,176.



Job Posting Activity



100,092 Unique Job Postings

The number of unique postings for this job from Jan 2020 to Dec 2022.



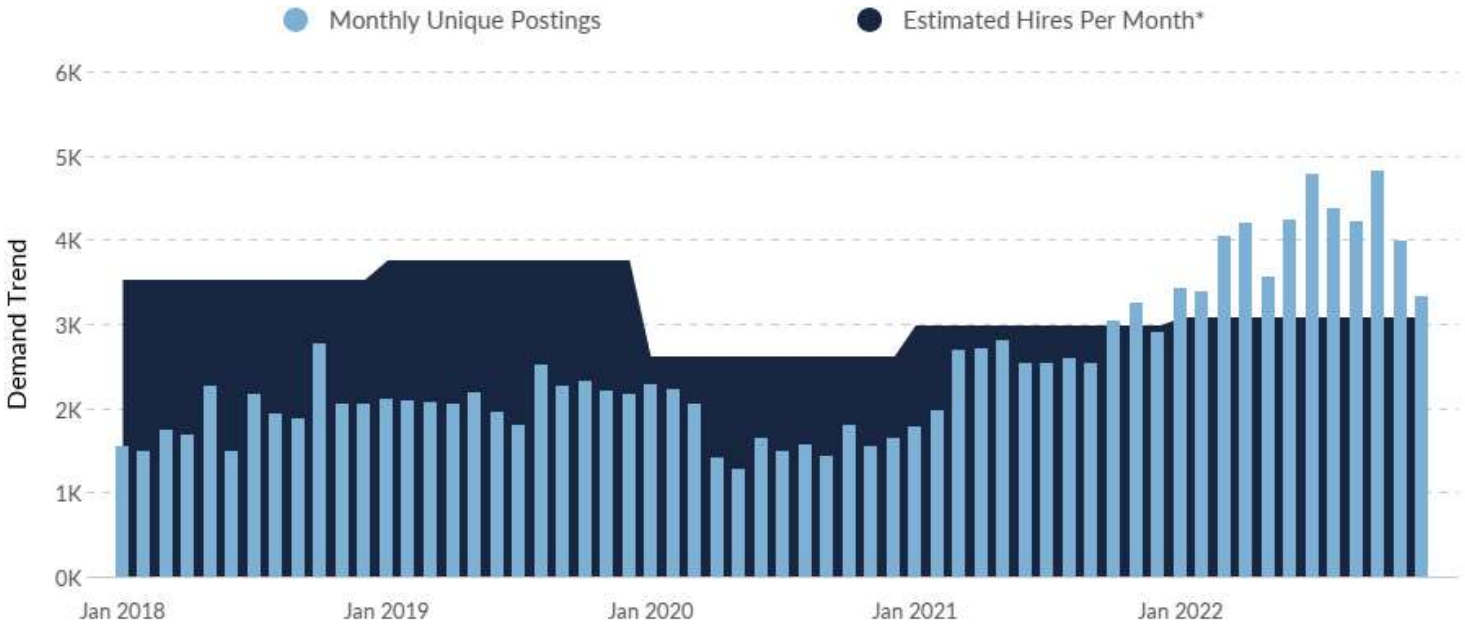
12,831 Employers Competing

All employers in the region who posted for this job from Jan 2020 to Dec 2022.



26 Day Median Duration

Posting duration is 3 days shorter than what's typical in the region.



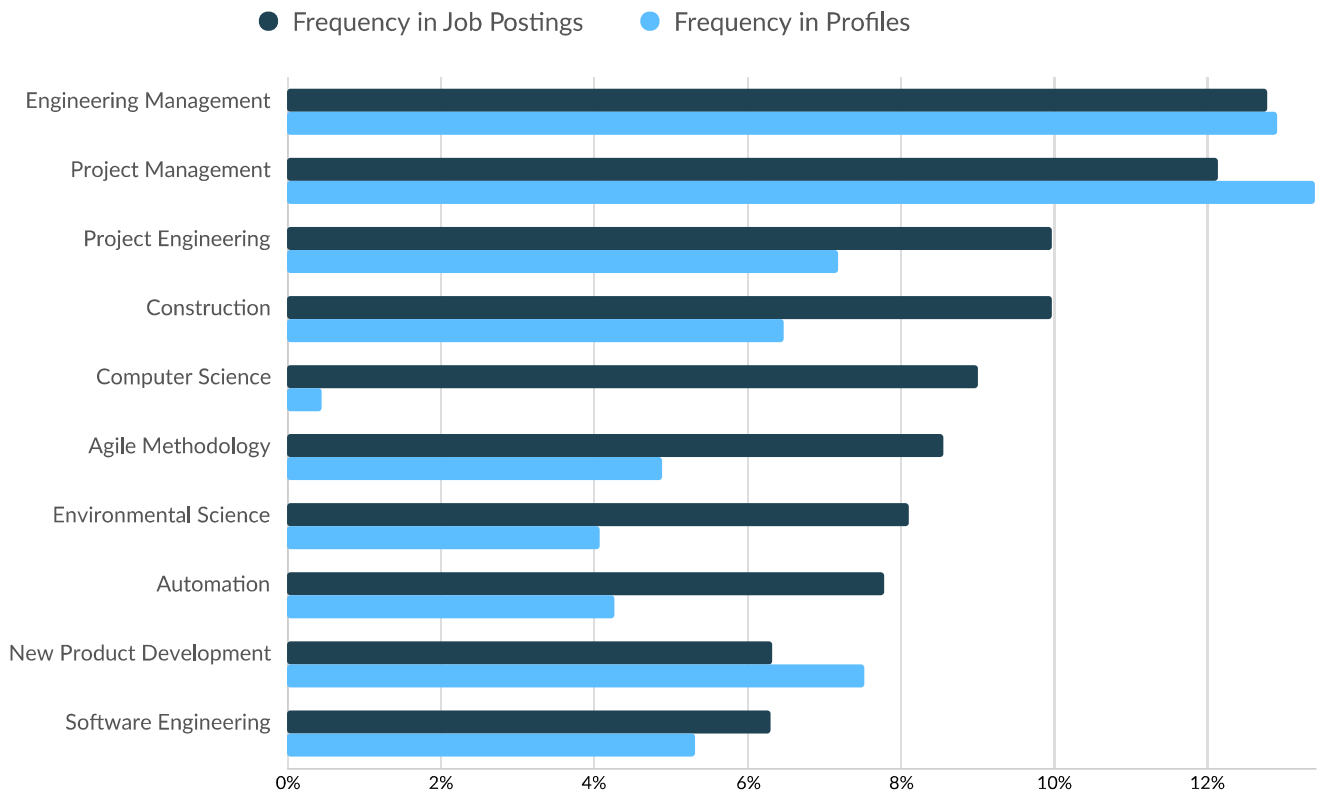
Occupation	Avg Monthly Postings (Jan 2020 - Dec 2022)	Avg Monthly Hires (Jan 2020 - Dec 2022)
Architectural and Engineering Managers	1,788	942
Environmental Science and Protection Technicians, Including Health	346	573
Environmental Engineers	274	272
Environmental Scientists and Specialists, Including Health	275	598
Geoscientists, Except Hydrologists and Geographers	84	300
Environmental Engineering Technologists and Technicians	13	207

*A hire is reported by the Quarterly Workforce Indicators when an individual's Social Security Number appears on a company's payroll and was not there the quarter before. Lightcast hires are calculated using a combination of Lightcast jobs data, information on separation rates from the Bureau of Labor Statistics (BLS), and industry-based hires data from the Census Bureau.

Top Companies	Unique Postings
State of Florida	2,015
GPAC	1,292
Lockheed Martin	1,070
KPMG	865
Marriott International	783
WSP Global	637
Randstad	599
Jobot	598
Clean Harbors	584
Raytheon Technologies	553

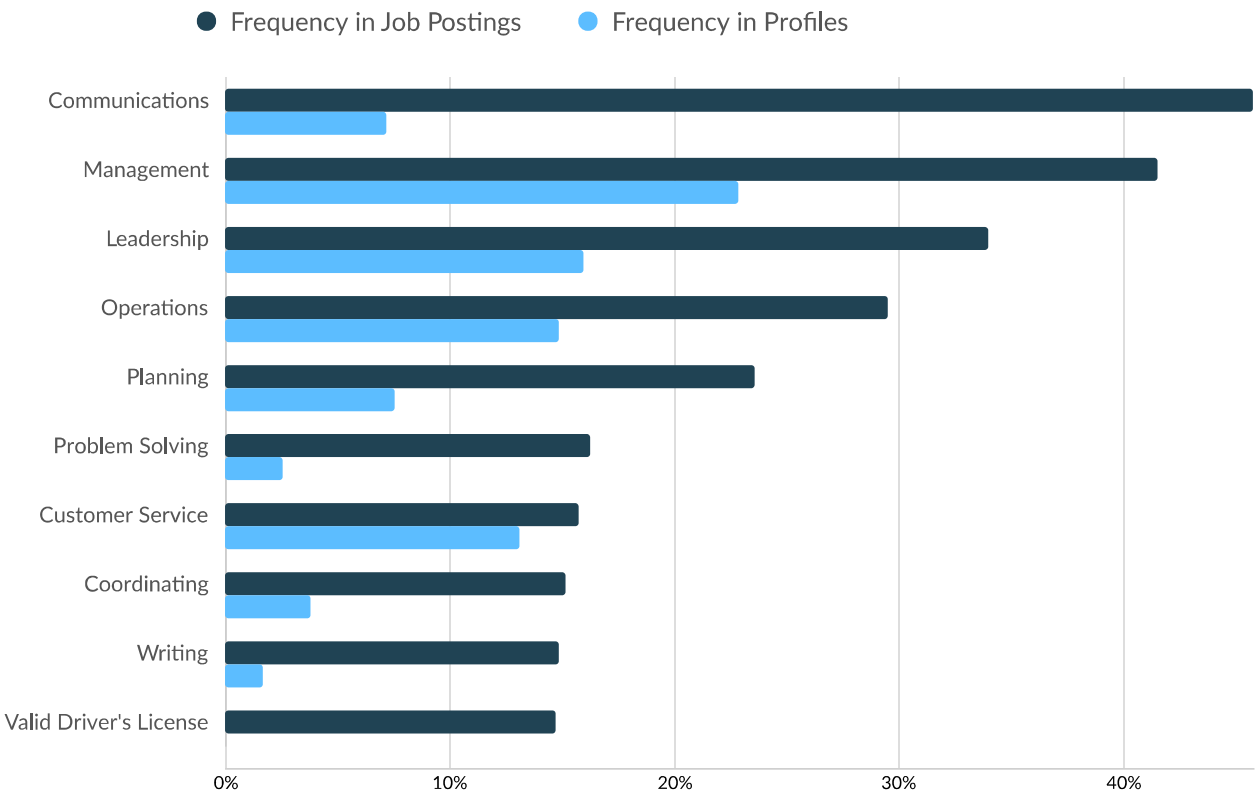
Top Job Titles	Unique Postings
Engineering Managers	5,118
Project Engineers	4,656
Chief Engineers	3,671
Environmental Specialists	3,297
Environmental Technicians	2,941
Directors of Engineering	2,544
Environmental Scientists	1,862
Environmental Engineers	1,795
Architectural Project Managers	1,059
Environmental Project Managers	867

Top Specialized Skills



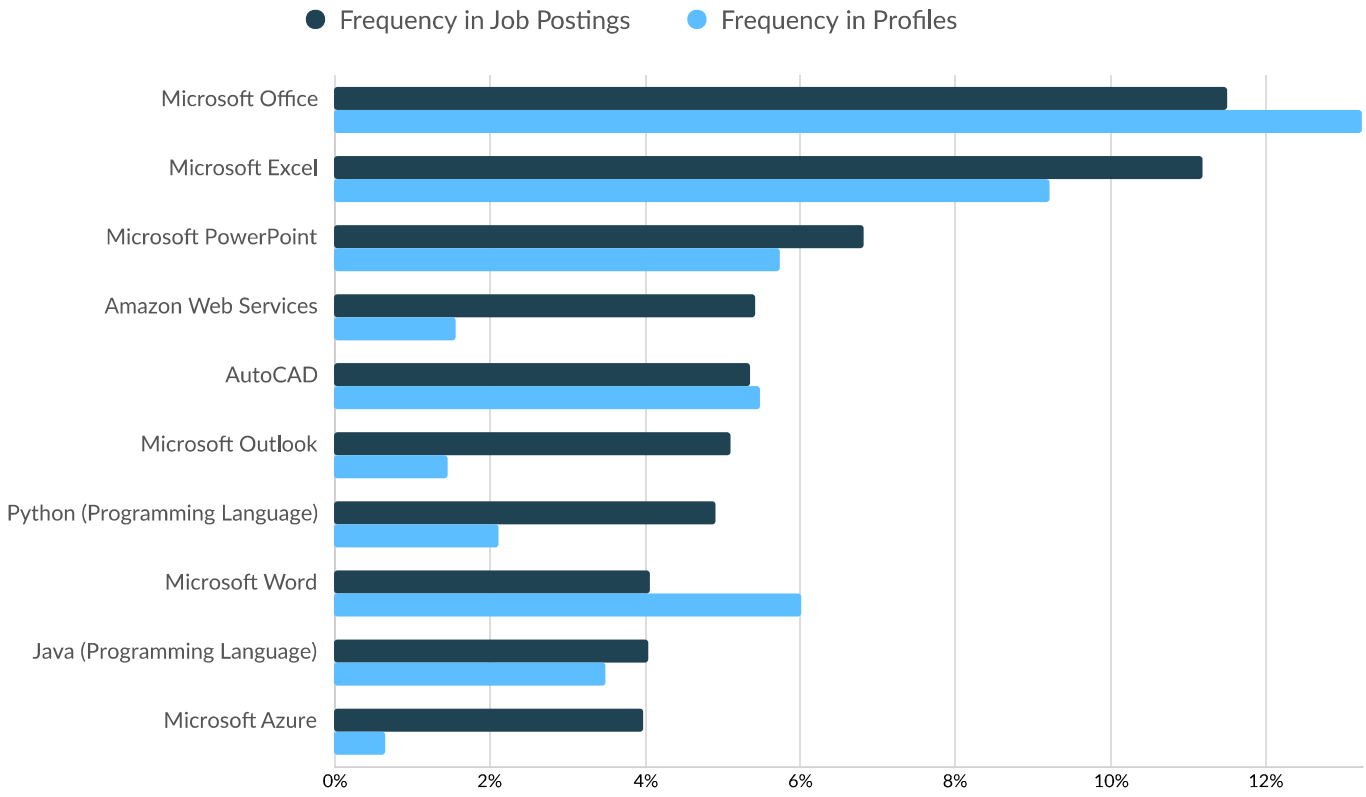
Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Engineering Management	12,807	13%	22,363	13%
Project Management	12,156	12%	23,211	13%
Project Engineering	9,994	10%	12,438	7%
Construction	9,986	10%	11,219	6%
Computer Science	9,018	9%	765	0%
Agile Methodology	8,563	9%	8,459	5%
Environmental Science	8,124	8%	7,053	4%
Automation	7,789	8%	7,382	4%
New Product Development	6,336	6%	13,027	8%
Software Engineering	6,311	6%	9,204	5%

Top Common Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Communications	45,842	46%	12,401	7%
Management	41,594	42%	39,585	23%
Leadership	34,000	34%	27,650	16%
Operations	29,555	30%	25,796	15%
Planning	23,589	24%	13,060	8%
Problem Solving	16,254	16%	4,458	3%
Customer Service	15,734	16%	22,646	13%
Coordinating	15,201	15%	6,579	4%
Writing	14,866	15%	2,866	2%
Valid Driver's License	14,742	15%	26	0%

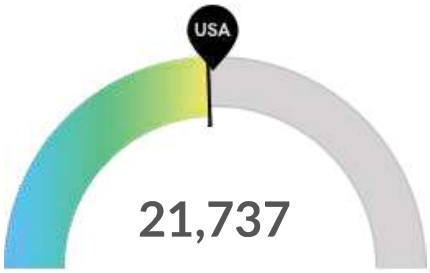
Top Software Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Microsoft Office	11,515	12%	22,925	13%
Microsoft Excel	11,195	11%	15,947	9%
Microsoft PowerPoint	6,825	7%	9,955	6%
Amazon Web Services	5,439	5%	2,709	2%
AutoCAD	5,363	5%	9,482	5%
Microsoft Outlook	5,109	5%	2,522	1%
Python (Programming Language)	4,927	5%	3,671	2%
Microsoft Word	4,069	4%	10,430	6%
Java (Programming Language)	4,051	4%	6,066	4%
Microsoft Azure	3,985	4%	1,129	1%

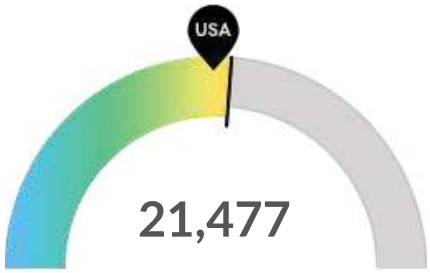
Demographics

Retirement Risk Is About Average, While Overall Diversity Is About Average



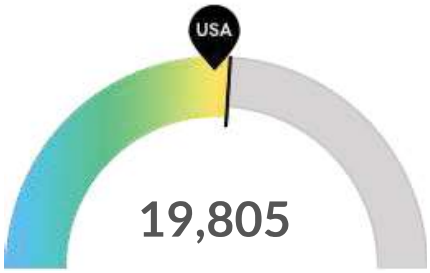
Retiring Soon

Retirement risk is about average in your area. The national average for an area this size is 22,418* employees 55 or older, while there are 21,737 here.



Racial Diversity

Racial diversity is about average in your area. The national average for an area this size is 20,027* racially diverse employees, while there are 21,477 here.

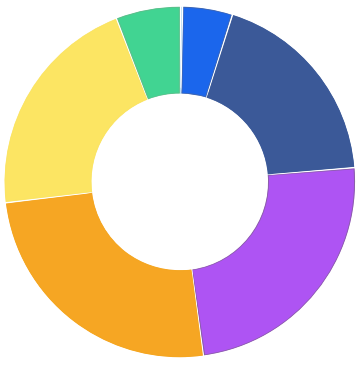


Gender Diversity

Gender diversity is about average in your area. The national average for an area this size is 18,647* female employees, while there are 19,805 here.

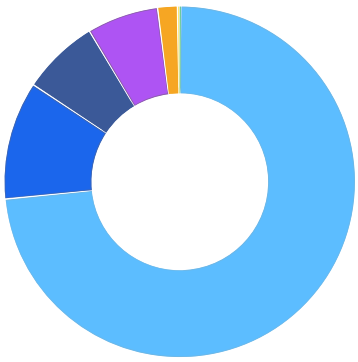
*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

Occupation Age Breakdown



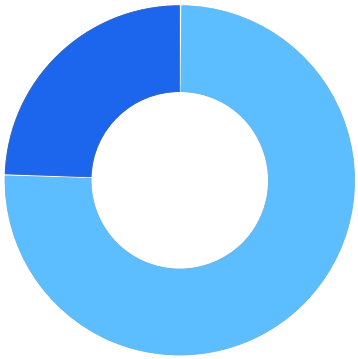
	% of Jobs	Jobs
14-18	0.2%	145
19-24	4.6%	3,720
25-34	18.8%	15,179
35-44	24.1%	19,450
45-54	25.3%	20,352
55-64	21.0%	16,935
65+	6.0%	4,802

Occupation Race/Ethnicity Breakdown



	% of Jobs	Jobs
White	73.3%	59,105
Hispanic or Latino	10.9%	8,783
Asian	7.1%	5,707
Black or African American	6.6%	5,298
Two or More Races	1.8%	1,458
American Indian or Alaska Native	0.2%	190
Native Hawaiian or Other Pacific Islander	0.1%	41

Occupation Gender Breakdown



	% of Jobs	Jobs
Males	75.4%	60,778
Females	24.6%	19,805

Occupational Programs



102 Programs

Of the programs that can train for this job, 102 have produced completions in the last 5 years.



101,860 Completions (2021)

The completions from all regional institutions for all degree types.



8,818 Openings (2021)

The average number of openings for an occupation in the region is 6,478.

CIP Code	Top Programs	Completions (2021)
26.0101	Biology/Biological Sciences, General	21,198
14.1901	Mechanical Engineering	9,809
45.1001	Political Science and Government, General	8,501
14.1001	Electrical and Electronics Engineering	5,546
45.1101	Sociology, General	4,578
14.0801	Civil Engineering, General	4,473
45.0601	Economics, General	3,991
40.0501	Chemistry, General	3,781
15.0501	Heating, Ventilation, Air Conditioning and Refrigeration Eng...	3,103
14.0701	Chemical Engineering	2,453

Top Schools	Completions (2021)
Texas A & M University-College Station	5,586
University of Florida	4,547
The University of Texas at Austin	4,465
Georgia Institute of Technology-Main Campus	3,772
Florida International University	3,144
University of Central Florida	2,893
University of South Florida	2,603
University of Houston	2,396
Florida State University	2,378
The University of Texas at Arlington	2,038

Appendix A - Data Sources and Calculations

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates are also affected by county-level Emsi earnings by industry.

Staffing Patterns Data

The staffing pattern data in this report are compiled from several sources using a specialized process. For QCEW and Non-QCEW Employees classes of worker, sources include Occupational Employment Statistics, the National Industry-Occupation Employment Matrix, and the American Community Survey. For the Self-Employed and Extended Proprietors classes of worker, the primary source is the American Community Survey, with a small amount of information from Occupational Employment Statistics.

Cost of Living Data

Lightcast's cost of living data is based on the Cost of Living Index published by the Council for Community and Economic Research (C2ER).

Lightcast Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Job Posting Analytics

Lightcast Q4 2022 Data Set

January 2023

Tennessee

Parameters

Select Timeframe: Aug 2020 - Dec 2022

Occupations:

Code	Description
11-9041	Architectural and Engineering Managers
17-2081	Environmental Engineers
17-3025	Environmental Engineering Technologists and Technicians
19-2041	Environmental Scientists and Specialists, Including Health
19-4042	Environmental Science and Protection Technicians, Including Health
19-2042	Geoscientists, Except Hydrologists and Geographers

Regions:

Code	Description
47	Tennessee

Skills (Has Any):

Results should Include any of the selected skills

Code	Skills (Has Any)
Specialized Skill	Environmental Science

Minimum Experience Required: Any

Programs:

Code	Description
03.0104	Environmental Science

Education Level:

Description
Master's degree

Keyword Search:

Posting Type: Newly Posted

Job Postings Summary

91	2 : 1	35 days
Unique Postings	**Posting Intensity**	**Median Posting Duration**
198 Total Postings	Regional Average: 3 : 1	Regional Average: 32 days

There were **198** total job postings for your selection from August 2020 to December 2022, of which **91** were unique. These numbers give us a Posting Intensity of **2-to-1**, meaning that for every 2 postings there is 1 unique job posting.

This is lower than the Posting Intensity for all other occupations and companies in the region (3-to-1), indicating that they may not be trying as hard to hire for this position.

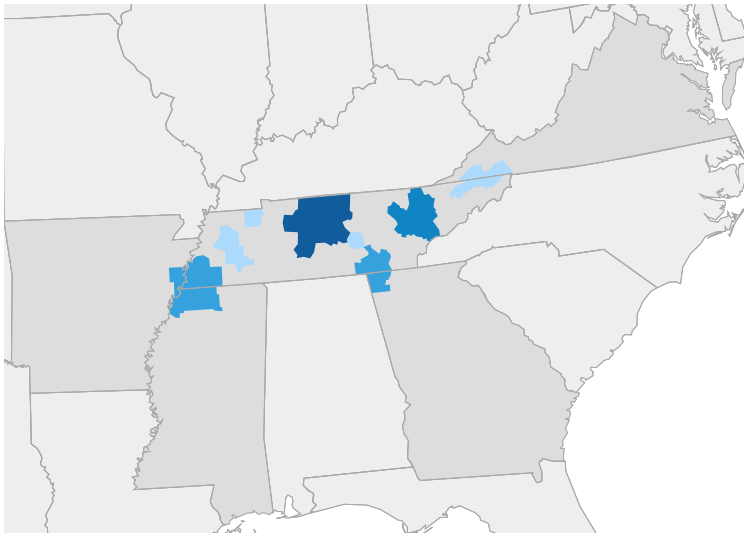
Advertised Salary

Not enough data for this chart.

Advertised Wage Trend

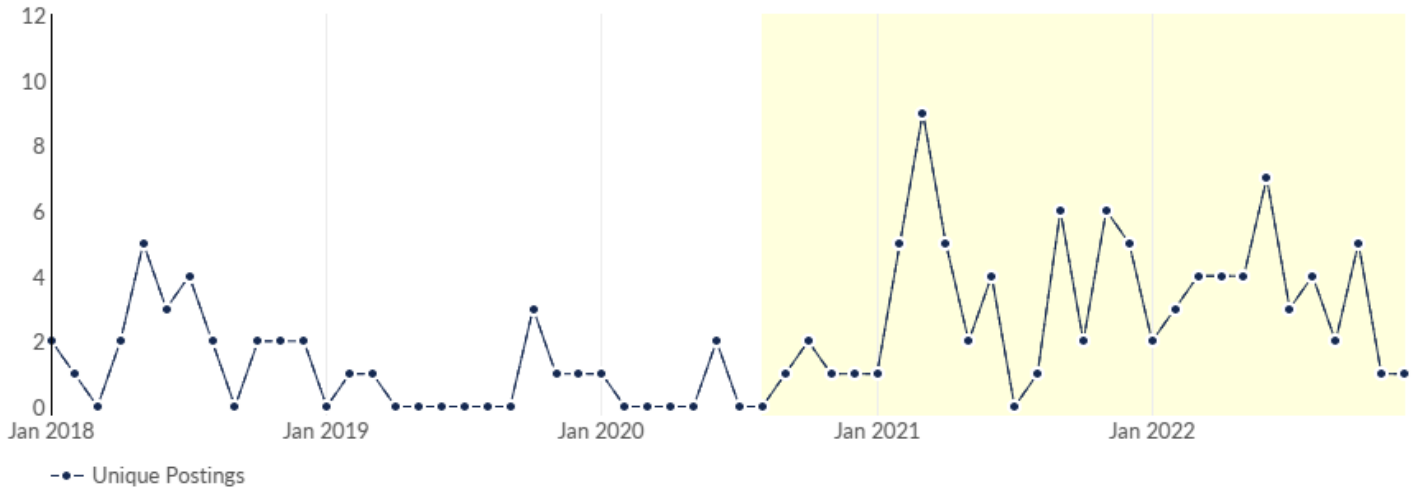
Not enough data for this chart.

Job Postings Regional Breakdown



MSA	Unique Postings (Aug 2020 - Dec 2022)
Nashville-Davidson--Murfreesboro--Franklin, TN	57
Knoxville, TN	16
Memphis, TN-MS-AR	6
Chattanooga, TN-GA	5
Kingsport-Bristol, TN-VA	2

Unique Postings Trend



Month	Unique Postings	Posting Intensity
Dec 2022	1	1 : 1
Nov 2022	1	1 : 1
Oct 2022	5	2 : 1
Sep 2022	2	1 : 1
Aug 2022	4	3 : 1
Jul 2022	3	6 : 1
Jun 2022	7	2 : 1
May 2022	4	2 : 1
Apr 2022	4	2 : 1
Mar 2022	4	2 : 1
Feb 2022	3	2 : 1
Jan 2022	2	3 : 1

Education Breakdown

Education Level	Unique Postings	% of Total
No Education Listed	0	0%
High school or GED	2	2%
Associate degree	1	1%
Bachelor's degree	88	97%
Master's degree	91	100%
Ph.D. or professional degree	2	2%

Minimum Education Breakdown

Minimum Education Level	Unique Postings (minimum)	Unique Postings (max advertised)	% of Total (minimum)
High school or GED	2	0	2%
Associate degree	1	0	1%
Bachelor's degree	85	0	93%
Master's degree	3	86	3%
Ph.D. or professional degree	0	2	0%

Experience Breakdown

Minimum Experience	Unique Postings	% of Total
No Experience Listed	21	23%
0 - 1 Years	17	19%
2 - 3 Years	11	12%
4 - 6 Years	20	22%
7 - 9 Years	14	15%
10+ Years	8	9%

Top Companies Posting

	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
GHD	25 / 10	3 : 1	6 days
John Wood Group	23 / 10	2 : 1	10 days
Leidos	18 / 7	3 : 1	44 days
Civil & Environmental Consultants	13 / 5	3 : 1	52 days
Hdr Engineering Incorporated	15 / 5	3 : 1	n/a
HNTB	8 / 4	2 : 1	n/a
Environmental Resources Management Group	6 / 3	2 : 1	n/a
AMEC	3 / 3	1 : 1	n/a
Entech	3 / 3	1 : 1	14 days
Stantec	16 / 2	8 : 1	n/a

Top Cities Posting

City	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Nashville, TN	92 / 35	3 : 1	36 days
Franklin, TN	44 / 22	2 : 1	49 days
Oak Ridge, TN	27 / 13	2 : 1	30 days
Memphis, TN	10 / 6	2 : 1	14 days
Chattanooga, TN	12 / 5	2 : 1	15 days
Knoxville, TN	6 / 3	2 : 1	36 days
Kingsport, TN	2 / 2	1 : 1	21 days
Milan, TN	1 / 1	1 : 1	15 days
Morrison, TN	1 / 1	1 : 1	28 days
Paris, TN	1 / 1	1 : 1	n/a

Top Posted Occupations

	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Environmental Scientists and Specialists, Including Health	94 / 35	3 : 1	21 days
Environmental Engineers	50 / 27	2 : 1	28 days
Geoscientists, Except Hydrologists and Geographers	33 / 17	2 : 1	36 days
Architectural and Engineering Managers	13 / 8	2 : 1	40 days
Environmental Science and Protection Technicians, Including Health	6 / 3	2 : 1	n/a
Environmental Engineering Technologists and Technicians	2 / 1	2 : 1	n/a

Top Posted Occupations

Occupation (O*NET)	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Environmental Engineers	50 / 27	2 : 1	28 days
Environmental Scientists and Specialists, Including Health	52 / 25	2 : 1	21 days
Geoscientists, Except Hydrologists and Geographers	33 / 17	2 : 1	36 days
Environmental Restoration Planners	37 / 9	4 : 1	n/a
Architectural and Engineering Managers	13 / 8	2 : 1	40 days
Environmental Science and Protection Technicians, Including Health	6 / 3	2 : 1	n/a
Environmental Engineering Technologists and Technicians	2 / 1	2 : 1	n/a
Climate Change Policy Analysts	5 / 1	5 : 1	54 days

Top Posted Occupations

Occupation	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Environmental Planner / Scientist	106 / 43	2 : 1	21 days
Geologist	37 / 21	2 : 1	15 days
Engineering Manager	9 / 7	1 : 1	40 days
Project Manager	6 / 3	2 : 1	n/a
Elementary and Secondary School Administrator	6 / 3	2 : 1	n/a
Water Treatment Specialist / Waste Water Operator	8 / 3	3 : 1	n/a
Civil Engineer	4 / 2	2 : 1	36 days
Environmental Engineer	2 / 2	1 : 1	28 days
Religious Leader / Professional	1 / 1	1 : 1	n/a
Water / Wastewater Engineer	1 / 1	1 : 1	n/a
Surveying / Mapping Technician	2 / 1	2 : 1	n/a
Environmental Compliance Specialist	1 / 1	1 : 1	n/a
Repair / Service Technician	12 / 1	12 : 1	n/a
Urban / Transportation Planner	1 / 1	1 : 1	49 days

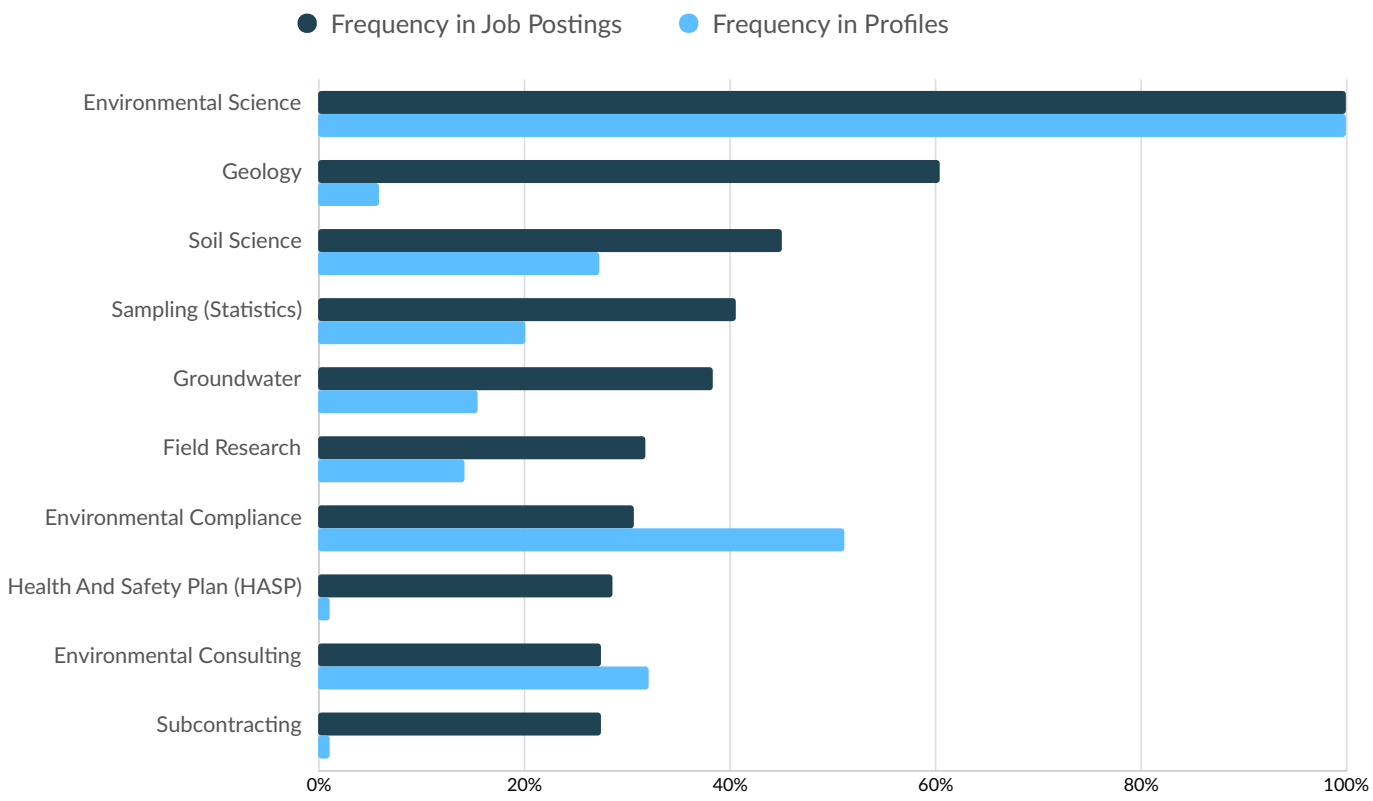
Top Posted Job Titles

	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Environmental Scientists	29 / 16	2 : 1	18 days
Geologists	29 / 15	2 : 1	36 days
Environmental Scientists/Geologists	30 / 10	3 : 1	6 days
Environmental Planners	25 / 8	3 : 1	n/a
Geologists and Project Manager	4 / 4	1 : 1	35 days
Watershed Managers	8 / 3	3 : 1	n/a
Environmental Engineers/Geologists	3 / 3	1 : 1	2 days
Environmental Project Managers	2 / 2	1 : 1	n/a
Environmental Affairs Managers	2 / 2	1 : 1	21 days
Associate Principals	4 / 2	2 : 1	n/a

Top Industries

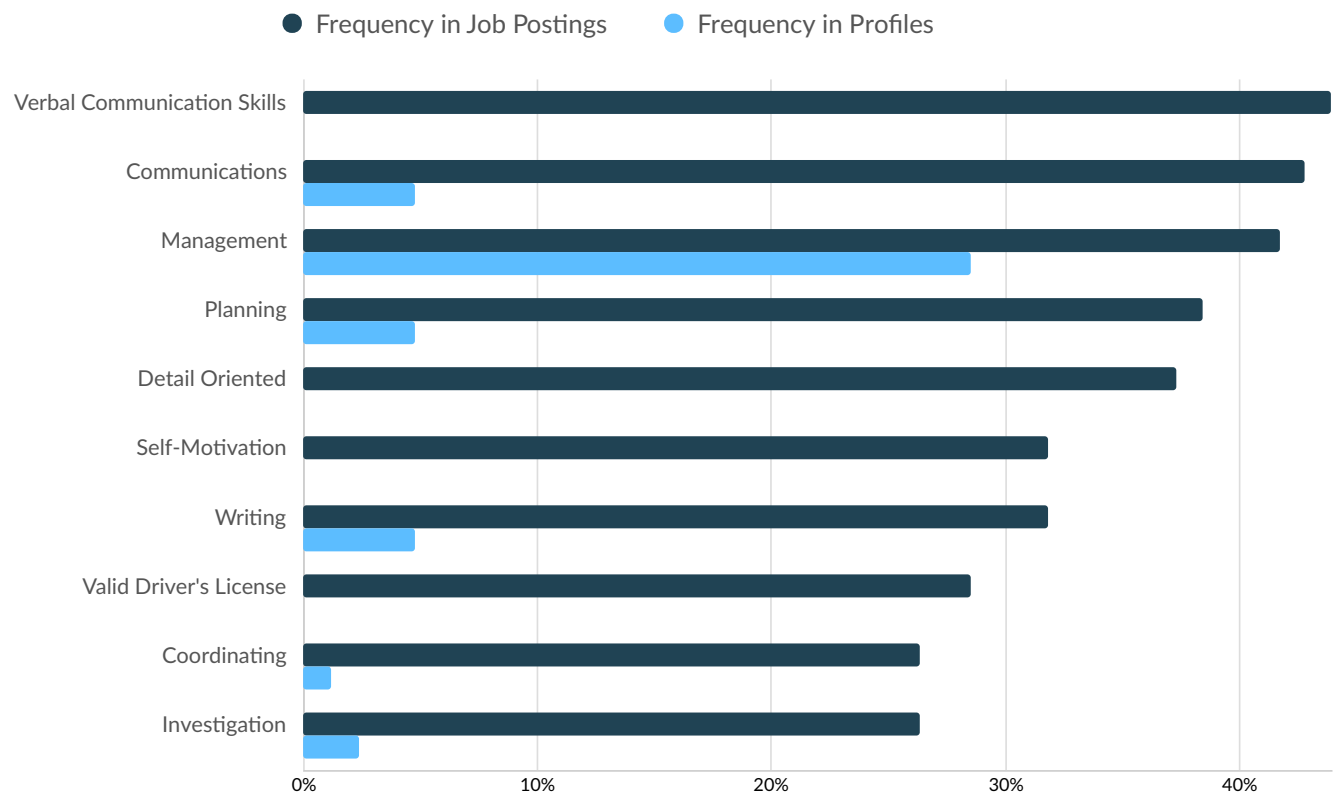
	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Professional, Scientific, and Technical Services	103 / 39	3 : 1	44 days
Mining, Quarrying, and Oil and Gas Extraction	25 / 11	2 : 1	10 days
Accommodation and Food Services	25 / 10	3 : 1	6 days
Construction	8 / 6	1 : 1	n/a
Manufacturing	9 / 5	2 : 1	21 days
Wholesale Trade	3 / 3	1 : 1	14 days
Retail Trade	2 / 2	1 : 1	15 days
Administrative and Support and Waste Management and Remediation Services	3 / 2	2 : 1	n/a
Educational Services	2 / 2	1 : 1	47 days
Utilities	1 / 1	1 : 1	n/a

Top Specialized Skills



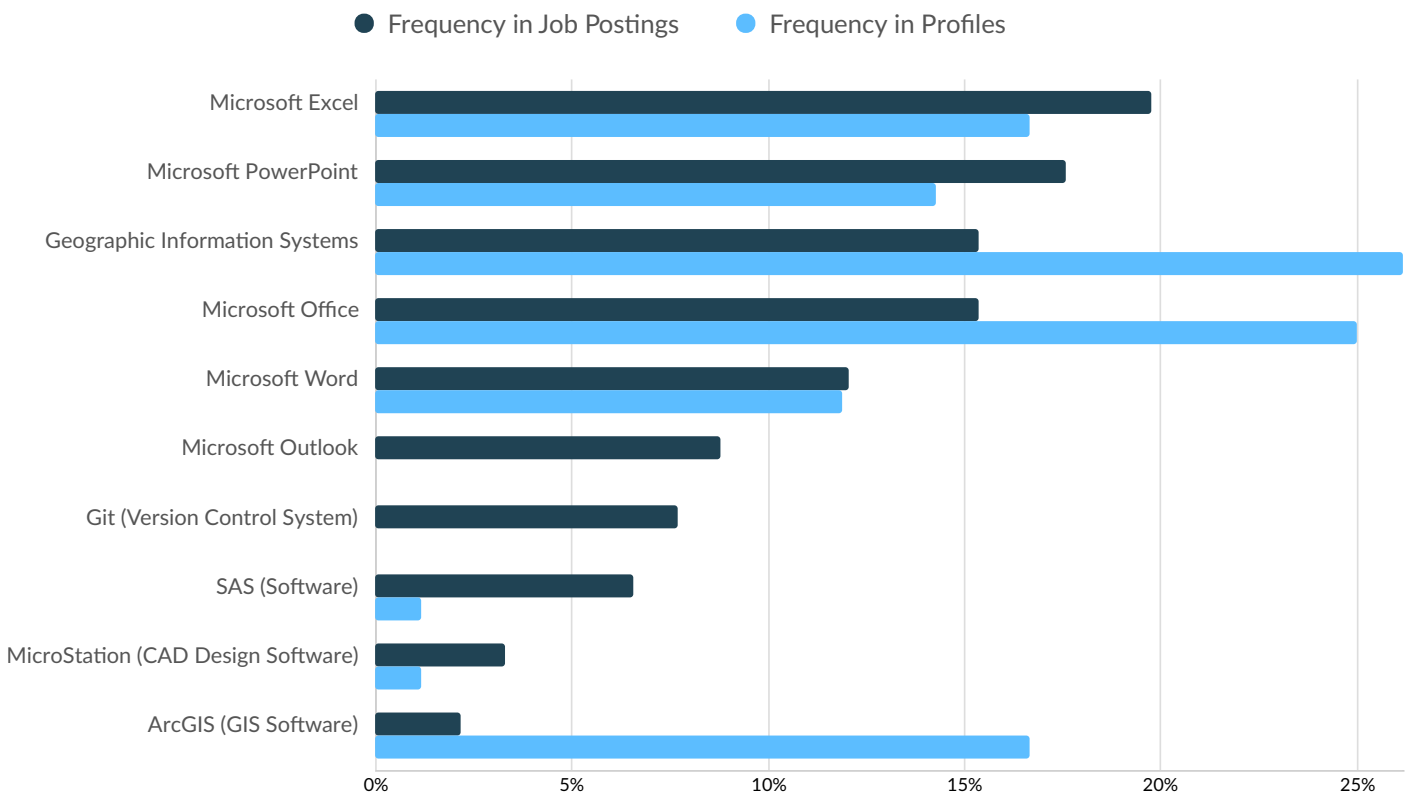
	Postings	% of Total Postings	Profiles	% of Total Profiles
Environmental Science	91	100%	84	100%
Geology	55	60%	5	6%
Soil Science	41	45%	23	27%
Sampling (Statistics)	37	41%	17	20%
Groundwater	35	38%	13	15%
Field Research	29	32%	12	14%
Environmental Compliance	28	31%	43	51%
Health And Safety Plan (HASP)	26	29%	1	1%
Environmental Consulting	25	27%	27	32%
Subcontracting	25	27%	1	1%

Top Common Skills



	Postings	% of Total Postings	Profiles	% of Total Profiles
Verbal Communication Skills	40	44%	0	0%
Communications	39	43%	4	5%
Management	38	42%	24	29%
Planning	35	38%	4	5%
Detail Oriented	34	37%	0	0%
Self-Motivation	29	32%	0	0%
Writing	29	32%	4	5%
Valid Driver's License	26	29%	0	0%
Coordinating	24	26%	1	1%
Investigation	24	26%	2	2%

Top Software Skills



	Postings	% of Total Postings	Profiles	% of Total Profiles
Microsoft Excel	18	20%	14	17%
Microsoft PowerPoint	16	18%	12	14%
Geographic Information Systems	14	15%	22	26%
Microsoft Office	14	15%	21	25%
Microsoft Word	11	12%	10	12%
Microsoft Outlook	8	9%	0	0%
Git (Version Control System)	7	8%	0	0%
SAS (Software)	6	7%	1	1%
MicroStation (CAD Design Software)	3	3%	1	1%
ArcGIS (GIS Software)	2	2%	14	17%

Top Qualifications

	Postings with Qualification
10-Hour OSHA General Industry Card	2
American Institute Of Certified Planners (AICP) Certification	1
Asbestos License/Certification	1
Certified Hazardous Materials Manager	4
Certified Industrial Hygienist (CIH)	3
Certified Safety Professional	2
HAZWOPER Certification	10
LEED Accredited Professional (AP)	1
Professional Engineer	2
Top Secret-Sensitive Compartmented Information (TS/SCI Clearance)	4

Appendix A

Top Posting Sources

Website	Postings on Website (Aug 2020 - Dec 2022)
indeed.com	27
dejobs.org	16
disabledperson.com	11
simplyhired.com	10
jobs4tn.gov	9
myworkdayjobs.com	9
careerbuilder.com	8
arkansasjobboard.com	4
icims.com	4
hireahero.org	3
latpro.com	3
rigzone.com	3
selectminds.com	3
ecslimited.com	2
huntsvillerecruiter.com	2
jobit.com	2
leidos.com	2
lever.co	2
recruiternetworks.com	2
taleo.net	2
theconstructionjob.com	2
ziprecruiter.com	2
adp.com	1
arcadis.com	1
asce.org	1

Appendix B

Sample Postings

PFAS Emerging Contaminants Engineer/Lead

Link to Live Job Posting: www.latpro.com

Location: Franklin, TN	**O*NET:** 17-2081.00
Company: GHD	**Job Title:** Contamination Control Engineers

PFAS Emerging Contaminants Engineer/Lead GHD United States, Tennessee, Franklin 354 Downs Boulevard (Show on map) December 09, 2022 Join a global professional services leader. We are committed to solving the world's biggest challenges in the areas of water, energy and urbanization! GHD has a great opportunity for a Treatment Expert to lead our Emerging Contaminants Practice in North America! Our teams specialize in environmental science and engineering, waste management and water and are supported by our full service engineering design centers. Your primary task would be leading teams and projects in the environment space, specifically related to investigation and remediation. This position can be based in most GHD office location in the

U.S. GHD

supports a hybrid work model. Remote work may also be an option.

Key responsibilities will include:

Provide Senior Technical Leadership with emerging contaminants, including per- and polyfluoroalkyl substances (PFAS)Externally lead GHD's emerging contaminants field, focusing on support and preparation of peer-reviewed publications (journal articles, presentations, etc.) and attendance at relevant conferencesSupporting strategic pursuits, including growth in both the Private and Public Sectors, as well as the Federal SectorProvide Senior Technical Leadership in project delivery, e.g. Providing senior review to technical environmental reports and assistance to Project Managers through preparation of scope, schedules and budgetsContribute to business planning to identify opportunities to grow GHD's market shareGrow and maintain client relationshipsWork within multi-disciplinary project teams, providing environmental advice to other GHD teamsOpportunity to work on local, national, and global projects, which may at times entail supporting multiple GHD office locationsSupport and mentor junior team members in a learning and collaborative environment Successful skills & qualifications: Bachelor's and/or Master's Degree in chemistry, geology, environmental science, environmental engineering, or discipline relevant to environmental site assessment or remediationMinimum 15-20 years-experience, including 3 to 5 with PFAS or other emerging contaminantsSignificant experience with emerging contaminants including PFASDemonstrated industry leading knowledge relative to emerging contaminants and remediation; specifically authoring within peer-reviewed journals and presentations at relevant conferencesExperience in the technical delivery of investigations, management plans, environmental impact assessmentsExperience or willingness to manage clients and communications with regulatorsUnderstanding of emerging contaminant environmental legislation throughout North AmericaStrong commitment to client service excellenceOutstanding verbal and written communication skills as well as organizational and presentation skills If you're interested in pursuing this opportunity, please submit your application below! As a multicultural organization, we encourage individual achievement and recognize the strength of a diverse workforce. GHD is an equal opportunity employer. We provide equal employment opportunities to all qualified employees and applicants without regard to race, creed, religion, national origin, citizenship, color, sex, sexual orientation, gender identity, age, disability, marital status or veteran status. #LI-Remote

Environmental Affairs Specialist

Link to Live Job Posting: Posting is no longer active

Location: Kingsport, TN	**O*NET:** 19-2041.00
Company: BAE Systems	**Job Title:** Environmental Affairs Managers

Company:

BAE Systems Location:

Kingsport, TN Career Level:

Associate Industries:

Manufacturing, Engineering, Aerospace on company website Description Job Description BAE Systems, one of the world's leading defense contractors and a stable Fortune 500 Company, is hiring an Environmental Affairs Specialist at the Holston Army Ammunition Plant. We are seeking a detail oriented, highly organized individual with strong interpersonal and communication skills who will serve as a contact between the company and regulatory agencies for solid and hazardous waste and SPCC and SWPPP related environmental matters at our Kingsport, TN location.

The successful candidate will provide:

Regulatory interpretations, consultation, and training in order to provide compliance with all applicable Department of Defense (DoD), State, and Federal requirements; Ensure that all solid and hazardous waste-related environmental records and reports are prepared and submitted as required; Obtain and maintain appropriate environmental permits (SWPPP, special waste, etc.); Conduct written and verbal communications and notifications with environmental regulators; Perform required environmental assessments and records of consideration under NEPA for new projects; Respond to accidental spills, emergencies, and clean ups to ensure environmental compliance; Assist with coordination of environmental sampling; Maintain SPCC and SWPPP environmental records and files and seek pollution prevention solutions; Support facilities environmental management system as needed. Required Education, Experience, & Skills Typically requires a Bachelors Degree in Environmental Science, Environmental Engineering, or similar field plus six (6) years related experience, particularly within a Federal, State or Industrial environmental office, or the overall equivalent. Well versed in environmental regulations, both at the Federal and State level. Experience working to the Resource Conservation and Recovery Act (RCRA) regulations. Knowledgeable in hazardous waste management. Highly effective communication skills, both written and verbal, to disseminate information to a diverse audience. Able to collaborate and liaison with regulatory agencies on company's behalf. Computer skills to include Microsoft Office Suite. Ability to utilize complex spreadsheets and other environmental industry specific applications and databases. Preferred Education, Experience, & Skills Solid and hazardous waste Federal and State of Tennessee regulations. Masters degree in Environmental Science, Environmental Engineering or related field. Certification with National Registry of Environmental Professionals, Institute of Professional Environmental Practice. Detailed knowledge in Statistics, Chemistry/Chemical Engineering and Environmental Law and 6+ years of experience in a chemical or other manufacturing setting. SPCC and SWPPP implementation and oversight. Experience with landfill operations and post closure care. About BAE Systems Platforms & Services BAE Systems, Inc. is the U.S. subsidiary of BAE Systems plc, an international defense, aerospace and security company which delivers a full range of products and services for air, land and naval forces, as well as advanced electronics, security, information technology solutions and customer support services. Improving the future and protecting lives is an ambitious mission, but it's what we do at BAE Systems. Working here means using your passion and ingenuity where it counts defending national security with breakthrough technology, superior products, and intelligence solutions. As you develop the latest technology and defend national security, you will continually hone your skills on a

teammaking a big impact on a global scale. At BAE Systems, you'll find a rewarding career that truly makes a difference. The Platforms & Services (P&S) sector under BAE Systems, Inc does the big stuff: the armored combat vehicles, naval guns, missile launchers, and naval ship repairjust to name a few. Our employees take pride in the work they do and why they do it. They are on the front lines every day, building our products to protect the lives of those who serve. We may be biased, but we think P&S does some of the coolest work around, and we think you will too. Our Commitment to

Diversity, Equity, and Inclusion:

At BAE Systems, we work hard every day to nurture an inclusive culture where employees are valued and feel like they belong. We are conscious of the need for all employees to see themselves reflected at every level of the company and know that in order to unlock the full potential of our workforce, everyone must feel confident being their best, most sincere self and be equipped to thrive. We provide impactful professional development experiences to our employees and invest in social impact partnerships to uplift communities and drive purposeful change. Here you will find significant opportunities to do meaningful work in an environment intentionally designed to be one where you will learn, grow and belong. on company website

Environmental Specialist 6, Natural Resource Manager

Link to Live Job Posting: Posting is no longer active

Location: Milan, TN	**O*NET:** 19-2041.00
Company: The Nature Conservancy	**Job Title:** Environmental Resources Specialists

Environmental Specialist 6, Natural Resource Manager Save Job Tennessee Army National Guard Milan, Tennessee Job TypePermanentSalary Details$49,092.00 - $78,552.00 AnnuallyDeadlineNov 09, 2022Required Experience2 - 6 years Under general supervision, the employee will manage the installation natural resource program in compliance with the Integrated Natural Resource Management Plan, and component plans/programs. They will ensure compliance with all natural resource related laws and regulations, coordinate and consult with outside agencies, plan and implement natural resource monitoring through contract and in-house efforts, identify and resolve natural resource issues, and participate in NEPA evaluations of proposed actions. They will supervise one employee, providing necessary training, ensuring work quality, and ensuring completion of the employee's assigned programs.

Qualifications:

Graduation from an accredited college or university with a bachelor's degree in environmental science, biology, chemistry, geology, physics, ecology, sustainability, applied science in sustainability, or other acceptable science or natural resource related field and five years of full-time professional environmental program or natural resource conservation work including, at least, one year of supervisory experience. Qualifying fulltime natural resource conservation program experience may substituted for education on a year-for-year basis, to a maximum of four years. Applicable graduate coursework can substitute for experience on a year-for-year basis, to a maximum of two years (24 semester hours equivalent to one year). There is no substitution for required supervisory experience.

HOW TO APPLY

Applicants need to log onto www.tn.gov, select careers/apply here/external candidates, and search for Environmental Specialist to find the listing. Job descriptions are generic, requiring applicants to select the Environmental Specialist 6 announcement with Job ID # 38990 to ensure they are applying for the correct position. When you apply, please indicate that you are responding to the posting on Conservation Job Board. CategoryGeneral / StewardshipTagsPermittingRelated JobsEcological Services CoordinatorEast Bay Regional Park District Oakland, CA Salary$55.52 - $62.81 Hourly Job TypeFull-time (37.5 hrs) Job Number22-GB-16 Closing... 30 days agoConservation ScientistThe Nature Conservancy Lansing, MI

WHO WE ARE

The mission of The Nature Conservancy (TNC) is to conserve the lands and waters upon which all life depends. As a science-based organization, we develop innovati... 10 days agoTree Worker / Native Plant LandscaperNew Leaf Tree Services Inc Chatham, NY New Leaf Tree Services Inc in Chatham NY is looking to hire multiple people to assist with our tree care and landscaping operations. We work with trees to ensure the safety and beauty of ... 18 days agoOutdoor Education Instructor

Clemson University Youth Learning Institute Sunset, SC Title:

Field Study Instructor/Naturalist Work Dates:

January/February 2023 - May 2023

Exploration Hannon:

Located in the upstate B... 12 days agoAgriculture TechnicianMonroe Conservation District Monroe, MI

ESSENTIAL FUNCTIONS

Deliver the Michigan Agricultural Environmental Assurance Program (MAEAP) by: Providing on-farm, one-on-one technical assistance, usi... 10 days agoOnline Master's in Environmental Studies & SustainabilityUnity College100% Online Prepare for a vibrant career designing solutions to the world's environmental issues. Study when and where you want with 8 online start dates each year. Learn more today! SponsoredEquitable Energy Transition AdvisorThe Nature Conservancy Remote, Remote

WHO WE ARE

The mission of The Nature Conservancy (TNC) is to conserve the lands and waters upon which all life depends. As a science-based organization, we develop innovati... 3 days agoCalifornia Stewardship Strategy LeadThe Nature Conservancy Remote, CA

WHO WE ARE

The mission of The Nature Conservancy (TNC) is to conserve the lands and waters upon which all life depends. As a science-based organization, we develop innovati... 16 days agoEmerging Leaders Program - Cohort MemberWashington Trails Association Tacoma, WA Inspiring Hikers to Create Trails for Everyone, Forever Washington is home to extraordinary hiking destinations, including desert dunes, wild beaches, tranquil mountain top... 18 days agoVoluntary Stewardship Program CoordinatorFoster Creek Conservation District Waterville, WA Foster Creek Conservation District Foster Creek Conservation District (FCCD) is a dynamic organization comprised of a volunteer supervisory board and a small team of staff ... 12 days agoSustainable Finance Advisory Coordinator, NatureVestThe Nature Conservancy Remote, Remote

WHO WE ARE

The mission of The Nature Conservancy (TNC) is to conserve the lands and waters upon which all life depends. As a science-based organization, we develop innovati... 10 days agoOnline Ecosystem Management CertificatePenn State World Campus100% Online Prepare to lead the management of natural resources and keep up with rapid changes in applications and methodology by earning an Ecosystem Management degree or certificate online through Penn State World Campus. SponsoredDirector of Finance and AdministrationAfrican Parks Foundation of America New York, NY This is a critical senior management role, responsible for ensuring effective financial management of the US fundraising entity of Africa's leading conservation organization. We are looking for a... 10 days agoEnvironmental Science EducatorNatureBridge Traingle, VA About the Position NatureBridge provides environmental science education experiences for more than 30,000 students and their teachers every year in the world's best class... 16 days agoAssistant/Associate Professor of Wildlife Disease Ecology and One HealthMississippi State University Starkville, MS

RESPONSIBILITIES

We seek a wildlife disease and One Health ecologist interested in both terrestrial and/or aquatic vertebrates whose research will span observational, exp... 11 days agoFacilities and Construction ManagerTreePeople Calabasas, CA TreePeople is an environmental nonprofit organization that is mobilizing people, business, philanthropists, and public agencies to work together to create green, resilient communities by planting t... 29 days agoFlorida Climate Strategy DirectorThe Nature Conservancy Remote, FL

WHO WE ARE

The mission of The Nature Conservancy (TNC) is to conserve the lands and waters upon which all life depends. As a science-based organization, we develop innovati... 23 days agoLoad More

Geologist

Link to Live Job Posting: Posting is no longer active

Location: Franklin, TN	**O*NET:** 19-2042.00
Company: Civil & Environmental Consultants	**Job Title:** Geologists

Geologist Civil and Environmental Consultants United States, Tennessee, Franklin 117 Seaboard Lane (Show on map) October 26, 2022 GeologistJob Locations US-TN-Franklin Category Waste Management Type Full-Time Overview At Civil & Environmental Consultants, Inc. (CEC), every member of our team has a personal stake in ensuring the success of our clients. As employee-owners of the firm, we are all personally accountable for building lasting relationships and delivering outstanding results. We put people first, whether that's our clients, our employees, or our community. It's why we listen more and work harder to understand the unique needs of our clients. And it's why we prioritize the career development of every individual on our team. People are why we do this, and why we love what we do. We are at our best when we work together. That means bringing together a diverse team of talented, passionate, multidisciplinary experts to work closely alongside clients to create comprehensive solutions to complex problems. We believe that by working together, no problem is insurmountable. As a Geologist/Environmental Scientist for Civil & Environmental Consultants, Inc. (CEC), you'll be directly involved with solid waste and environmental compliance monitoring and assessment projects. Your primary responsibility will be completing field activities, including: assisting with and leading field sampling activities for groundwater, surface water, air and soil monitoring/assessment projects; monitoring soil boring installation and bedrock coring activities; field screening of various media for evidence of environmental impacts; documenting groundwater monitoring well and piezometer installation activities. You will also assist with reporting activities, including managing and interpreting environmental data, developing potentiometric surface maps and geologic cross sections, and report development. Qualifications B.S. in Geology, Environmental Science or related field (M.S. a plus);1-3 years' professional experience;Ability to speak and write professionally;Valid driver's license, clean driving record, and ability to drive a pickup truck;Detail oriented;Working knowledge of Microsoft Word and Excel.Drilling observation and environmental media sampling experience.OSHA 40-hour Hazardous Waste Operations training. About Us Civil & Environmental Consultants, Inc. (CEC) is consistently ranked as an Engineering News-Record Top 200 Design Firm, offering big firm opportunities with a small firm culture. Not only will we help you develop professionally, but we will also provide you with the opportunity to become an owner of the firm and share in our success. You will work on diverse projects while providing high quality service to our clients. In addition to offering company stock at all levels, we provide a matching 401(k), profit sharing, a performance bonus for all employees, medical dental and vision insurance, short and long term disability and tuition assistance. Join our team where your contribution matters. CEC is an equal opportunity and affirmative action employer. We do not discriminate in recruiting, hiring or promotion based on race, color, religion, sex (including sexual orientation, gender identity or expression, transgender status), national origin, age, disability, protected veteran status or any other basis or characteristic prohibited by applicable federal, state, or local law.

Survey Technician

Link to Live Job Posting: Posting is no longer active

Location: Franklin, TN	**O*NET:** 17-3025.00
Company: Civil & Environmental Consultants	**Job Title:** Survey Technicians

Job Summary 103 of 10000 Position range in Middle Region$30k•$52kPer year Survey TechnicianCivil & Environmental Consultants, Inc.

Occupation:

Surveying and Mapping Technicians

Location:

Franklin, TN•37067Positions available: 1Job #: 1302214Work At Home option: Not Specified

Updated:

9/27/2022

Expires:

12/25/2022

Source:

JOBS4TN.GOV

Site:

JOBS4TN.GOV

Agency Job ID:

69761550 Job Requirements Job Properties Job DescriptionJob Description Survey Technician Job Locations US-TN-Franklin Category Survey / Geospatial Type Full-Time Overview At Civil & Environmental Consultants, Inc. (CEC), every member of our team has a personal stake in ensuring the success of our clients. As employee-owners of the firm, we are all personally accountable for building lasting relationships and delivering outstanding results. We put people first, whether that's our clients, our employees, or our community. It's why we listen more and work harder to understand the unique needs of our clients. And it's why we prioritize the career development of every individual on our team. People are why we do this, and why we love what we do. We are at our best when we work together. That means bringing together a diverse team of talented, passionate, multidisciplinary experts to work closely alongside clients to create comprehensive solutions to complex problems. We believe that by working together, no problem is insurmountable. As a Survey Technician for Civil & Environmental Consultants, Inc. (CEC), you will be part of a survey field crew performing a variety of topographic and boundary surveys, as well as surveying on construction sites. You will perform land survey work using routine surveying practices and equipment. You will work on land survey projects, operate instrumentation, take notes, make minor sketches and clean equipment as needed. You will also be responsible for utilizing various surveying programs to gather, retrieve and interpret important data, and performing minor computations as required. You will perform

incidental clerical and aid in the upkeep of survey vehicles and survey tools. Ultimately, this position will provide a foundation for further professional development as a land surveyor. Qualifications 0-4 years related survey experience;Ability to operate motorized equipment;Ability to work outdoors under various field conditions;Valid Driver's License. Us Civil & Environmental Consultants, Inc. (CEC) is consistently ranked as an Engineering News-Record Top 200 Design Firm, offering big firm opportunities with a small firm culture. Not only will we help you develop professionally, but we will also provide you with the opportunity to become an owner of the firm and share in our success. You will work on diverse projects while providing high quality service to our clients. In addition to offering company stock at all levels, we provide a matching 401(k), profit sharing, a performance bonus for all employees, medical dental and vision insurance, short and long term disability and tuition assistance. Join our team where your contribution matters. CEC is an equal opportunity and affirmative action employer. We do not discriminate in recruiting, hiring or promotion based on race, color, religion, sex (including sexual orientation, gender identity or expression, transgender status), national origin, age, disability, protected veteran status or any other basis or characteristic prohibited by applicable federal, state, or local law. Civil & Environmental Consultants, Inc. is an equal opportunity and affirmative action employer. We do not discriminate in recruiting, hiring, or promotion based on race, color, religion, sex (including sexual orientation, gender identity or expression, transgender status), national origin, age, disability, protected veteran status or any other basis or characteristic prohibited by applicable federal, state or local law. Employer ResearchEmployer Research Civil & Environmental Consultants, Inc.Is a Private Sector employer with 3 locations

Company Profile:

Civil & Environmental Consultants, Inc. (CEC) provides comprehensive market-oriented consulting services that advance the strategic business objectives of its clients. CEC is recognized for its innovative design solutions and integrated expertise in air quality, civil engineering, ecological sciences, environmental engineering and sciences, manufacturing infrastructure services, planning, survey, transportation engineering, waste management, and water resources. Multi-disciplined Industry Consulting Groups (ICGs) strategically focus on the business challenges and drivers of the manufacturing, mining, oil & gas, power, public sector, real estate, and solid waste markets. CEC's employee-owners are highly motivated by the link between their personal success and the success of our clients. Our continuing growth reflects client confidence in the work of our employees, who are guided by three core business principles: Senior Leadership, Integrated Services and Personal Business Relationships. A culture of accountability. We own it.®At CEC, every member of our team has a personal stake in ensuring the success of our clients. Their success is our success. As employee-owners of the firm, we are all personally accountable for building lasting relationships and delivering outstanding results. Because we don't just work at CEC. We own it.

CEC COMPANY VALUES

Our four sets of Company Values have been an integral part of our foundation and have driven our success. We are guided by these values in our personal interactions and daily decisions as we work together to create the greatest value for our clients, fellow professionals, and shareholders.

CULTURAL VALUES

•How we treat our people

CLIENT SERVICE VALUES

•How we treat our clients

BUSINESS VALUES

•How we strengthen and sustain our business

CORE VALUES

•The values that flow through all other values:Safety, Integrity, Collaboration, Personal and Professional Development, Service Excellence

CAREERS AN INSPIRED FUTURE. OWN IT.

A career at CEC is different. You will be challenged to turn big ideas into solid results, to grow your career alongside a growing company, and to take ownership of your contributions. Work where you're encouraged to explore your passions, where people come first, where above and beyond is the standard, and where you can own your future. If you're prepared to own it, we'd love to hear from you.

BIG FIRM OPPORTUNITIES + SMALL FIRM CULTURE

There are clear but different advantages to working for large or small firms. At CEC, you get both.

COMMITMENT TO DIVERSITY AND INCLUSION.

We believe that the diversity of our people is part of what makes CEC such a special place to work. Every member of our team brings unique strengths to the workplace, and by embracing those strengths, we are better able to deliver outstanding results for our clients. 1,000-4,999 employeesConnect withCivil & Environmental Consultants, Inc. Jobs from this Employer Environmental Engineering Project Manager Civil & Environmental Consultants, Inc.•Franklin, TNRegularEnvironmental Engineering Project Manager Job Locations US-TN-Franklin Category Environmental Type Full-Time Overview As Senior Project Manager/Principal in the Franklin, Tennessee office of Civil & Environmental Consultants, Inc. (CEC), you will be responsible for helping to shape the continued growth of our Environmental Practice including recruiting new staff and building upon existing staff and expertise to expand our client base and service offerings. Daily duties will include managing client relationships and developing new business, managing projects, and providing senior direction on a variety of Environmental projects in the broad areas of air, water, and waste. Qualifications BS in Geology, Environmental Science or Civil/Environmental Engineering, or equivalent suitable to the area of practice (MS a plus); Current Tennessee Licensure as a P.E., P.G., and/or

QEP/C.I.H.

Certification. (Licensure in adjacent states and Florida would be a plus.) 18+ years diverse environmental consulting experience including at least 5 in a supervisory role. Candidates will be evaluated based on the degree of local or regional experience developing, managing, and performing services such as: Regulatory Liaison Contaminated Site and Brownfield Investigations and Remediation RCRA Facility Investigations and Corrective Action Environmental compliance (spill response plans, water/waste permitting, compliance audits, multi-media compliance monitoring. etc.). Air/water/waste permitting, Developing, managing, and performing due diligence, regulatory compliance and environmental management system audits; Phase I/II environmental assessments for real estate development; Strong leadership, team building, and interpersonal skills; Demonstrated business development and client management experience; Familiarity and positive working relationships with local, state, and federal regulators such as TDEC, ADEM, MDEQ, GAEPD, and USEPA Ability to speak and write professionally, including experience with the preparation of regulatory submittals; Demonstrated experience managing multiple projects, budgeting and cost control; Demonstrated experience supervising technical and administrative staff; Health and Safety/OSHA compliance experience a plus. Here's What We'd Like to

See:

Experience successfully building and managing an environmental practice or demonstrated career advancement that would indicate you are ready to step into this role. A strong desire to help CEC grow its environmental practice service offerings, client base, and expertise in the southeast region. Membership and active participation in applicable trade groups and professional organizations Us C ivil & Environmental Consultants, Inc. (CEC) is consistently ranked as an Engineering News-Record Top 200 Design Firm, offering big firm opportunities with a small firm culture . Not only will we help you develop professionally, but we will also provide you with the opportunity to become an owner of the firm and share in our success. You will work on diverse projects while providing high quality service to our clients. In addition to offering company stock at all levels, we provide a matching 401(k), profit sharing, a performance bonus for all employees, medical dental and vision insurance, short and long term disability and tuition assistance. Join our team where your contribution matters. CEC is an equal opportunity and affirmative action employer. We do not discriminate in recruiting, hiring or promotion based on race, color, religion, sex (including sexual orientation, gender identity or expression, transgender status), national origin, age, disability, protected veteran status or any other basis or characteristic prohibited by applicable federal, state, or local law. Civil & Environmental Consultants, Inc. is an equal opportunity and affirmative action employer. We do not discriminate in recruiting, hiring, or promotion based on race, color, religion, sex (including sexual orientation, gender identity or expression, transgender status), national origin, age, disability, protected veteran status or any other basis or characteristic prohibited by applicable federal, state or local law.This chart is used to compare your background against this job to help to

determine if you would be a good fit for this position. You match 0% of the General Job Requirements. You match 0% of the Skills Required, and you match 0% of the Specialized Job Requirements.End of interactive chart.ViewSave Solid Waste Engineer/Principal Civil & Environmental Consultants, Inc.•Franklin, TNRegularSolid Waste Engineer/Principal Job Locations US-TN-Franklin Type Full-Time Overview At Civil & Environmental Consultants, Inc. (CEC), every member of our team has a personal stake in ensuring success. As employee-owners, we strive to build lasting personal business relationships by delivering a higher level of service through our focus on the client experience and employee satisfaction. We put people first, whether that's our clients, our employees, or our community. It's why we listen more and work harder to understand the needs of our clients. We prioritize professional development for every individual on our team. We strive to bring together a diverse team of talented, passionate, multidisciplinary experts to deliver integrated project services and provide innovative solutions for our clients. CEC is growing our operations, and we have an excellent opportunity to hire a Principal to contribute to our Waste Management Practice in our Franklin, TN location. As a Principal with CEC, you will assist in expanding the practice in market sectors that include traditional Solid Waste, Composting and other waste stream management solutions. You will be responsible for developing new business, managing existing client relationships, as well as managing projects, mentoring junior staff, making hiring recommendations, and providing direction on a variety of projects for private and public sector clients. Qualifications 10+ years' experience in the Solid Waste industry including engineering design, operations and management; Demonstrated business development and client relationship management experience required; Strong professional relationships with clients in applicable market sector(s); B.S. in Civil, Geotechnical, or Environmental Engineering (M.S. a plus); Tennessee Professional Engineering (P.E.) Licensure; and Sound understanding of business principles of consulting projects and related project delivery tools.

Strong project management skills:

Good communication, leadership, planning and mentoring skills; Promote our safety culture and encourage collaboration; Foster an attitude and committment to being an active participant of our employee-owned culture. Us C ivil & Environmental Consultants, Inc. (CEC) is consistently ranked as an Engineering News-Record Top 200 Design Firm, offering big firm opportunities with a small firm culture . Not only will we help you develop professionally, but we will also provide you with the opportunity to become an owner of the firm and share in our success. You will work on diverse projects while providing high quality service to our clients. In addition to offering company stock at all levels, we provide a matching 401(k), profit sharing, a performance bonus for all employees, medical dental and vision insurance, short and long term disability and tuition assistance. Join our team where your contribution matters. CEC is an equal opportunity and affirmative action employer. We do not discriminate in recruiting, hiring or promotion based on race, color, religion, sex (including sexual orientation, gender identity or expression, transgender status), national origin, age, disability, protected veteran status or any other basis or characteristic prohibited by applicable federal, state, or local law. Civil & Environmental Consultants, Inc. is an equal opportunity and affirmative action employer. We do not discriminate in recruiting, hiring, or promotion based on race, color, religion, sex (including sexual orientation, gender identity or expression, transgender status), national origin, age, disability, protected veteran status or any other basis or characteristic prohibited by applicable federal, state or local law.This chart is used to compare your background against this job to help to determine if you would be a good fit for this position. You match 0% of the General Job Requirements. You match 0% of the Skills Required, and you match 0% of the Specialized Job Requirements.End of interactive chart.ViewSave See all jobs from Civil & Environmental Consultants, Inc. Location/Work Site InformationLocation/Work Site Information

Address:

117 Seaboard Lane, Franklin, TN 37067 Work At Home option: No

Public Transportation Accessible:

NoLocation/Work Site Industry (NAICS): Engineering Services (541330)

Cost of Living:

View cost of living information based on this location Compensation and HoursCompensation and Hours

Salary Range:

Not Available DOE (Depends on Experience)Not Available

Other Benefits:

Not Available

Full or Part Time:

Full Time (30 Hours or More)

Job Duration:

Over 150 Days

Type of Job:

RegularRegular

Shift:

Not Applicable Hours per

Week:

Hours Not Specified View what local employers are paying Surveying and Mapping Technicians Work ExperienceWork Experience

Minimum Experience Required:

Not Specified Education and TrainingEducation and Training

Minimum Education Level Required:

No Minimum Education Requirement

Required License/Certification:

No Related Education Opportunities Skills RequiredSkills RequiredView typical job skill requirements for Surveying and Mapping TechniciansView typical Tools and Technology skills used by Surveying and Mapping TechniciansView the typical workplace skills for Surveying and Mapping TechniciansView the personal skills that are typically associated with individuals that work as Surveying and Mapping Technicians Other SkillsOther SkillsSpecial Software/Hardware skills needed: No Occupation InformationOccupation Information

Occupation:

Surveying and Mapping Technicians

Other Matching Jobs:

View other jobs available for Surveying and Mapping Technicians

Other Related Jobs:

View other jobs available for occupations related to Surveying and Mapping Technicians

Job Distribution:

View the distribution of jobs for Surveying and Mapping Technicians

Supply and Demand:

View the competition for Surveying and Mapping Technicians

Future Employment Outlook:

View the employment and future employment outlook for Surveying and Mapping Technicians

Other Employers:

View the largest local employers of Surveying and Mapping Technicians This section shows the number of job openings advertised online in Williamson County, TN for Surveying and Mapping Technicians and for the related occupational group of Architecture and Engineering Occupations on October 15, 2022 (Jobs De-duplication Level 2).OccupationJob OpeningsSurveying and Mapping Technicians4Architecture and Engineering Occupations254

Source:

Online advertised jobs data Career LadderCareer Ladder Personal RequirementsPersonal Requirements

Knowledge:

View the knowledge typically needed by Surveying and Mapping Technicians

Abilities:

View the abilities typically needed by Surveying and Mapping Technicians

Work Styles:

View the personal characteristics that can affect how well Surveying and Mapping Technicians perform Nature of the WorkNature of the Work

Importance:

View what is typically important in a job to Surveying and Mapping Technicians

Work Activities:

View typical work activities for Surveying and Mapping Technicians

Tasks:

View the specific tasks commonly performed by Surveying and Mapping Technicians

Working Conditions:

View the typical working conditions for Surveying and Mapping Technicians

Tools and Technology Skills:

View the tools and technology generally used by Surveying and Mapping Technicians

Occupational Videos:

View a short video about Surveying and Mapping Technicians Change Job Search Criteria Print Job Order [Do you have a comment or concern about this job posting?]

Appendix C - Data Sources and Calculations

Lightcast Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

State Data Sources

This report uses state data from the following agencies: Tennessee Department of Labor & Workforce Development

Job Posting Analytics

Lightcast Q4 2022 Data Set

January 2023

Tennessee

Parameters

Select Timeframe: Aug 2020 - Dec 2022

Regions:

Code	Description	Code	Description
1	Alabama	28	Mississippi
12	Florida	47	Tennessee
13	Georgia	48	Texas
21	Kentucky		

Minimum Experience Required: Any

Programs:

Code	Description
03.0104	Environmental Science

Education Level:

Description
Master's degree

Keyword Search:

Posting Type: Newly Posted

Job Postings Summary

6,278	2 : 1	30 days
Unique Postings	**Posting Intensity**	**Median Posting Duration**
14,606 Total Postings	Regional Average: 3 : 1	Regional Average: 30 days

There were **14,606** total job postings for your selection from August 2020 to December 2022, of which **6,278** were unique. These numbers give us a Posting Intensity of **2-to-1**, meaning that for every 2 postings there is 1 unique job posting.

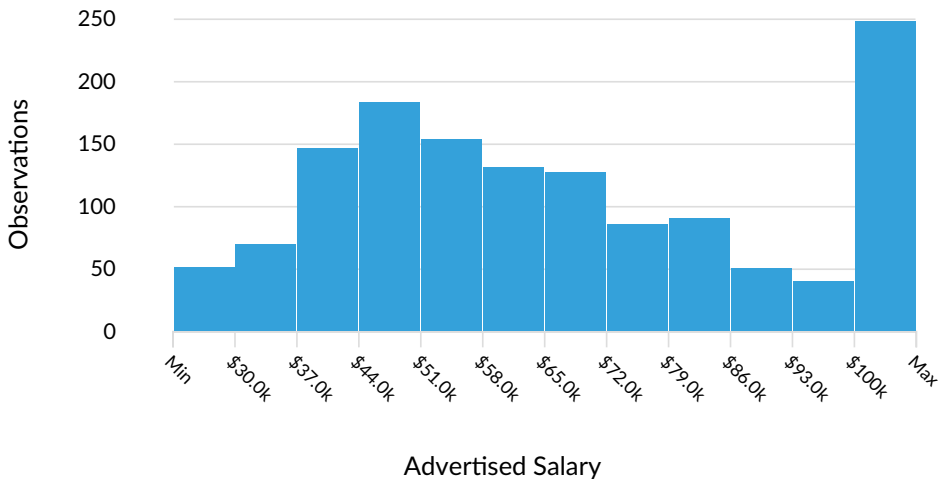
This is close to the Posting Intensity for all other occupations and companies in the region (3-to-1), indicating that they are putting average effort toward hiring for this position.

Advertised Salary

There are 1,373 advertised salary observations (22% of the 6,278 matching postings).

$62.7K

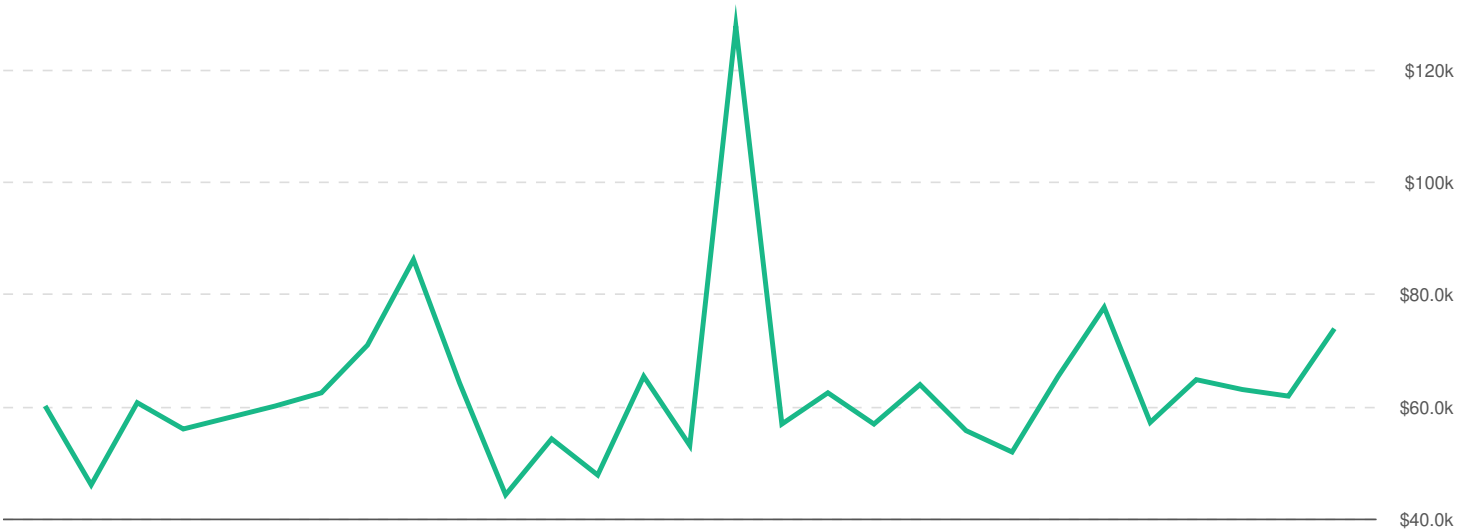
Median Advertised Salary



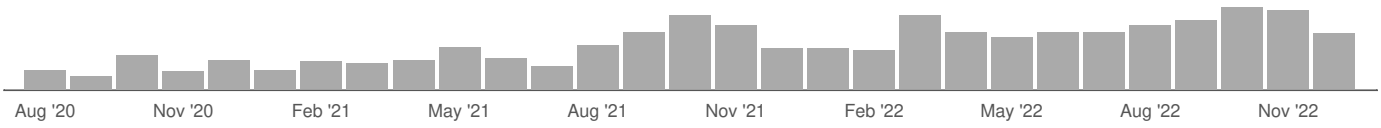
Advertised Wage Trend

▲ 22.7% Aug 2020 – Dec 2022

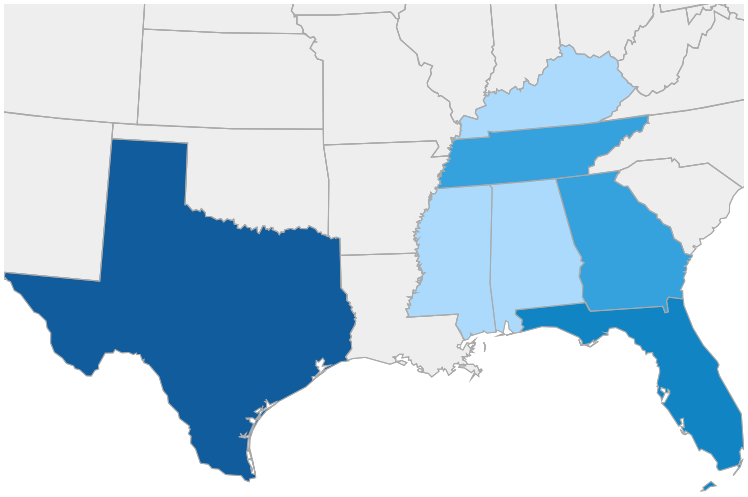
$62.7k **Median**



1,374 Job Postings

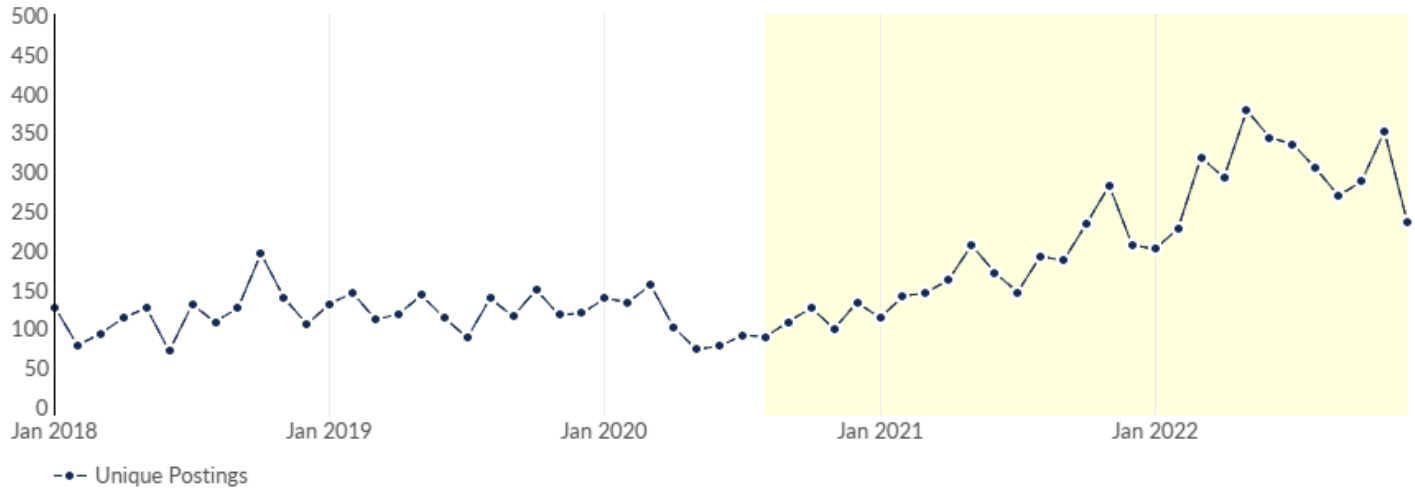


Job Postings Regional Breakdown



State	Unique Postings (Aug 2020 - Dec 2022)
Texas	2,650
Florida	1,609
Georgia	825
Tennessee	503
Alabama	316

Unique Postings Trend



Month	Unique Postings	Posting Intensity
Dec 2022	235	2 : 1
Nov 2022	351	2 : 1
Oct 2022	287	2 : 1
Sep 2022	269	4 : 1
Aug 2022	304	2 : 1
Jul 2022	335	2 : 1
Jun 2022	343	2 : 1
May 2022	378	2 : 1
Apr 2022	292	2 : 1
Mar 2022	318	2 : 1
Feb 2022	227	2 : 1
Jan 2022	201	2 : 1

Education Breakdown

Education Level	Unique Postings	% of Total
No Education Listed	0	0%
High school or GED	311	5%
Associate degree	262	4%
Bachelor's degree	5,664	90%
Master's degree	6,278	100%
Ph.D. or professional degree	914	15%

Minimum Education Breakdown

Minimum Education Level	Unique Postings (minimum)	Unique Postings (max advertised)	% of Total (minimum)
High school or GED	311	0	5%
Associate degree	204	0	3%
Bachelor's degree	5,208	0	83%
Master's degree	555	5,008	9%
Ph.D. or professional degree	0	914	0%

Experience Breakdown

Minimum Experience	Unique Postings	% of Total
No Experience Listed	1,636	26%
0 - 1 Years	516	8%
2 - 3 Years	1,199	19%
4 - 6 Years	1,522	24%
7 - 9 Years	692	11%
10+ Years	713	11%

Top Companies Posting

	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
WSP Global	533 / 348	2 : 1	22 days
State of Florida	446 / 177	3 : 1	22 days
Tarleton State University	417 / 167	2 : 1	49 days
CDM Smith	171 / 158	1 : 1	27 days
Stantec	320 / 120	3 : 1	30 days
Terracon Consultants	225 / 116	2 : 1	42 days
Ryder	177 / 93	2 : 1	50 days
Deloitte	116 / 85	1 : 1	31 days
Texas Commission On Environmental Quality	164 / 79	2 : 1	35 days
City of Austin	563 / 78	7 : 1	27 days

Top Cities Posting

City	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Houston, TX	1,567 / 672	2 : 1	30 days
Austin, TX	1,522 / 516	3 : 1	29 days
Atlanta, GA	717 / 392	2 : 1	28 days
Dallas, TX	535 / 250	2 : 1	34 days
Nashville, TN	461 / 195	2 : 1	38 days
Tampa, FL	387 / 184	2 : 1	31 days
San Antonio, TX	1,303 / 165	8 : 1	28 days
Stephenville, TX	398 / 165	2 : 1	37 days
Miami, FL	377 / 153	2 : 1	30 days
Fort Lauderdale, FL	298 / 119	3 : 1	26 days

Top Posted Occupations

	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Environmental Scientists and Specialists, Including Health	1,918 / 798	2 : 1	30 days
Postsecondary Teachers	1,033 / 492	2 : 1	33 days
Managers, All Other	932 / 420	2 : 1	33 days
Environmental Engineers	864 / 350	2 : 1	33 days
Operations Research Analysts	698 / 346	2 : 1	20 days
Project Management Specialists	676 / 303	2 : 1	30 days
Geoscientists, Except Hydrologists and Geographers	247 / 134	2 : 1	25 days
Computer Occupations, All Other	292 / 128	2 : 1	28 days
Occupational Health and Safety Specialists	353 / 120	3 : 1	24 days
Compliance Officers	492 / 119	4 : 1	22 days

Top Posted Occupations

Occupation (O*NET)	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Environmental Scientists and Specialists, Including Health	1,710 / 708	2 : 1	30 days
Managers, All Other	851 / 374	2 : 1	33 days
Environmental Engineers	864 / 350	2 : 1	33 days
Operations Research Analysts	698 / 346	2 : 1	20 days
Project Management Specialists	676 / 303	2 : 1	30 days
Postsecondary Teachers, All Other	532 / 261	2 : 1	34 days
Geoscientists, Except Hydrologists and Geographers	247 / 134	2 : 1	25 days
Occupational Health and Safety Specialists	353 / 120	3 : 1	24 days
Zoologists and Wildlife Biologists	231 / 114	2 : 1	36 days
Chief Sustainability Officers	203 / 103	2 : 1	16 days
Sustainability Specialists	264 / 99	3 : 1	36 days
Environmental Compliance Inspectors	439 / 93	5 : 1	19 days
Biologists	160 / 83	2 : 1	39 days
Medical and Health Services Managers	164 / 82	2 : 1	35 days
Management Analysts	920 / 81	11 : 1	25 days
Environmental Science and Protection Technicians, Including Health	183 / 78	2 : 1	30 days
Sales Managers	159 / 77	2 : 1	14 days
Emergency Management Directors	89 / 76	1 : 1	19 days
Software Developers	169 / 75	2 : 1	17 days
Architectural and Engineering Managers	178 / 70	3 : 1	34 days
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	142 / 69	2 : 1	37 days
First-Line Supervisors of Housekeeping and Janitorial Workers	129 / 67	2 : 1	30 days
English Language and Literature Teachers, Postsecondary	171 / 64	3 : 1	33 days

Computer and Information Research Scientists	133 / 63	2 : 1	37 days
Geographic Information Systems Technologists and Technicians	103 / 63	2 : 1	28 days
Environmental Restoration Planners	161 / 63	3 : 1	26 days
Civil Engineers	94 / 62	2 : 1	23 days
General and Operations Managers	136 / 58	2 : 1	38 days
Construction Managers	71 / 57	1 : 1	17 days
First-Line Supervisors of Office and Administrative Support Workers	96 / 54	2 : 1	59 days
Biological Science Teachers, Postsecondary	77 / 53	1 : 1	39 days
Natural Sciences Managers	117 / 47	2 : 1	59 days
Chemists	95 / 45	2 : 1	10 days
Teachers and Instructors, All Other	68 / 41	2 : 1	25 days
Information Technology Project Managers	152 / 39	4 : 1	31 days
Compliance Managers	69 / 38	2 : 1	38 days
Education Administrators, Postsecondary	91 / 37	2 : 1	48 days
First-Line Supervisors of Retail Sales Workers	63 / 37	2 : 1	28 days
Quality Control Systems Managers	62 / 35	2 : 1	32 days
Supply Chain Managers	64 / 33	2 : 1	50 days
Economists	34 / 32	1 : 1	n/a
Conservation Scientists	56 / 31	2 : 1	17 days
Chemistry Teachers, Postsecondary	67 / 31	2 : 1	19 days
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	66 / 30	2 : 1	36 days
Energy Auditors	32 / 26	1 : 1	49 days
Regulatory Affairs Specialists	52 / 25	2 : 1	23 days
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	64 / 25	3 : 1	12 days

Water and Wastewater Treatment Plant and System Operators	39 / 24	2 : 1 	24 days
Transportation Planners	41 / 23	2 : 1 	34 days
Administrative Services Managers	55 / 22	3 : 1 	32 days

Top Posted Occupations

Occupation	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Environmental Planner / Scientist	3,274 / 1,346	2 : 1	30 days
Project Manager	1,110 / 499	2 : 1	37 days
Safety Manager	536 / 263	2 : 1	19 days
College Professor (Other)	362 / 185	2 : 1	28 days
Geologist	308 / 176	2 : 1	28 days
Sustainability Specialist	396 / 172	2 : 1	35 days
Safety Specialist / Coordinator	448 / 166	3 : 1	21 days
Environmental Compliance Specialist	447 / 149	3 : 1	22 days
Science Teacher	253 / 136	2 : 1	32 days
Environmental Engineer	221 / 135	2 : 1	28 days
Researcher / Research Associate	276 / 131	2 : 1	26 days
Geographer / GIS Specialist	166 / 97	2 : 1	29 days
Housekeeping / Environmental Services Supervisor	176 / 76	2 : 1	50 days
Biologist	136 / 74	2 : 1	39 days
Program Manager	283 / 73	4 : 1	23 days
Water Treatment Specialist / Waste Water Operator	120 / 63	2 : 1	37 days
Business / Management Analyst	86 / 60	1 : 1	27 days
Biology Professor	119 / 60	2 : 1	33 days
Business Development / Sales Manager	120 / 56	2 : 1	14 days
Urban / Transportation Planner	100 / 55	2 : 1	37 days
Operations Manager / Supervisor	80 / 49	2 : 1	34 days
Biological Technician	97 / 47	2 : 1	23 days
Compliance Officer / Analyst	109 / 46	2 : 1	23 days
General Manager	132 / 43	3 : 1	28 days
Energy Analyst / Auditor	67 / 43	2 : 1	30 days

Compliance Manager	73 / 43	2 : 1	35 days
Forest / Conservation Technician	80 / 41	2 : 1	32 days
Computer Support Specialist	55 / 40	1 : 1	59 days
Engineering Manager	84 / 38	2 : 1	40 days
Health and Safety Engineer	84 / 35	2 : 1	37 days
Operations and Maintenance Specialist	36 / 34	1 : 1	42 days
Economist	35 / 33	1 : 1	32 days
Elementary and Secondary School Administrator	84 / 32	3 : 1	32 days
Water / Wastewater Engineer	44 / 30	1 : 1	52 days
Risk Manager / Analyst	54 / 30	2 : 1	20 days
Laboratory Technician	70 / 29	2 : 1	29 days
Database Architect	171 / 29	6 : 1	31 days
Chemist	41 / 27	2 : 1	17 days
Account Manager / Representative	45 / 26	2 : 1	60 days
Corporate Development Analyst / Manager	63 / 25	3 : 1	32 days
Laboratory Manager	54 / 23	2 : 1	60 days
Surveying / Mapping Technician	96 / 22	4 : 1	27 days
Academic / Guidance Counselor	58 / 20	3 : 1	6 days
Archeologist	24 / 20	1 : 1	26 days
Environmental Technician	43 / 20	2 : 1	32 days
Policy Analyst	47 / 20	2 : 1	43 days
Office / Administrative Assistant	69 / 19	4 : 1	43 days
Zoologist / Wildlife Biologist	29 / 18	2 : 1	16 days
Social Science Researcher	50 / 18	3 : 1	19 days
Administrative Supervisor	28 / 17	2 : 1	18 days

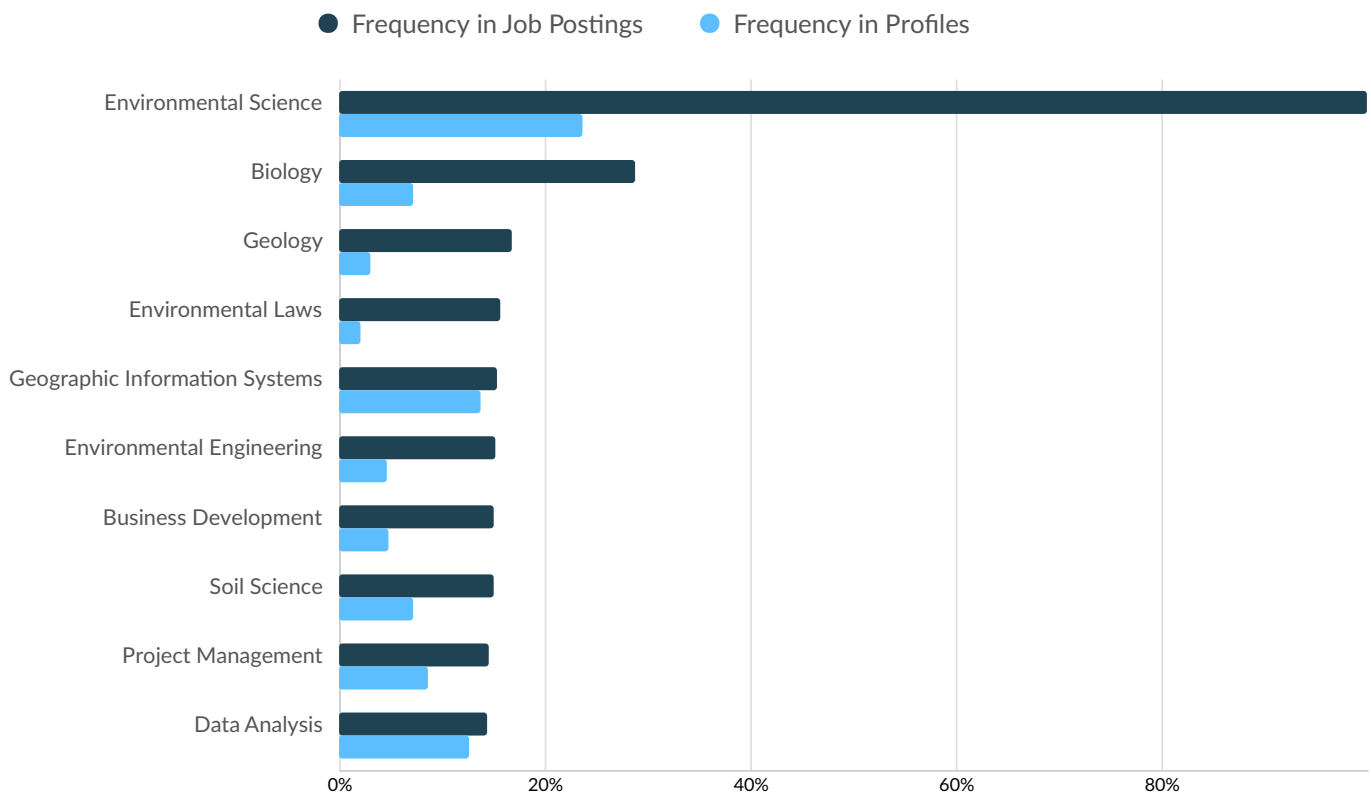
Top Posted Job Titles

	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Environmental Scientists	660 / 330	2 : 1	32 days
Environmental Project Managers	512 / 212	2 : 1	40 days
Environmental Specialists	601 / 199	3 : 1	32 days
Project Scientists	314 / 172	2 : 1	19 days
Environmental Managers	162 / 74	2 : 1	34 days
Environmental Compliance Specialists	248 / 64	4 : 1	20 days
Environmental Planners	147 / 62	2 : 1	30 days
Environmental Scientists/Geologists	180 / 61	3 : 1	18 days
Staff Scientists	118 / 60	2 : 1	37 days
Sustainability Managers	126 / 59	2 : 1	26 days

Top Industries

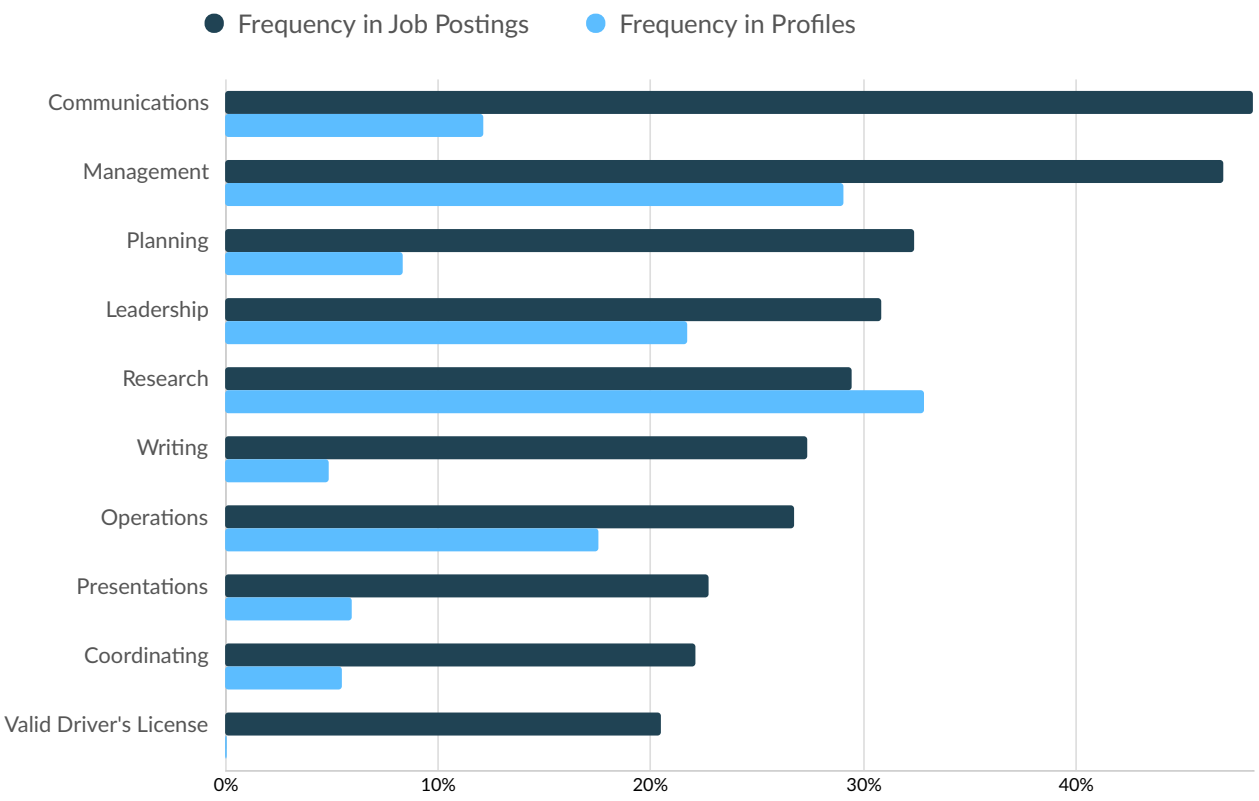
	Total/Unique (Aug 2020 - Dec 2022)	Posting Intensity	Median Posting Duration
Professional, Scientific, and Technical Services	4,791 / 2,323	2 : 1	32 days
Educational Services	1,927 / 865	2 : 1	33 days
Public Administration	1,699 / 533	3 : 1	23 days
Manufacturing	562 / 289	2 : 1	32 days
Administrative and Support and Waste Management and Remediation Services	471 / 208	2 : 1	25 days
Construction	401 / 160	3 : 1	34 days
Utilities	1,330 / 156	9 : 1	32 days
Finance and Insurance	233 / 122	2 : 1	16 days
Real Estate and Rental and Leasing	215 / 115	2 : 1	46 days
Mining, Quarrying, and Oil and Gas Extraction	227 / 95	2 : 1	20 days

Top Specialized Skills



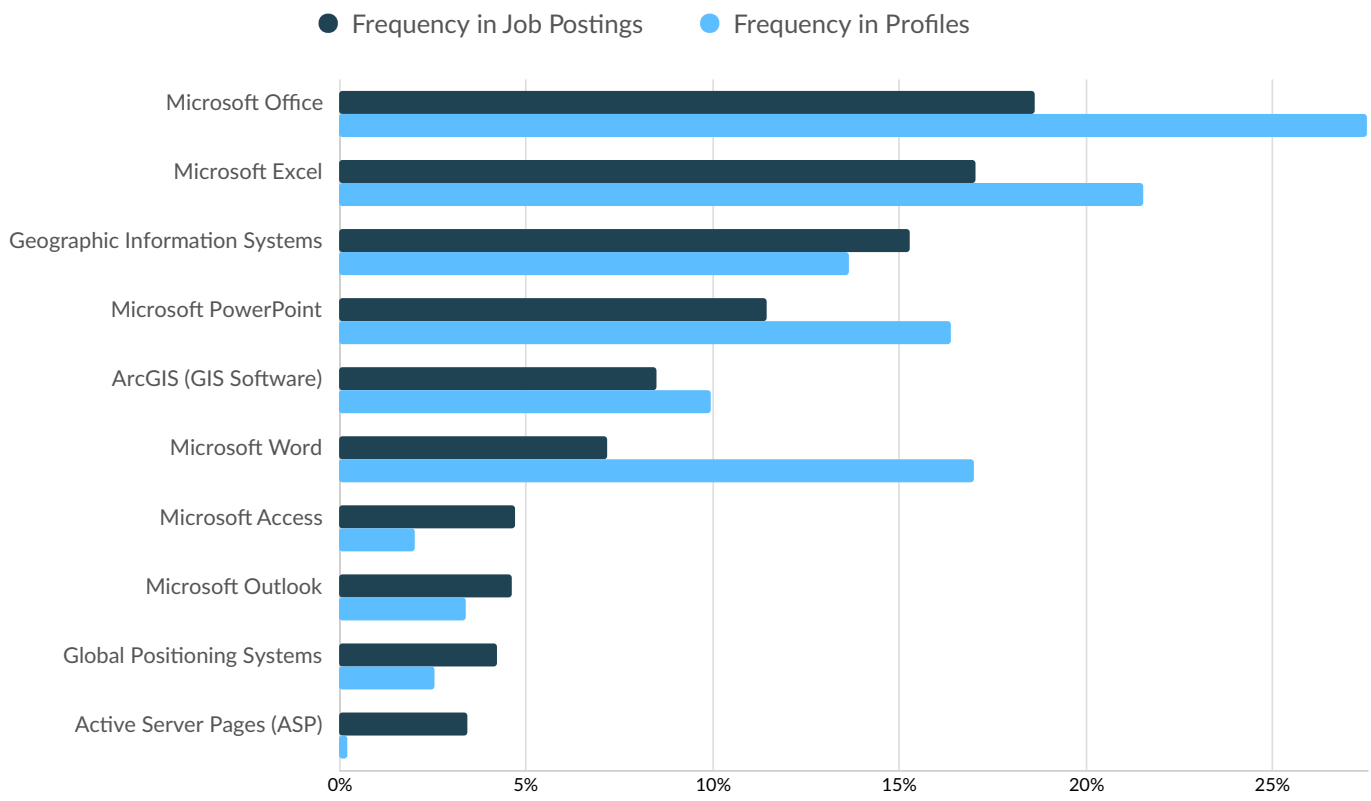
	Postings	% of Total Postings	Profiles	% of Total Profiles
Environmental Science	6,276	100%	4,762	24%
Biology	1,807	29%	1,461	7%
Geology	1,056	17%	620	3%
Environmental Laws	982	16%	417	2%
Geographic Information Systems	959	15%	2,756	14%
Environmental Engineering	949	15%	931	5%
Business Development	944	15%	982	5%
Soil Science	942	15%	1,446	7%
Project Management	917	15%	1,753	9%
Data Analysis	899	14%	2,532	13%

Top Common Skills



	Postings	% of Total Postings	Profiles	% of Total Profiles
Communications	3,036	48%	2,445	12%
Management	2,950	47%	5,868	29%
Planning	2,035	32%	1,690	8%
Leadership	1,939	31%	4,372	22%
Research	1,851	29%	6,622	33%
Writing	1,721	27%	981	5%
Operations	1,680	27%	3,534	18%
Presentations	1,430	23%	1,195	6%
Coordinating	1,389	22%	1,107	5%
Valid Driver's License	1,288	21%	11	0%

Top Software Skills



	Postings	% of Total Postings	Profiles	% of Total Profiles
Microsoft Office	1,172	19%	5,550	28%
Microsoft Excel	1,072	17%	4,341	22%
Geographic Information Systems	959	15%	2,756	14%
Microsoft PowerPoint	720	11%	3,306	16%
ArcGIS (GIS Software)	533	8%	2,009	10%
Microsoft Word	451	7%	3,429	17%
Microsoft Access	297	5%	412	2%
Microsoft Outlook	291	5%	683	3%
Global Positioning Systems	266	4%	514	3%
Active Server Pages (ASP)	215	3%	47	0%

Top Qualifications

	Postings with Qualification
American Institute Of Certified Planners (AICP) Certification	98
Certified Hazardous Materials Manager	318
Certified Industrial Hygienist (CIH)	162
Certified Safety Professional	340
HAZWOPER Certification	162
Licensed Professional Engineer	163
Master Of Business Administration (MBA)	259
Professional Engineer	261
Professional Wetland Scientist	120
Project Management Professional Certification	186

Appendix A

Top Posting Sources

Website	Postings on Website (Aug 2020 - Dec 2022)
dejobs.org	1,688
indeed.com	1,560
simplyhired.com	1,012
myworkdayjobs.com	360
careerbuilder.com	331
taleo.net	311
workintexas.com	274
disabledperson.com	241
recruiternetworks.com	205
hercjobs.org	202
icims.com	180
energyjobline.com	163
governmentjobs.com	163
higheredjobs.com	151
scholarshipdb.net	150
ziprecruiter.com	147
conbio.org	117
glassdoor.com	106
oilandgasjobsearch.com	99
tamus.edu	97
stantec.jobs	91
austincityjobs.org	83
careercast.com	72
myflorida.com	72
jobs4tn.gov	68

Appendix B

Sample Postings

Environmental Scientist II - Compliance Specialist

Link to Live Job Posting: www.indeed.com	
Location: Dallas, TX	**O*NET:** 19-2041.00
Company: Raba Kistner	**Job Title:** Environmental Compliance Specialists

Environmental Scientist II - Compliance Specialist 28 reviews 19111 Dallas Pkwy, Dallas, TX 75287 Full-time Raba Kistner Inc 28 reviews Read what people are saying about working here. Job details Job Type Full-time Full Job Description The Environmental Scientist II as part of the Compliance Assurance Division responsibilities encompass supporting and contributing to a successful Environmental Services Division through execution of compliance, geosciences, and/or natural resource tasks under the supervision or guidance of a project manager/technical expert. Though there is a lot of variability in the potential work the base consists of turnkey Industrial Storm Water support. Responsibilities include performance of field activities including but not limited to site evaluations, data collection, geologic mapping, and soil, groundwater and surface water sampling activities. Environmental Scientist II responsibilities also include analysis of data, data reduction and preparation of technical reports. Secondary responsibilities include performance of internal projects as needed including but not limited to the development of internal documents, databases, and proposals or statements of qualifications. The Environmental Scientist II will also have the opportunity to oversee project budgets, subcontractors and clients and teach, and train other Environmental staff on the performance of technical and other job duties. Employee shall have the following minimum duties and responsibilities: Conduct fieldwork and data reduction to support environmental projects. Interpret technical information and prepare technical reports. Prepare or assist with preparation of registrations, permits and other submittals required by federal, state, or local agencies. Primarily; TXR050000, TXR150000, TXG110000 and 40 CRF 112. Perform desktop studies and coordinate with resource agencies to identify project related environmental constraints (TPWD, USFWS, TCEQ, THC and others). Conduct environmental construction monitoring for various projects. Coordinate activities of subcontractors on assigned projects. Participate in Phase I and/or Phase II Environmental Site Assessments and Geophysical evaluations. Conduct and/or participate in Compliance, Natural Resources and Geoscience projects as assigned. Participate in regulatory compliance audits. Interact with clients on a daily basis. Lift and carry 25+ pounds to include, but not limited to tools, sample containers and equipment. Potential exposure to movement of heavy equipment on construction or roadway sites; potential exposure to hazardous dangerous chemicals and solvents, noise, dust, fumes, grease and oils, radiant and electrical energy, and vibration; all of which would require employee to follow proper safety procedures and utilize appropriate protective equipment. Position may require protracted or irregular hours. Flexibility to work irregular hours is necessary due to client needs. Work responsibilities require out of town/overnight travel to Raba Kistner offices, client offices and project locations. Travel will be conducted by means of vehicle or commercial airline. Perform other duties as assigned. Employees shall possess the following minimum qualifications: Bachelors degree or higher in environmental science/engineering, chemistry, geology, biology or related field. Three (3) five (5) years of applicable experience. Practical experience executing environmental compliance (air, water, waste), geosciences (remediation, environmental site assessments, environmental due diligence) and natural resources (NEPA, wetland and waters of the US delineations) projects or project tasks. Practical experience operating geographic data collection and other scientific data collection equipment. Practical experience in field sample collection (air, soil, groundwater, surface water) protocols and procedures. Must be able to identify and resolve problems in a timely manner. Must be able to effectively read and interpret information, present numerical data in a resourceful manner and skillfully gather and analyze information. Proven experience working on multiple projects, producing accurate information while meeting deadlines. Experience developing permits and plans like (Stormwater Pollution Prevention Plans, Spill Prevention Control and Countermeasures Plans, Permits by Rule, New Source Review permits, waste classification and registration, Tier II reporting, TRI reporting, etc.). Experience with Microsoft Office Suite (Word, Excel, PowerPoint, Access, Publisher). Excellent oral and written communication skills. Work well with all levels of people within the organization and outside of the company. Possess valid Texas drivers license and meet companys auto insurability requirements. Ability to work independently on a job site. 40-hour

OSHA HAZWOPER.

Present a professional appearance to best represent the firm. Must pass a drug test prior to employment and will be subject to post-accidental, random, and reasonable cause testing during employment. Comply with all attendance requirements as noted in most current edition of the Employee Handbook. This position description is intended to describe the general nature and level of work being performed by the person assigned to this position. Key responsibilities and essential functions are intended to describe those functions that are essential to the performance of this position and will vary dependent upon which Service Line the position is assigned to. This position description does not state or imply that the above are the only duties and responsibilities assigned to this position. Employees holding this position will be required to perform any other position-related duties as requested by management. All requirements are subject to possible modification to reasonably accommodate individuals with a disability. EOE/Minority/Female/Disabled/Veterans Hiring Insights Job activity Posted Just posted Raba Kistner Inc If you require alternative methods of application or screening, you must approach the employer directly to request this as Indeed is not responsible for the employer's application process. Report job

Environmental Scientist II

Link to Live Job Posting: dejobs.org

Location: Havana, FL	**O*NET:** 19-2041.00
Company: Northwest Florida Water Management District	**Job Title:** Environmental Scientists

Minimum Qualifications:

Bachelor\'s degree in Environmental Science, Biology, or related discipline and four years experience in the related field, to include experience permitting stormwater systems in northwest Florida. A master\'s degree as described above may be substituted for one year of the required professional experience. Additional course work in the physical sciences is desirable. Must be competent in the identification and delineation of wetlands in accordance with the procedures of 62-340, F.A.C.

Special Abilities:

Familiarity with applicable statutes, rules and regulations regarding water resources; expertise in water quality/limnology/ecology; knowledge of and experience with rare and endangered flora and fauna evaluation and identification; ability to evaluate written proposals in area of expertise; working knowledge of biological field equipment and laboratory procedures; ability to speak and write effectively; experience with PC data base systems; knowledge of GIS/GPS technology; knowledge of rule development and drafting. Must obtain the FDEP Certified Wetland Evaluator CWE certification within 120 days of hire date. Must be able to work outside in the heat and in inclement weather conditions.

Description of Position:

This is a professional position with responsibilities providing professional, technical, supervisory and administrative support for environmental and biological aspects of the surface water management regulation programs of the District. This position will include both field and office work in support of environmental, engineering, hydrologic and administrative activities associated with these programs. Work to be performed includes conducting environmental assessments of surface water management projects and permit application evaluation regarding wetland protection, water quality, and potential environmental effects, and the preparation of technical staff reports for permits and other investigations. Responsible for the processing of permit applications by ensuring that all noticing requirements and time frames are met, administrative details and requirements are fulfilled, and that all applications are processed in a timely and efficient manner.

Further duties include:

providing environmental, biological, ecological, and water quality expertise including field evaluation of site(s); the identification, delineation, and evaluation of wetland communities; directing or assisting in the collection of surface water quality data; participating in the inspection of surface water management facilities; reviewing environmental and biological portions of Environmental Resource Permit applications and other documents submitted for review and comment; providing technical assistance to other divisions within the District, other agencies or citizens; writing or assisting in the writing of reports and correspondence related to previous tasks; working closely with other similar or related disciplines in District studies and other programs; undertaking site inspections and writing or assisting in writing reports in support of the District\' enforcement efforts; generating quarterly reports on permitting activity, and other subjects, and representing the District in various committees, and or meetings. This position is based on permit workload and duties include site inspections to ensure compliance with already permitted facilities. Other duties as assigned by Bureau Chief. Performing related duties as assigned.

LIMITED TERM INSTRUCTOR OF ECOLOGY AND ENVIRONMENT

Link to Live Job Posting: dejobs.org

Location: Kennesaw, GA	**O*NET:** 25-1199.00
Company: Kennesaw State University	**Job Title:** Directors of Environment

Limited Term Instructor of Ecology and Environmental ScienceJob ID:

253076

Location:

Kennesaw, GeorgiaFull/Part Time:

Full TimeRegular/Temporary:

RegularAbout UsFor more than 50 years, Kennesaw State University has been known for its entrepreneurial spirit and sense of community. A leader in innovative teaching and learning, Kennesaw State is located just north of Atlanta, and combines a suburban setting on two metro-Atlanta campuses in Kennesaw and Marietta. As one of Georgia's largest universities, Kennesaw State offers undergraduate and graduate degrees, including a growing number of doctoral programs. A member of the University System of Georgia, Kennesaw State is a Carnegie-designated doctoral research institution (R2) committed to becoming a world-class academic institution positioned to broaden its academic and research missions and expand its scope on a local, regional and national level. For more information, visit https://kennesaw.edu/.LocationOur Kennesaw campus is located at 1000 Chastain Road NW, Kennesaw, GA 30144. Our Marietta campus is located at 1100 South Marietta Parkway, Marietta, GA 30060.Department InformationThe Department of Ecology, Evolution and Organismal Biology (EEOB) is seeking to support a strong population of students majoring in Biology and Environmental Science. EEOB serves over 2,000 undergraduate majors earning the Bachelor of Science degree in Biology, and over 100 majors in Environmental Science. We are committed to the cultivation of an inclusive community, motivating our diverse students and helping them to connect in meaningful ways to course material. We believe in nurturing a growth mindset and celebrating diverse ideas and individuals as we expand our national footprint.

Job SummaryKennesaw State University is now accepting applications for a nine-month, full-time, non-tenure track, Limited Term Instructor of Ecology and Environmental Science faculty position in the Department of Ecology, Evolution, and Organismal Biology that begins August 2023.ResponsibilitiesResponsibilities include the following, at a minimum: Successful candidates will be expected to establish an inclusive teaching environment where students from diverse backgrounds can be successful and feel like they belong. The main responsibility of this position is teaching at the undergraduate level with an emphasis on active, inclusive, and experiential learning. The primary teaching responsibilities will be for the Ecology classes (ecology lecture and labs; BIOL 3370 and

BIOL 3370L

). Other teaching responsibilities may include Environmental Science courses for non-majors, including Science, Society, and the Environment I and II (SCI 1101 and 1102), and or an introductory biology class (Principles of Modern Biology II (BIOL 1108 and

BIOL 1108L

).Teaching assignments will be based on earned degrees and SACSCOC Faculty Credentials Guidelines.

Required Qualifications A Master's degree, or the foreign equivalent, in a discipline related to Biology or a closely related discipline is required.

OR A Master's degree, or the foreign equivalent, in a non-related discipline with 18 graduate credit hours in Biology, Ecology, or Environmental Science is required.

Preferred Qualifications Demonstrated success using evidence-based, inclusive teaching practices at the university level. A record of teaching ecology, environmental science, general biology, or related courses. Evidence of teaching and working with a culturally and an ethnically diverse community Willingness to teach in face-to-face, on-line or hybrid modalities Record of past teaching at the undergraduate level.

Required Documents to Attach CV Cover Letter Unofficial Transcripts and/or international equivalency evaluations (Official Transcripts and Official International Evaluations Due Upon Hire)Apply Before DateFor full consideration, please apply by January 9, 2023. This position is open until filled.

Contact InformationFor questions about this faculty opening, pl

Environmental Engineer

Link to Live Job Posting: dejobs.org

Location: Bay Minette, AL	**O*NET:** 17-2081.00
Company: Novelis	**Job Title:** Environmental Engineers

[Environmental Engineer]{style="color:#2ecc71;"} Bay Minette, Alabama [

SALARY:

DEPENDS ON EXPERIENCE

]{style="color:#2ecc71;"} [Position Overview]{style="color:#2ecc71;"} We have an exciting opportunity for a dedicated individual to be a part of our Environmental team at our Bay Minette, Alabama site. The ideal candidate will be responsible for developing and driving the site to best-in-class environmental performance. This new \$2.5 billion world-class fully integrated aluminum recycling and rolling facility is the most significant expansion in the aluminum industry in over 40 years and is being developed on a greenfield site near Bay Minette. This role will oversee the significant environmental permitting and compliance activities during the construction phase of the project and ultimately for leading the overall plant environmental programs. The position will be accountable for the environmental management including development and implementations of controls, policies, and procedures to achieve and maintain compliance with all regulatory, permit or license requirements for the plant. [Responsibilities and Qualifications]{style="color:#2ecc71;"}[Targeted Outcomes]{style="color:#2ecc71;"}Develop and lead environmental team to ensure right priorities, right talent and appropriate behaviors and team dynamics exist to position the team for successAchieve regulatory and corporate requirements, procedure development, self-auditing and drive sustainable complianceEngage and communicate with regulatory agencies, prepare required documentation and reportsReview environmental regulations and determine applicability and strategic path forwardObtain and implement all vital Environmental permits for the construction and to enable the site\'s growth projects to proceed as needed to meet its Business PlanCommunicate environmental issues with Environmental team and Site and Corporate LeadershipNetwork and work multi-functionally with Operating Units, Technology, Engineering, Maintenance and Training organizations and translate problems/solutions directly into the team members\' frame of reference, while driving vital influence[Responsibilities]{style="color:#2ecc71;"}Lead all aspects of environmental compliance and sustainability at the Bay Minette site initially during construction and ultimately the operational facilityEstablish and set environmental policy consistent with Novelis guidelines for the facility as warrantedFamiliarity with ADEM air quality regulations (PSD, Title V, NSPS, NESHAP, MACT, etc.), water quality regulations, stormwater management, NPDES programs, etc.Prepare and manage permit applications and modifications (Title V and NSR), and any permits-by-rule (PBRs) and permit exemptions with corporate support as the need arisesBe responsible for and oversee the development and submittal of all required environmental reports and permits to government agencies Participate in environmental audits at the site and at other plants within the Novelis audit programParticipate in corporate-wide environmental and EHS networks across all Novelis operating sites to keep abreast of environmental related requirements and procedures.Interface directly with local, state, and federal regulatory agencies in all areas of environmental compliance, including on-site inspections, to communicate business strategy and handle information and communication between the plant and its regulatorsEstablish and enforce policies and practices required to provide safe equipment, a safe working environment and safe work practicesPromote EHS policy, implement the EHS management system and ensure continual improvement of EHS performance in day-to-day operat ons (strong familiarity with ISO 14001 and similar management systems)Supervise emerging regulatory and industry issues that may affect the facility, and review and interpret all compliance regulatory and permit requirements for all environmental media[Qualifications]{style="color:#2ecc71;"}B.S. Degree in Environmental Engineering, Chemical or Civil Engineering, Environmental Science, or other similar technical degree or equivalentMaster\'s Degree in the environmental field and/or Professional Engineering (PE) license a plusOver 10 years related environmental regulatory compliance experienceExperience with staff supervision and development of direct reports a plusDemonstrated experience with Title V, RCRA, NPDES, and Spill Prevention

complianceExcellent communication (oral and written) skills; ability to connect with all levels within the organizationThe ability to achieve results through othersDemonstrated ability to lead and facilitate teams involving diverse work groups[

What We Offer:

]{style="color:#2ecc71;"} Novelis\' benefits say a lot about how we care for each other. Our employees and their families have many different needs. As a result, our benefits offer choices on many levels and are high in quality, driven in the marketplace, and affordable. These are a few of the benefits we offer to support you and your family\'s well-being: Medical, dental and vision insuranceHealth savings accounts Company Funded Health Savings Account (HSA) and Health Reimbursement Account (HRA)Company-paid basic life insurance and Additional voluntary life coveragePaid vacation and competitive personal time off401(k) savings plan with company matchRetirement savings plans medical and prescription drug coverage through private exchangeEmployee assistance programs available 24/7 to you and your familyWellness and Work Life Support - career development and educational assistance At Novelis, we believe our culture of collaboration is what makes us great, and we would love for you to consider building a career with us. Novelis provides equal employment opportunities to all employees and applicants. All terms and conditions of employment at Novelis including recruiting hiring placement promotion termination layoffs recalls transfers leaves of absence compensation and training are without regard to race color religion age sex national origin disability status genetics protected veteran status sexual orientation gender identity or expression or any other characteristic protected by federal provincial or local laws. [Location Profile]{style="color:#2ecc71;"} Novelis\' newly announced Bay Minette operations is located 35 miles northeast of Mobile, AL and 45 miles west of Pensacola, FL and is expected to create approximately 1000 high-paying, advanced careers in modern manufacturing and become fully operational in 2025. This highly advanced rolling and recycling facility will be the first of its kind. It will primarily serve our customers in the beverage can and automotive markets. Novelis is committed to the community and will actively build partnerships in Baldwin County focused on recycling, STEM education and workforce development.

Environmental Specialist

Link to Live Job Posting: Posting is no longer active

Location: Dallas, TX	**O*NET:** 19-2041.00
Company: Unclassified	**Job Title:** Environmental Specialists

Environmental Specialist 2 reviews Dallas, TX 75201 HF Sinclair 2 reviews Read what people are saying about working here. Basic Function HF Sinclair is seeking an Environmental Specialist to be based at our Dallas office (Preferred). Conducts environmental and safety assignments and duties for the assigned Department. Internally considered as a technical advisor. Job Duties Coordinates environmental programs and provides environmental assistance to business units Ensures environmental programs comply with the applicable federal, state, and local government laws. Advises management of environmental issues and activities necessary to ensure compliance. Proposes environmental policies, programs, and initiative Represents the company to governmental environmental agencies, the public, and trade/professional associations Ensures environmental considerations are factored into corporate planning and the capital budget process Tracks environmental performance measures and recommends parameters Provides documentation and environmental analysis for management review Prepares comments on proposed Environmental regulations, and maintains involvement with trade associations as appropriate Stays current with applicable Federal, State, and local regulations governing RCRA (waste management e.g., hazardous waste, universal waste, used oil, non-hazardous waste, regulated medical waste), CWA (water and wastewater), OPA (SPCC, FRP), SDWA (UIC Wells),. NEPA (COE permits, WOTUS), TSCA, EPCRA/CERCLA reporting compliance. Coordinates with site program leads from all business units and facilities technical team meetings and training. Coordinate with site staff on permit applications and renewals, and review draft permits issued by regulatory agencies. Reviews and maintains company waste disposal/recycling policies in coordination with Legal. Identifies and reviews disposal/recycling facilities, brokers, and transporters for inclusion in the company-approved waste management/recycling program and assists business units in their use. May include some or all of the following: Participates in third-party compliance audits of company's facilities Participates in emergency response and cleanup activities Directs the work of other environmental technicians Interfaces with operation departments to communicate and define their role in compliance efforts Interfaces with regulatory agencies to ensure the understanding of, and compliance with, all applicable environmental regulations and requirements Lead corporate initiatives such as systems and tools development towards the advancement of responsible programs Special assignments or tasks are assigned to the employee by their supervisor, as determined from time to time in their sole and complete discretion. Experience A minimum of 10 years of extensive industry and on-the-job experience is required. Education Level A minimum of a Bachelor's Degree in environmental sciences or a related field is required.

PREFERRED EDUCATIONAL LEVEL

; A Master's Degree is preferred. Required Skills Ability to lead and train a small group of employees in a Technical Expert capacity. Special training in hazardous waste regulations and DOT Hazmat Shipping, and a Certification in OSHA Hazmat may be required depending on assignment. Advanced working knowledge of environmental water quality, wastewater, and waste compliance regulations required depending on the assignment Adept at making hazardous waste determinations through process knowledge and analytical testing. Is knowledgeable of applicable regulatory exclusions from the definition of solid and hazardous waste and can put those into practice. Working knowledge of oil refining processes (process flow diagrams/mechanical flow sheets, chemical phase separations, and reactions). Ability to effectively communicate with others, both written and verbal communication. Advanced reading and writing skills, with the ability to perform complex mathematical calculations. Advanced ability to provide analyses of proposed and final

CWA, OPA. RCRA, TSCA, EPCRA, CERCLA, NEPA, SDWA

regulations that significantly impact operations and/or compliance status and application of these regulations to business units

PREFERRED SKILLS

Ability to build and direct teams and to represent the company effectively to community groups and regulatory agencies Ability to evaluate large amounts of information quickly and accurately. Communicates effectively with a wide range of audiences, comfortable speaking in a group and adversarial settings. Ability to negotiate effectively with industry, public, and agency personnel. Supervisory/Managerial Responsibility May be responsible for the supervision of up to approximately five employees and contractors depending upon the assigned subsidiary. Work Conditions Office and plant-based with travel up to 50% of the time required by land and air. Petroleum refinery, warehouse/plant environment, out-of-doors environment including but not limited to chemicals, pressure vessels, tanks, and rotating equipment. Required to work in all temperatures including outdoors. Subject to varying road and weather conditions.

Our One HF Sinclair Culture:

At HF Sinclair, we are united through our One HF Sinclair Culture, which is underpinned by our five core values of Safety, Integrity, Teamwork, Ownership and Inclusion. Developed to empower our people, our five core cultural values are at the heart of everything we do and extend to how we engage our stakeholders. These values influence our decisions, shape our behaviors and keep us connected across the entire organization. We maintain a true Safety culture for our employees, communities, environments and customers. Our goal is to make sure everyone returns home safely each day. We have a long-standing commitment to Integrity and ethical behavior and do what is right for our employees, investors, communities and the environment. We encourage employees to Step Up and Stand Out by championing a culture of Teamwork and Ownership. We foster a culture of Inclusion by encouraging diversity of experiences, viewpoints and backgrounds. What makes each of us different, together makes us stronger. About HF Sinclair Corporation HF Sinclair Corporation ("HF Sinclair"), headquartered in Dallas, Texas, is an independent energy company that produces and markets high value light products such as gasoline, diesel fuel, jet fuel, renewable diesel and other specialty products. HF Sinclair owns and operates refineries located in Kansas, Oklahoma, New Mexico, Wyoming, Washington and Utah and markets its refined products in 19 states principally in the Southwest U.S., the Rocky Mountains extending into the Pacific Northwest and in other neighboring Plains states. HF Sinclair supplies high quality fuels to more than 1,300 Sinclair branded stations and licenses the use of the Sinclair brand at more than 300 additional locations throughout the country. In addition, subsidiaries of HF Sinclair produce and market base oils and other specialized lubricants in the U.S., Canada and the Netherlands, and export products to more than 80 countries. Through its subsidiaries, HF Sinclair produces renewable diesel at two of its facilities in Wyoming. HF Sinclair also owns a 47% limited partner interest and a non-economic general partner interest in Holly Energy Partners, L.P., a master limited partnership that provides petroleum product and crude oil transportation, terminalling, storage and throughput services to the petroleum industry, including HF Sinclair subsidiaries. Equal Opportunity Employer HF Sinclair Corporation is an Equal Opportunity Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, veteran status or any other prohibited ground of discrimination. Hiring Insights Job activity Posted Today HollyFrontier Corporation Report job

Appendix C - Data Sources and Calculations

Lightcast Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

State Data Sources

This report uses state data from the following agencies: Alabama Department of Labor; Florida Department of Economic Opportunity; Georgia Labor Market Explorer; Kentucky Center for Statistics; Mississippi Department of Employment Security; Tennessee Department of Labor & Workforce Development; Texas Workforce Commission

Austin Peay State University

Diversity

POLICIES

Issued: September 17, 2021
Responsible Official: Chief Diversity Officer/Title IX Coordinator
Responsible Office: Office of Equity, Access, & Inclusion

Policy Statement

It is the policy of Austin Peay State University to support diversity by modeling and promoting equity, access and inclusion in all sectors of the University. Diversity refers to the variety of personal experiences, values, and worldviews that arise from differences of culture and circumstance. Such differences include: race, ethnicity, gender identity, age, veteran status, religion, language, abilities/disabilities, sexual orientation, socioeconomic status, geographic region, and more.

Purpose

The diversity of Austin Peay State University (APSU) has been the source of innovative ideas and creative accomplishments by talented students, faculty, staff, administrators, alumni, and other invested constituents. Diversity should be integral to the University's ability to enhance its academic mission. Diversity aims to broaden and deepen both the educational experience and the scholarly environment, as students and faculty and staff learn to interact effectively with each other. This interaction will help to prepare students to participate in an increasingly complex and pluralistic society.

Contents

Procedures
-Introduction
-Administrative Responsibility

Links
-APSU Diversity Committee
-APSU Chief Diversity Officer

Procedures

Introduction

A. Diversity starts with our campus community. It starts with helping campus members to discover ways of working that foster a sense of inclusion and a deep sense of belonging—for themselves, for their teams, and for Austin Peay State University.
B. Diversity is the presence of difference within a giving setting. In this case, the campus community is the setting and the differences typically refer to a person's identity.
C. When applied within the context of education and the educational community, diversity represents the inclusion and support of groups of people with a variety of human characteristics that go beyond the legally protected classes of race, ethnicity, gender identity, age, veteran status, religion, language, abilities/disabilities– to include, but not be limited to, other categories such as socio-economic status, sexual orientation, geographic region – and other personal characteristics that shape an individual's identity and life experience in a substantive way.
D. In parallel, Austin Peay State University will focus on building a diverse workforce by attracting, developing and retaining employees. By having a diverse workforce, APSU will be employing the best talent and leveraging diverse and unique skills and perspectives.

Administrative Responsibility

A. Duties of the Chief Diversity Officer/Title IX Coordinator
    1. The Chief Diversity Officer/Title IX Coordinator shall be responsible for promoting a sense of belonging by fostering cooperation among campus members for initiatives that incorporate diversity, equity, and inclusion (DEI), where all feel welcome and valued.
    2. In carrying out this responsibility, the Chief Diversity Officer/Title IX Coordinator shall comply with the following:
        a. Provide positive and assertive leadership in the development and implementation of the campus diversity plan and ensure that appropriate attention is devoted to the plan and its initiatives in staff and faculty meetings.
        b. Ensure that campus diversity plans are reviewed annually and progress towards meeting the goals and objectives is assessed.
        c. Work with a Diversity Committee of campus-wide constituents to ensure that Austin Peay State University is accountable for specific diversity, equity, and inclusion (DEI) responsibilities and for achieving DEI outcomes.
        d. Set DEI goals to foster diverse representation and an inclusive environment.

e. Ensure that employment-related decisions are free from discrimination by mitigating potential unconscious bias in employment decisions and talent practices (e.g., performance, development, compensation, and hiring).
f. Engage in conscious inclusion and other positive behaviors that promote equity by role-modeling inclusive and respectful behavior on campus and at all-work-related activities.
g. Create an inclusive environment free from discrimination, harassment and bullying by cultivating a safe campus environment that supports DEI by helping to build a culture of empathy that inspires respect for all students, faculty, staff, administrators, alumni, vendors, contractors and others within the campus community.
h. Recommend diversity related initiatives, by encouraging campus members to collaborate, make suggestions, and to respect and listen to diverse opinions.
i. Appropriately address any behaviors not consistent with policies and applicable laws relating to equal opportunity, diversity, equity, and inclusion.

3. The charge of the Diversity Committee should include, but not be limited to:
   a. Ensuring a consistent experience for all campus members through execution of a comprehensive diversity plan.
   b. Following appropriate internal procedures and policies for DEI communications, programs, and events.
   c. Assisting in communicating and championing the importance of DEI at APSU and its Diversity Plan.

	Links
APSU Diversity Committee	http://www.apsu.edu/diversity
APSU Office of Equity, Access and Inclusion	https://www.apsu.edu/equity-access/

	Revision Dates
	APSU Policy 1:006 – Rev.: September 17, 2021 APSU Policy 1:006 (previously 5:064) – Rev.: March 30, 2017 APSU Policy 1:006 – Rev.: August 12, 2015 APSU Policy 1:006 – Issued: December 8, 2009

Subject Areas:

Academic	Finance	General	Human Resources	Information Technology	Student Affairs
		☑			

Approved

President: signature on file

Enabling the Competitive Edge: Tennessee Higher Education in the New Economy

Master Plan Update 2020







THEC TSAC

2019-20 COMMISSION MEMBERS

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Ms. Celeste Riley | University of Memphis |Student Member

INTRODUCTION

This document is about the role higher education will play in the future of Tennessee's economy. As emerging technologies have created a pace of change faster than at any time in history, navigating this challenge requires the full commitment of our colleges and universities. Tennessee's public campuses possess unmatched intellectual capabilities, enduring community ties, and world-class research capacity unmatched by any other entity in this state. It is critical, therefore, that there is a roadmap for postsecondary engagement in the crucial task of shoring up the state economy where it is already strong, and building new capacity where it is needed. This update to the 2015-2025 Tennessee Higher Education Master Plan intends to serve as that guide.

Higher education strategic plans often suffer from a crippling case of insularity, developing goals detached from the reality of the average household and delivered in a complex format. This virtually assures no one will read them. This plan seeks to avoid this fate by establishing a simple framework, focusing on the success of our students, prosperity for Tennessee's families, and our state's workforce.

If we make progress in each of these areas, higher education will have been the catalyst for meaningful change, but will not be the most important beneficiary. The by-products of improved college affordability, gains in student success, and awarding high-need degrees will, as the title of this report indicates, develop a competitive edge in recruiting high quality jobs to our state. Closely allied to the economic impacts of a better-educated Tennessee are the societal effects: reductions in crime and recidivism, improvements to public health, and improved civic engagement.

The profound impact of a college degree on even one student would make the effort worthy, but when the multi-generational effects are considered, meeting the task ahead is not just the obligation of public higher education, it is a moral duty.



Mike Krause
Executive Director
Tennessee Higher Education Commission

CONTENTS

6 DATA SNAPSHOT

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EXECUTIVE SUMMARY

The Tennessee Higher Education Commission (THEC) adopted the Master Plan for Tennessee Postsecondary Education 2015-2025 in 2015. Published as Tennessee was launching the Drive to 55, the 2015-2025 Plan includes state and system-level projections of the necessary degree production to reach our state's ambitious attainment goal. As a complement to the Plan, this update presents action-oriented, tactical strategies to support Tennessee's students and institutions toward greater success and improved workforce alignment, while continuing to focus on increasing the state's educational attainment.

Following discussions of Tennessee's higher education landscape and progress toward the Drive to 55, this update is organized into three sections, focusing on critical constituencies served by public higher education in Tennessee: Student Success, Family Prosperity, and The Future Workforce.

Each of these three sections is divided into subsections, highlighting success stories across campuses and presenting actionable, measurable goals toward which the state and its institutions will work over the next 10 years. The subsections are organized as follows:

Student Success
Academic Readiness
Access to Higher Education
Completion

Family Prosperity
Affordability
Transparency
Outreach to Adults

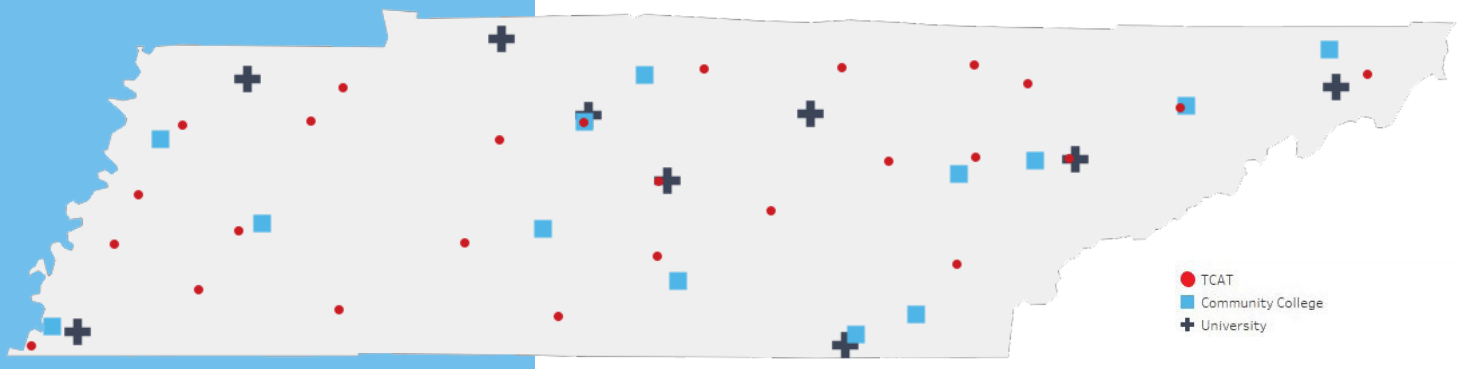
The Future Workforce
Future of Work
CTE and Work-Based Learning
Academic Program Approval

Finally, THEC staff recommends strategies and best practices to progress toward each stated goal. While each strategy's implementation will look different campus-by-campus to meet the needs of each institution's unique student body, we must commit as a state and as a higher education enterprise to working collectively, cooperatively, and intentionally to best serve the needs of students, their families, and Tennessee's economy.

DATA SNAPSHOT

Public higher education in Tennessee is comprised of nine universities, 13 community colleges, and 27 Colleges of Applied Technology (TCATs) across the state.

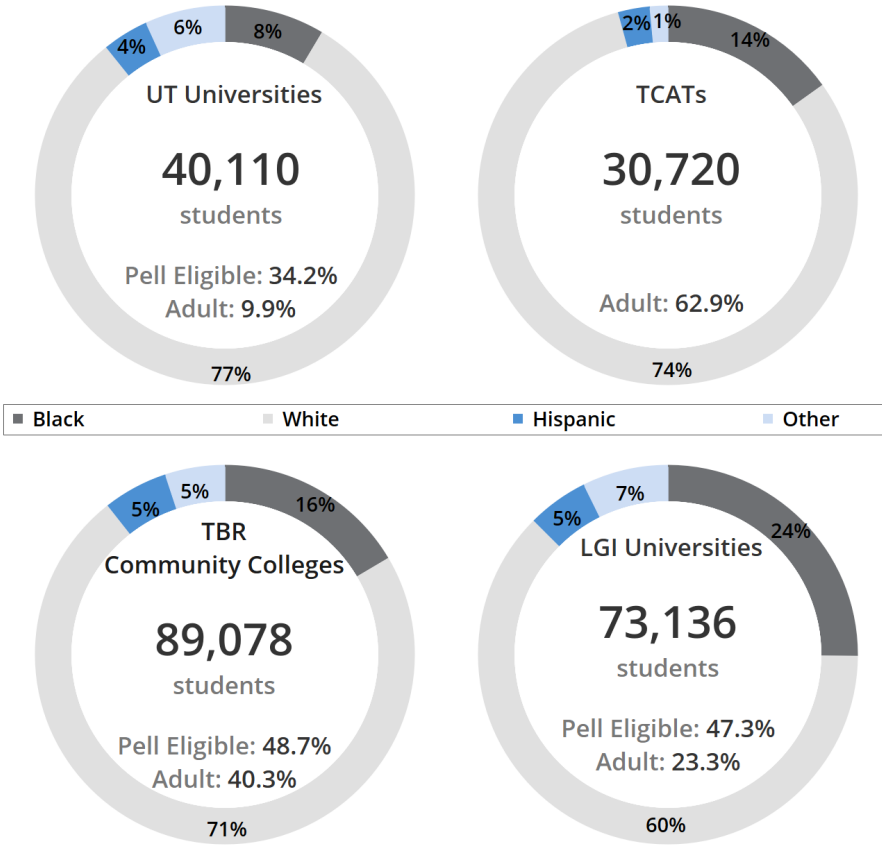
The map below depicts the main campus locations for each of these institutions; several campuses also have satellite locations, which allow institutions to serve Tennesseans beyond their main campuses and in their local communities. While each of these institutions serves unique and diverse students, the state must continue to prioritize and make strides toward access, inclusion, and equity for all student subgroups.



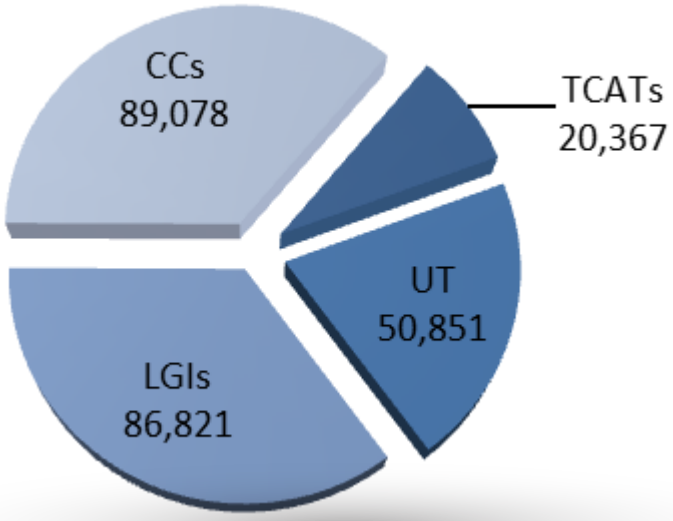
Note: For more information about off-campus sites and centers, please visit www.tn.gov/thec for location details. Please also refer to the Tennessee Higher Education Fact Book.

These institutions served over 230,000 students in the past academic year.

The figure to the right illustrates the composition of undergraduate students in Tennessee's public colleges and universities. Despite improvements in access and affordability for all Tennesseans, low-income students and students of color continue to be underrepresented in our state's public higher education enterprise.



Note: TCAT data represent the 2017-18 academic year. Community College and University data represent fall 2018.
Source: THEC Student Information System



The pie chart illustrates the enrollment distribution of public higher education, including both undergraduate and graduate students. The community college sector enrolls the largest share of students (36%) followed by the Locally Governed Institutions (LGIs).

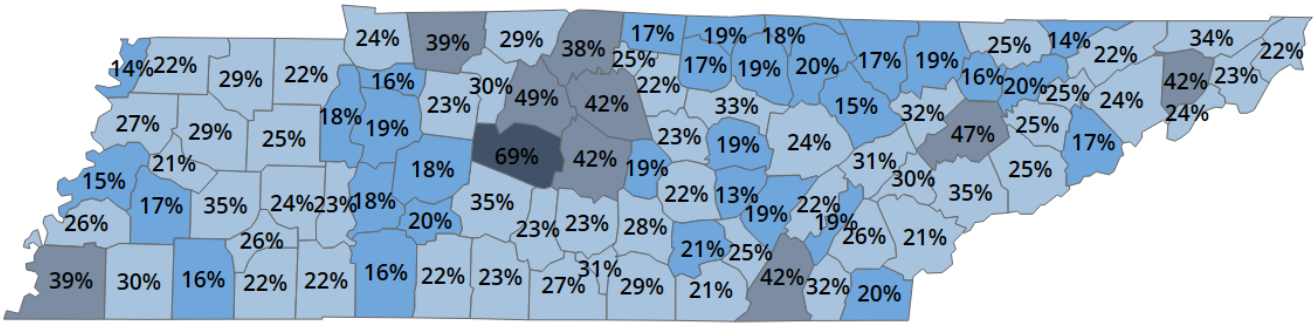
Note: All data represent fall 2018.
Source: THEC Student Information System and Tennessee Board of Regents

Drive to 55: Tennessee's Educational Attainment Goal

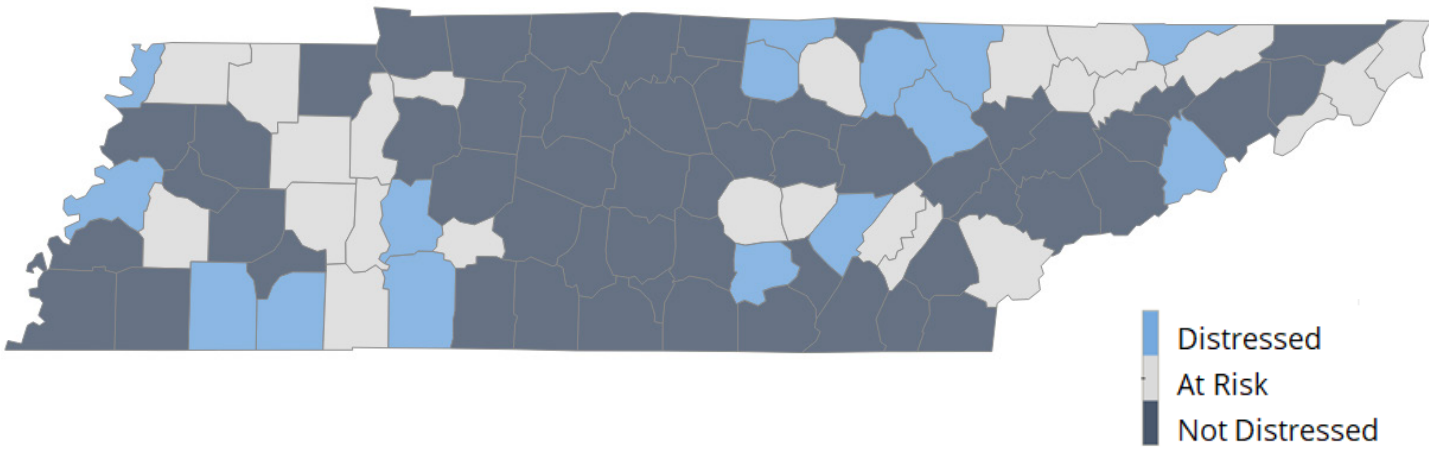
In 2013, Tennessee launched the Drive to 55, an ambitious educational attainment initiative to support the state's workforce: by the year 2025, 55% of Tennesseans would hold a postsecondary credential. When this goal was announced, 33.8% of adults in Tennessee held a degree; as of 2019, 43% have earned a postsecondary credential.[1] This progress is impressive, though there is much ground to cover before 2025.

Educational attainment looks very different in each of Tennessee's 95 counties. For example, while 69% of Tennesseans living in Williamson County hold a postsecondary credential, this is the case for only 13% of those living in Van Buren County. The diverse needs of local workforces require targeted, specific supports to increase attainment, particularly in economically distressed or at-risk counties.[2]

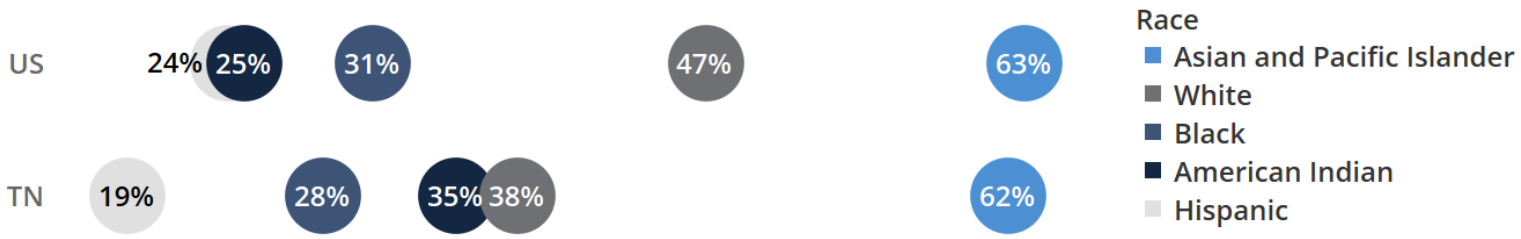
1 Prior to 2014, estimates of postsecondary attainment excluded certificates. Since 2014, estimates of attainment include Tennesseans who hold a postsecondary certificate. 2 "Distressed" and "at-risk" status designated by the Appalachian Regional Commission



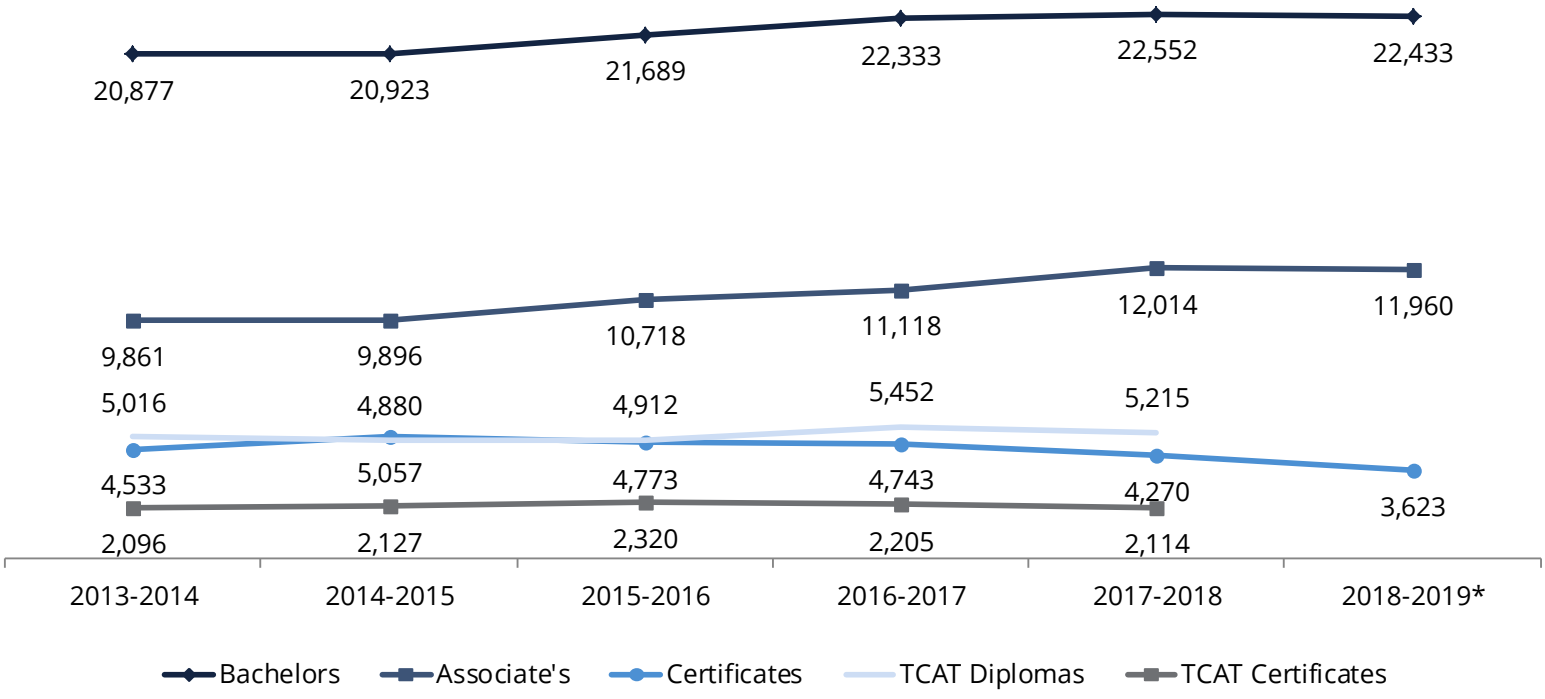
2020 Distressed County Status



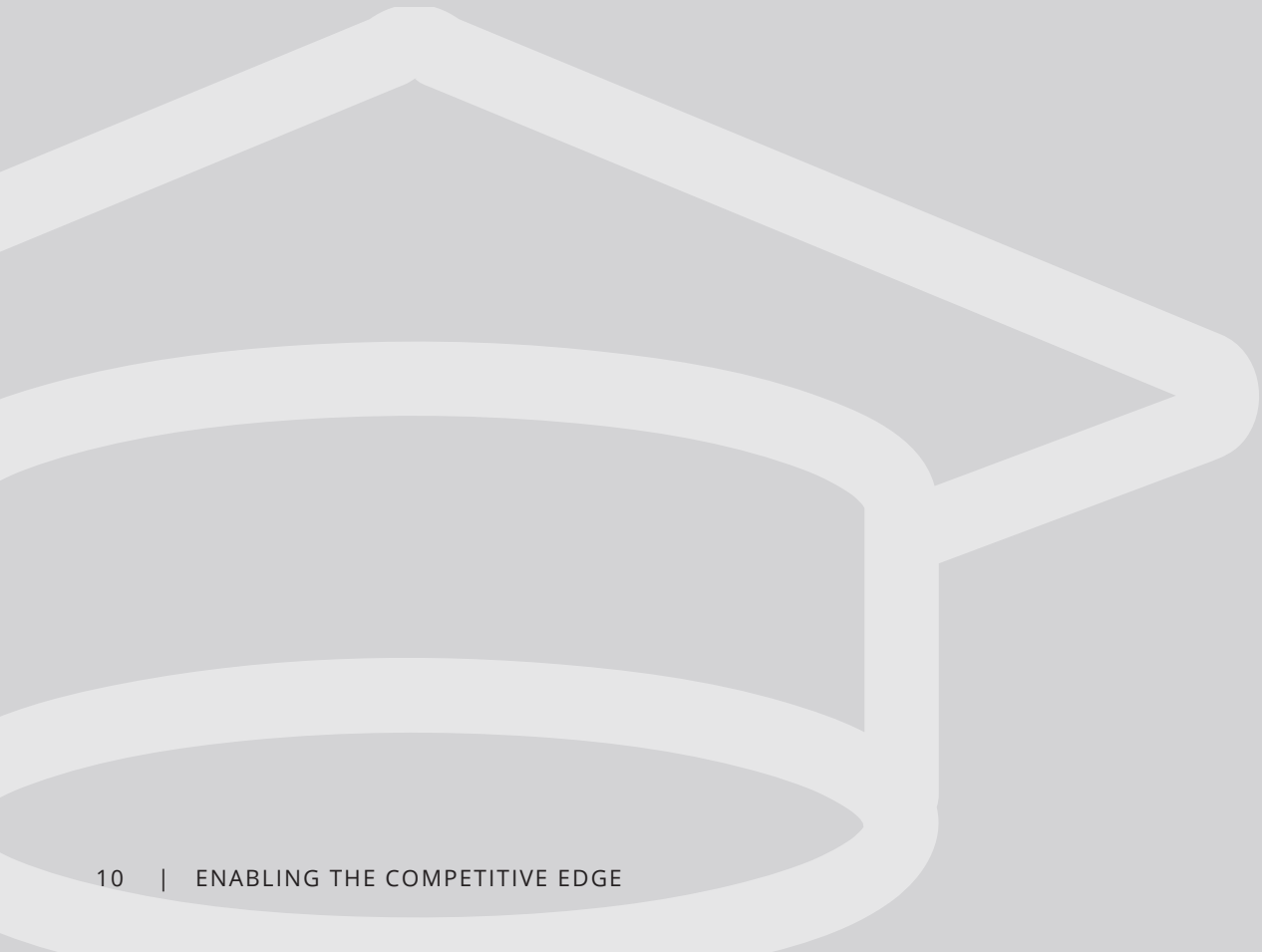
Further, gaps in educational attainment exist by race. These gaps must be addressed through state-level policy interventions (i.e., expanded dual enrollment opportunities, convening stakeholders around racial and socioeconomic equity) as well as tactically (i.e., mentorship programs, targeted student supports) at each of Tennessee's higher education institutions.



In pursuit of the Drive to 55, degree production has increased across all institution types and degree levels over the past five years. This is testament to the hard work of students and the commitment of campus administrators, faculty, and staff focused wholly on student success.



Source: THEC Student Information System
*TCAT data not yet available for AY 2018-19



STUDENT SUCCESS

READINESS

ACCESS

COMPLETION

READINESS

It is important that students graduate from high school prepared for postsecondary education. Across the state, K-12 and higher education professionals collaborate to ensure that initiatives supporting college readiness are aligned with the curriculum, standards, and demands of higher education.

Current Efforts

Seamless Alignment and Integrated Learning Support (SAILS)

Launched in 2013, the SAILS program delivers developmental math coursework to students during the senior year of high school, avoiding the need for Learning Support once enrolled in higher education. SAILS coursework is aligned with community college Introductory Mathematics (MATH1010) standards and curriculum, and is currently offered in 274 high schools across Tennessee. The proportion of community college students requiring Learning Support in math has decreased 14 percentage points since 2011, from 71 to 57%.

Early Postsecondary Opportunities (EPSOs)

EPSOs (i.e., Advanced Placement, dual enrollment, and dual credit courses) provide students the opportunity to earn postsecondary credit while still attending high school. These course offerings, particularly dual enrollment courses offered in partnership with higher education institutions, have increased substantially over the past five years. While this growth is impressive, much more must be done to increase EPSO offerings and diversify the types of students taking these courses beyond those who are high-achieving, non-minority, and high income.

Goals and Metrics

Increase enrollment in EPSO courses: Enrollment in these courses, particularly dual enrollment, will increase by at least 10 percentage points (N = 2,250) over the next five years. THEC/TSAC will focus its efforts on expanding opportunities for students living in distressed counties and students who are traditionally underserved (i.e., male, nonwhite, lower income) by EPSO courses.



SAILS Math teacher Mr. Jon Nelson is the SAILS instructor at McGavock High School. He actively engages with students each day by monitoring their progress and regularly meeting one-on-one to discuss problem areas and strategies for success. He encourages students to collaborate and tutor each other, rather than rely solely on him for assistance. Mr. Nelson instills in his students the value of independent learning with support. He believes that healthy accountability is a necessity in life and that SAILS offers that to students.

ACCESS

Tennessee is a national leader in college access, with initiatives ranging from an enduring GEAR UP grant to the Tennessee Promise and Tennessee Reconnect scholarships. These initiatives, however, mean little to everyday citizens without a robust effort to inform them about the state's diverse postsecondary options. In collaboration with high school counselors and community partners, THEC/TSAC staff work to ensure that students have complete information about their best postsecondary paths, whether they are entering higher education immediately following high school or returning as adults.

Current Efforts

AdviseTN

AdviseTN is a corps of college advisors who serve students in 33 of our state's neediest high schools. These advisors support students through the college and financial aid search, application, and enrollment processes. Since this program's inception, overall FAFSA filing has increased 10 percentage points (74% to 84%) in schools served by an AdviseTN advisor.

Outreach

The nine-member THEC/TSAC outreach team travels the state to inform high school students about federal and state financial aid opportunities, facilitate FAFSA completion, and support students as they make their college-going decisions. During the 2018-19 academic year, the outreach team facilitated 2,925 events, serving over 88,000 students and families. As a result of these critical efforts, Tennessee's FAFSA-filing rate has increased 12 percentage points to 80% over the past five years, growth that has resulted in students across Tennessee receiving more financial aid dollars than ever.

Navigate Reconnect

Informing adults about available higher education opportunities looks, by necessity, different from engaging with high school students. Across the state, 12 Reconnect Navigators provide adults who want to (re)engage with higher education with institution-neutral guidance about programs of study, financial aid, and potential workforce outcomes. This initiative will be discussed in greater depth later in this document.

Goals and Metrics

Increase college-going in distressed counties: The overall college-going rate (the percentage of students enrolling in higher education immediately following high school) in Tennessee's 15 distressed counties will increase by 4 percentage points in the next five years.

Increase FAFSA filing rate: Tennessee's FAFSA filing rate will increase 4 percentage points, to 84%, in the next five years. Outreach efforts will focus on distressed counties and students who are typically underrepresented in higher education.



“Advise TN means the ‘difference’ for students in Hickman County: a ‘difference’ in choosing the best college and career fit, a ‘difference’ in completing all the necessary paperwork to enroll and be accepted into their college of choice, a ‘difference’ in believing that college is possible for them. **Advise TN has provided guidance and helped students remove barriers, and created confident, college-going students who will be successful.”**

Kathy Dick
Supervisor for grades 6-12
Hickman County Schools



COMPLETION

While Tennessee has made enormous strides to ensure students enroll in higher education, it is critical that they persist and complete their credential. THEC/TSAC has partnered with institutions across the state to initiate interventions to directly support students and encourage completion. While Tennessee has led the nation in completion initiatives over the past two decades, much work remains to increase student persistence and completion across the state's higher education institutions.

Current Efforts

Intrusive advising

Based on best practices modeled by Georgia State University, institutions across Tennessee have increased the intensity of their advising. Each of the 13 community colleges, for example, now employs completion coaches and professional advisors to help students navigate the college experience. These coaches and advisors not only help students with scheduling and course plans, but intervene via email and text message when a student falls off track.

Cohorting and prescribed scheduling

Assigning groups of students to cohorts that will take courses together is widely considered a best practice throughout higher education. Students feel as though they are part of a unit, and can support and learn from each other. TCATs do this very well: students who are enrolled in a particular program of study take all of their courses with the same group of peers. Further, this limits student choice – students are not given a catalog of courses and asked to choose what to take, they are simply placed into courses with their cohort.

Targeted interventions

Postsecondary institutions have implemented campus-specific interventions (i.e., Summer Bridge programs, peer mentorship programs) to encourage and support students, particularly those from traditionally underrepresented populations. With support from the Lumina Foundation, five institutions across the state initiated programs to support African American and Latino students, working with them to complete credentials and introducing critical conversations about racial gaps in completion across Tennessee.

It is important to note, however, that these initiatives have not yet been deployed in a uniform fashion across the state. Roane State Community College and the University of Tennessee, Chattanooga, for example, have led in this space and have experienced substantial increases in retention and completion as a result. Other campuses across Tennessee have much to learn from their successes.

The initiatives these campuses have implemented are not new inventions, but rather are examples of campus leaders having the will and courage to do things that may seem difficult, but that are necessary to serve students.

Goals and Metrics

Progress toward 55% attainment goal: THEC will continue to support institutions to increase their completion rates and the number of degrees conferred in pursuit of the Drive to 55. As mentioned above, Tennessee's educational attainment rate is currently 43%. To reach 55% in the next five years, approximately 80,000 Tennesseans must earn a postsecondary credential each year. THEC projects based on prior years' data that approximately 30% of these degrees will be granted by public universities, 15% by community colleges, and 10% by TCATs.[1]

1 Postsecondary Attainment in the Decade of Decision: The Master Plan for Tennessee Postsecondary Education 2015-2025. p.14.



BEST PRACTICES

The Black Males on Campus (BMOC) initiative was implemented to support the success of black males on the University of Tennessee, Chattanooga (UTC) campus. Students who participate in BMOC have access to peer and community mentors, leadership training programs, and financial assistance. Approximately 95% of students participating in BMOC are in good academic standing; approximately 80% graduate from UTC. This far exceeds the proportion of black males who graduate from other higher education institutions across the state.[1]

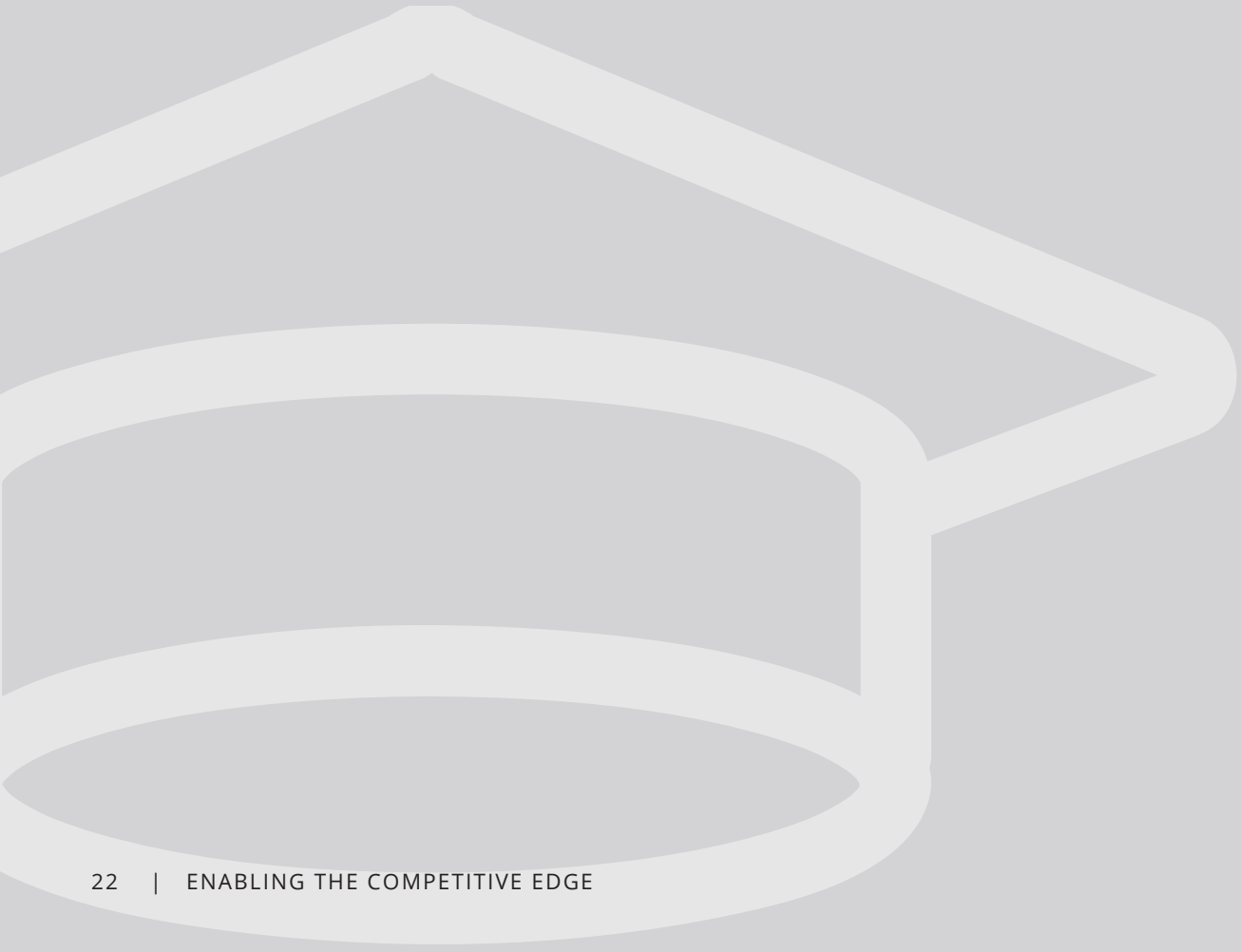
1 https://www.utc.edu/student-support-services/sss-statistics.php





Roane State has established a one-on-one coaching model for entering students, with an assigned college coach serving as a student's primary point of contact. Coaches participate in extensive training on-campus to ensure that they can serve the diverse needs of their students. Since this program's inception, the persistence rates of low income students and students of color have increased substantially, and overall three-year graduation rates at Roane State have increased by approximately four percentage points.[1]

1 https://diverseeducation.com/article/137510/



FAMILY PROSPERITY

AFFORDABILITY

TRANSPARENCY

OUTREACH

AFFORDABILITY

Tennessee has long been a national leader in higher education finance innovation. As early as 1979, Tennessee led the nation in adopting a performance funding component for higher education, and in 2010, the Outcomes-Based Funding Formula revolutionized how the state incentivized student success. The Tennessee Promise and Tennessee Reconnect programs have redefined state financial aid, and the FOCUS Act of 2016 gave THEC the authority to maintain low tuition growth and to target capital investment toward degree production and workforce needs.

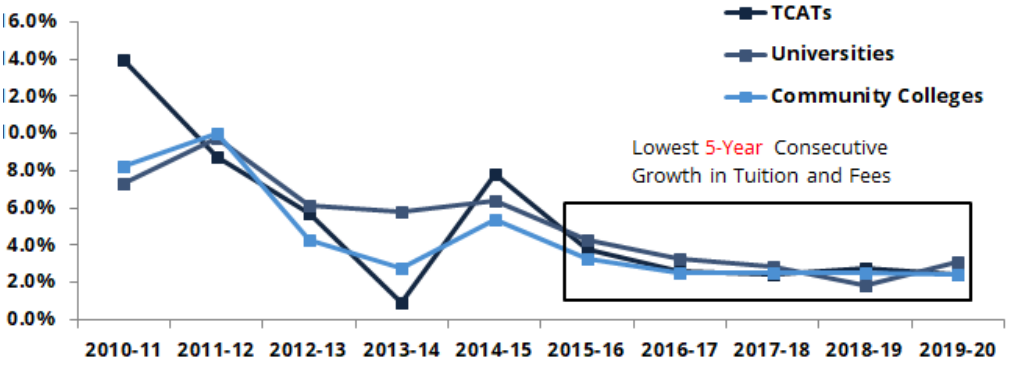
Tennessee must invest wisely in higher education to produce a clear return on investment. Each dollar invested via financial aid or an operating appropriation should be put forward with a central premise: ensuring that a quality postsecondary credential is attainable for all Tennesseans. As the Drive to 55 was implemented to give Tennessee the most competitive workforce among its southern peers, Tennessee should likewise compete on affordability, striving to be the most affordable state in the south for public higher education.

Current Efforts

Low Tuition

To determine increases to tuition, THEC forecasts potential changes in institutional costs based on inflationary increases, enrollment changes, and state appropriation projections – all with an overarching focus on student affordability. The Commission uses the consumer price index (CPI) to project tuition ranges; tying tuition to the cost realities of the average family better keeps affordability in check.

Over the past five years, the Commission has recommended the lowest tuition increases in four decades, this past year recommending its lowest ever 0 – 2% increase. Many higher education institutions, including the University of Memphis, University of Tennessee, Chattanooga, and University of Tennessee, Knoxville, have capped tuition growth at zero percent. Further, institutional efforts to contain costs have helped keep Tennessee higher education affordable

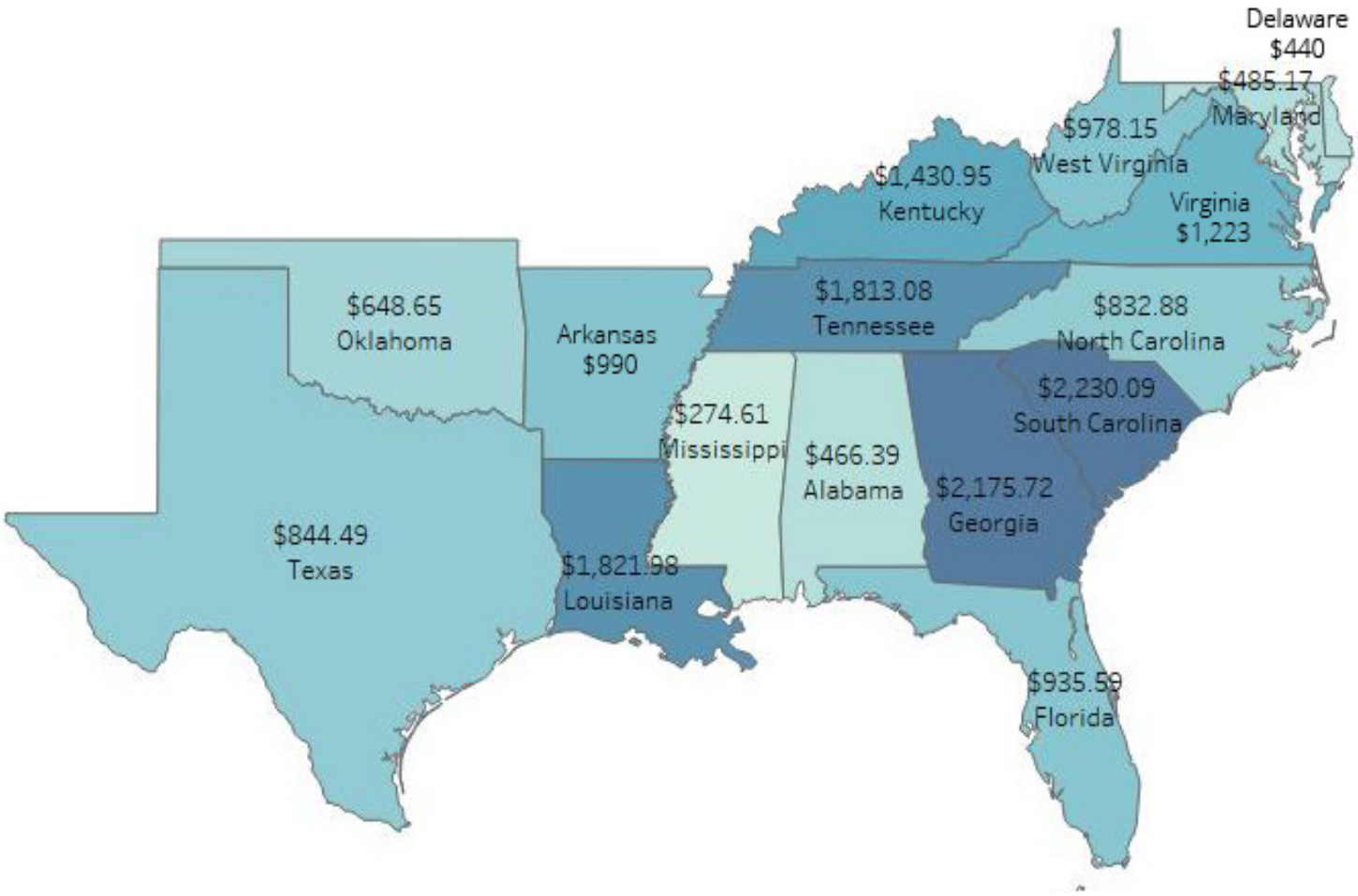


relative to other states.

Financial Aid

Tennessee leads the nation in the number of state financial aid programs available to students and the amount of scholarship dollars awarded each year. This suite of state financial aid programs includes merit- and need-based programs, as well as universal "free college" programs for students entering higher education immediately following high school and for adult learners. This robust portfolio does much to meet the diverse needs of students across the state.

Average financial aid awarded per student, SREB states



Goals and Metrics

Maintain low tuition growth: Consistent with the trend over past five years, THEC will focus on keeping tuition growth as low as possible, continuing to lead the region in this regard. Acknowledging that low tuition increases are contingent on full funding of the Outcomes Based Funding Formula, THEC will continue to advocate for full funding of the formula, while ensuring a fully transparent formula review process.

Maintain robust portfolio of state financial aid programs: Tennessee will continue to lead the nation in the number of merit-based, need-based, and universal financial aid programs that serve Tennessee's diverse student population. Further, THEC will simplify and streamline these programs, ensuring that financial aid in Tennessee is as accessible to as many students as possible.

Increase Tennessee Student Assistance Awards (TSAA): Funding for TSAA, which provides need-based grant dollars to the state's lowest income students, has increased substantially over the past decade. THEC will work with the General Assembly to continue increasing this funding, such that all Pell recipients (approximately 140,000 students) have access to these funds.

TRANSPARENCY

Tennesseans engaging with higher education have the right to robust information about the institutions at which they enroll, the programs offered, and the outcomes of students who receive credentials from a given college or university in our state. Providing this information is one of THEC's core functions, and the THEC staff does so in a number of ways for a many diverse audiences and constituencies – most importantly, the student and his or her family.

Current Efforts

Reporting

The THEC staff annually produces research reports – many of which are statutorily mandated – discussing higher education's performance on a number of metrics. Each report includes data and information related to enrollment, persistence, completion, affordability, financial aid, and job placement. These data are presented at the state, regional, and local levels, and are available on the THEC website in both static and interactive formats.

Consumer protection

Three divisions at THEC – Postsecondary Authorization, Veterans Affairs, and Financial Aid Compliance – are tasked with ensuring that all students enrolled at an authorized institution, using GI Bill benefits, and/or receiving financial aid are receiving the benefits to their higher education experiences. Further, these divisions field student complaints and issues related to school closures to remediate any situations that are negatively impacting students, and link students to alternate opportunities in higher education should the need arise.



Goals and Metrics

Present financial returns to higher education: THEC will disseminate information about financial returns to higher education and to particular programs of study, in accordance with the Tuition Transparency Act. It is imperative that this information is available in a consumable format for students and their families across the state.

Protect consumers: THEC will continue to execute its student-centric approach to consumer protection, including the monitoring of institutions at risk of closure and facilitating expedited enrollment of displaced students. These processes also include investigation and review of student complaints, and auditing the disbursement of state financial aid.

BEST PRACTICES



THEC's Veterans Education division serves as Tennessee's State Approving Agency (TNSAA), charged by the federal government to work closely with the U.S. Department of Veterans Affairs (VA).

Through this partnership, the Veterans Education division ensures that higher education and training programs for which military-affiliated Tennesseans may use GI Bill benefits are of high quality and provide value to veterans and their families.

Institutions eligible to receive GI Bill benefits must comply with strict regulations, are regularly reviewed, and are periodically audited. Because of the exceptional work of THEC staff, the state of Tennessee has received completely clean audits and a rating of "satisfactory" (the highest possible) from the United States VA over the past 20 years.



OUTREACH TO ADULTS

If Tennessee is to meet its ambitious 55% educational attainment goal by the year 2025, it is imperative that adults engage or reengage in higher education. Upon receiving a postsecondary credential, these adults will have access to increased job opportunities, and a greater likelihood of earning a livable wage as Tennessee's economy continues to evolve – the overarching objective of the Drive to 55 as a workforce development initiative.

Current Efforts

Navigate Reconnect

Navigate Reconnect is the regional outreach arm of Tennessee Reconnect. A team of 12 Navigators provides institution-neutral services to over 20,000 adult Tennesseans who want to return to or enroll in higher education for the first time. To meet the complex needs of adult learners, each Navigate Reconnect Region serves as a hub for information about wrap-around resources, including childcare options and affordable transportation. Navigate Reconnect has also expanded to serve Tennessee's incarcerated population, supporting offenders through the college-going process up to and following their release.

Reconnect Ambassadors

The Reconnect Ambassador program trains individuals at partner organizations throughout the state to identify potential adult learners, talk to them about completing a degree or credential and refer them to the best next step in the college-going process. To date, over 800 Ambassadors have been trained in partnership with the Tennessee Departments of Human Services and Transportation, as well as multiple employers and non-profit organizations. Through a partnership with the Tennessee Department of Labor and Workforce Development, all staff and partners at American Job Center locations throughout the state will be trained as Reconnect Ambassadors in 2020.

Goals and Metrics

Increase outreach to unemployed/underemployed adults: THEC staff will collaborate with the Department of Labor and Workforce Development to increase outreach to unemployed and displaced workers by at least 10% annually over the next five years. Reconnect Navigators will work with staff at American Job Centers across the state and the Tennessee Department of Corrections to ensure that adults seeking additional information about higher education have access to appropriate and useful resources.



Since November 2018, over 1,200 adult students have visited one of three Reconnect Café locations at Nashville State Community College. Staff and volunteers assist students with whatever they need: a snack to get them through their class (or until tomorrow if they need food for later), a computer to check their registration or financial aid, or a friend to listen while they process through a difficult class. When Nashville State opened the café, the team wanted a warm, inviting place where adults could find resources and support to help them get “to-and-through” their degree programs. Mr. Frazier is a Student Success Advisor with Nashville State Community College and staffs the Reconnect Café at the White Bridge Road campus.



THE FUTURE WORKFORCE

FUTURE OF WORK

CTE & WORK-BASED LEARNING

ACADEMIC PROGRAMS

FUTURE OF WORK

It is imperative for Tennessee's economy and the financial security of Tennesseans that higher education prepares its graduates for high-demand jobs. This is true for the current economy, but is even more critical as we think about Tennessee's future economy. Higher education must work with industry leaders to identify the knowledge and skills that will best support Tennessee's economy, both today and tomorrow.

Current Efforts:

Reporting

Each year, THEC collaborates with the Tennessee Departments of Labor and Workforce Development and Economic and Community Development to produce the annual Academic Supply and Occupational Demand report. This report outlines high-need jobs across the state, and the academic programs at Tennessee's colleges and universities that produce credentials often leading to employment in these areas. This report is the basis for defining high-need occupations that are linked to specific financial aid programs (i.e., Governor Lee's GIVE dual enrollment grants, which provide an additional subsidy for students to take dual enrollment courses linked to high-need fields).

Future of Work

In 2019, THEC convened its first ever Future of Work task force, comprised of representatives from higher education, state government, and industry across the state. This task force discussed not only the postsecondary credentials, but the skills that will be in high demand in Tennessee's workforce over the next decade. Specifically, much discussion centered around Computer Science and Data Analytics, and how to best provide opportunities in these fields to all students, not only those who select either discipline as a major/program of study.

The THEC Future of Work taskforce convened representatives from higher education (i.e., Commission members, system and campus administrators, faculty), state government (i.e., Office of the Governor, Tennessee Departments of Labor and Workforce Development and Economic and Community Development) and prominent industry sectors (i.e., healthcare, automotive, computer science/technology) for a series of three meetings over the past year.

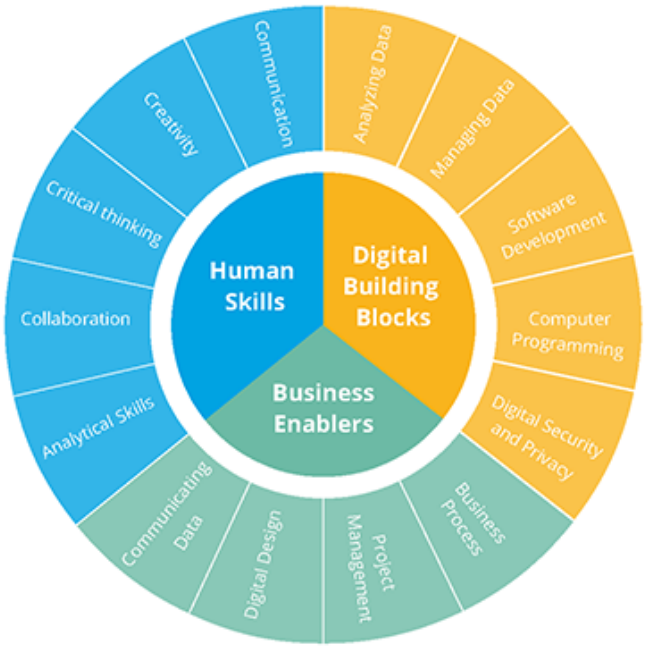
The overarching objectives of this taskforce were:
1. To align industry and higher education
2. To prepare for the state's workforce needs of 2030 and beyond
3. To ensure that skilled, credentialed Tennesseans are available to employers
4. To increase the speed and agility of workforce development

The Future of Work taskforce discussed many issues confronting Tennessee's economy, and the ways in which industry and higher education must work collectively to ensure that Tennesseans have access to high-paying jobs, and that employers have access to a skilled, capable workforce. Key findings of the taskforce are presented below:

Artificial intelligence and automation: Tennessee's economy is at great risk for disruption resulting from automation and artificial intelligence, according to Dr. Bill Fox (pictured below), professor of economics at the University of Tennessee, Knoxville. For this reason, all individuals employed in Tennessee must learn to interact with artificial intelligence using critical thinking, data analysis, and diverse communication skills rather than simply rely on artificial intelligence to complete a variety of tasks. The figure below, produced by Burning Glass Technologies, depicts the skills required in the new digital economy, both globally and within Tennessee's borders.



The New Foundational Skills of the Digital Economy

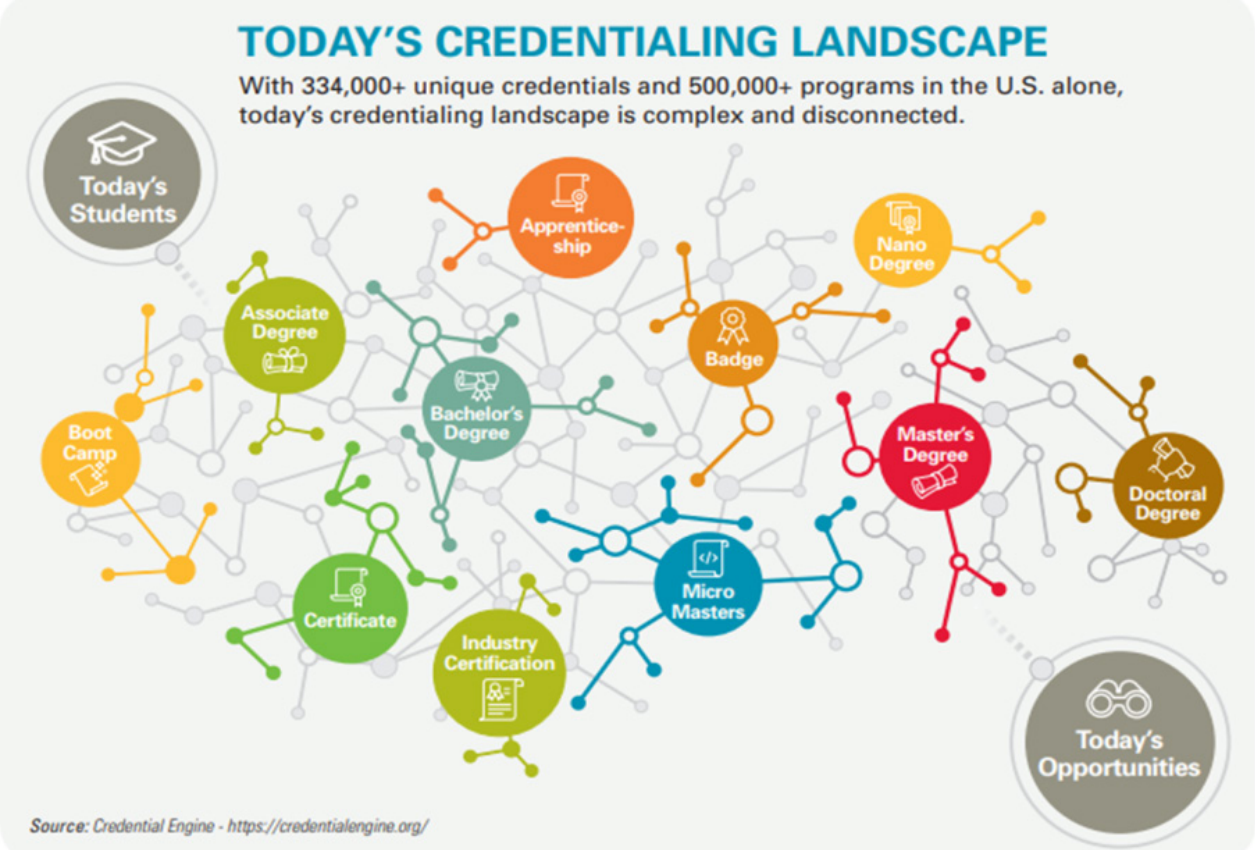


These 14 skills, already in wide demand by employers, command salary premiums and are crucial for workers who want to keep pace with a changing job market.

© Burning Glass Technologies

Computer Science and Data Analytics: A critical finding of the Future of Work taskforce was the need to develop more diverse Computer Science and Data Analytics course offerings across public higher education. This includes establishing concentrations of courses in addition to majors and minors, such that students majoring in a different field can gain useful computer science and data analysis skills. Further, faculty were encouraged by Future of Work taskforce members to think creatively about ways to offer this type of coursework in a manner that does not require proficiency in upper level (i.e., Calculus III) mathematics.

Stackable credentials: A student's ability to accumulate credentials in a given field over his or her working life is critical to the success of Tennessee's economy. "Stackable credentials" can be earned at all institution types, have cumulative industry value, and must be designed to build off each other. Further, institutions and industry must recognize that a student's path to a terminal credential is not necessarily linear; stackability and transferability of credits and clock hours is imperative. THEC staff is working to standardize the process for awarding stackable credentials across the state, though there currently exist pockets of best practices: East Tennessee State University, for example, has partnered with a number of TCATs to award Bachelor of Science in Nursing (BSN) degrees to those credentialed in Licensed Practical Nursing (LPN) on an expedited timeline.



Industry growth and recruitment: The Tennessee Department of Economic and Community Development is tasked with recruiting new industry to Tennessee and supporting existing employers to expand their operations. Employers often have very specific workforce needs, which serve as the crux of their decisions surrounding location and expansion. For example, the Oshkosh Corporation partnered with TCAT-Morristown and TCAT-Knoxville to meet its need for skilled labor and to produce a credentialed workforce specifically trained to work with Oshkosh and its partners. This explicit alignment between higher education and industry has been extremely successful and can serve as a model for other employers across the state.



Goals and Metrics

Increase enrollment in majors leading to high-demand jobs: The proportion of students enrolling in degree programs that lead to employment in high-need fields, as determined by THEC's annual Academic Supply and Occupational Demand report, will increase by at least 5% annually (N = 500) over the next five years.

Increase Computer Science and Data Analytics offerings: THEC will encourage higher education institutions, via funding opportunities and pilot initiatives, to increase offerings in Computer Science and Data Analytics to all students, not only those who are pursuing either field as a major. Further, THEC will work with institutions to increase the number of degrees produced in Computer Science and Data Analytics by 20% (N = 260) annually over the next five years.

CTE AND WORK-BASED LEARNING

As public higher education in Tennessee continues to think about the Future of Work and the future of the state's economy, opportunities for students to engage in career and technical (CTE) coursework and to spend time working with industry partners is critical. In alignment with Governor Lee's priorities in this area, THEC will continue to work with the Tennessee Departments of Labor and Workforce Development and Economic and Community Development to develop new opportunities for apprenticeships, internships, and cooperative learning experiences for all students, particularly those pursuing credentials in high-need, technical fields.

Current Efforts:

Governor's Investment in Vocational Education (GIVE) Community Grants

Signed into law by the General Assembly in 2019, Governor Bill Lee's GIVE Act is a two-pronged strategy to increase students' participation in career and technical education (CTE). GIVE Community Grants, awarded to 28 sites across the state, reflect local partnerships between K-12 and higher education and local industry to establish and/or improve CTE and work-based learning opportunities for students in these communities.

GIVE dual enrollment grants

The second prong of the GIVE Act is an increase to dual enrollment grant funding, such that high school students enrolling in high-need dual enrollment courses (in partnership with community colleges and TCATs) have access to two additional tuition-free courses. Subsidizing these additional courses will allow students to make progress toward earning a technical certificate, diploma, or Associate of Applied Science while they are still in high school.

Supporting Postsecondary Access in Rural Counties (SPARC) grants

Through the SPARC initiative, THEC has provided a total of $3.4 million to high schools in distressed and at-risk counties to invest in CTE equipment. As a result, coursework opportunities - particularly dual enrollment courses in partnership with local TCATs - have increased substantially. Further, these high schools are now beginning to deliver coursework after-hours to adults returning to higher education in pursuit of a technical certificate or diploma.

Goals and Metrics

Increase dual enrollment opportunities in high-need, technical fields: As facilitated by the GIVE Act, dual enrollment offerings in high-need technical courses/programs of study will increase by at least 5% (to 75% at TCATs and 15% at community colleges) in the next five years. Special emphasis will be placed on enrolling students typically underrepresented in dual enrollment courses.

Increase opportunities for work-based learning via the GIVE Act: GIVE grants proposing work-based learning opportunities will launch over the next year. THEC will evaluate the success of these 28 work-based learning initiatives across the state and report on them annually.



ACADEMIC PROGRAMS

For decades, THEC has been charged with approving new academic program proposals brought forward by higher education institutions across the state. Currently, this process involves: an evaluation of need (i.e., is this program redundant to others offered? Is there a need for the credentials produced?), external judgment of need and program readiness, governing board approval, Commission approval, and post-approval monitoring of the program's implementation, enrollment, completion rates, etc. This is one of THEC's core functions, executed by the Academic Affairs staff.

Current Efforts:

Brainstorming changes to the program approval process

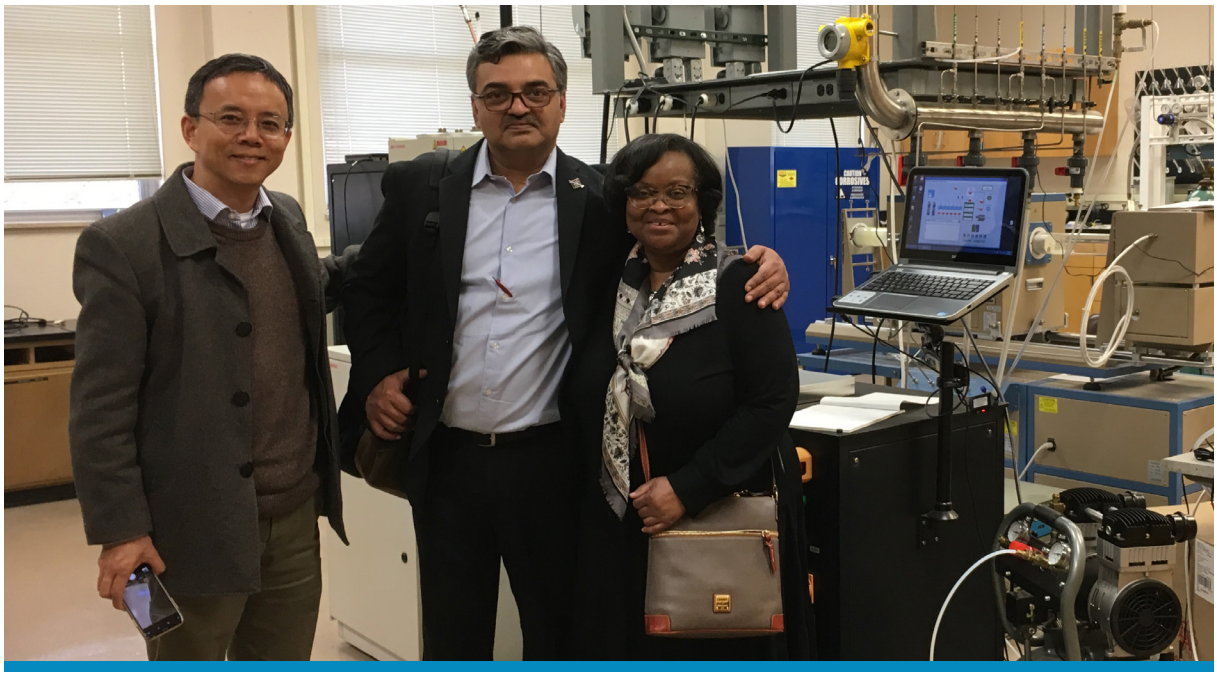
A key finding of the Future of Work taskforce was the need for an expedited academic program approval process for institutions planning to implement workforce-driven, industry aligned academic programs, as well as degree programs in Computer Science and Data Analytics. This will allow for faster start-up and improved alignment with the needs of Tennessee's economy, both present and future.



Goals and Metrics

Streamline approval process for academic programs leading to high-need credentials: New academic programs considered as high-demand in response to demonstrated workforce needs will be reviewed by THEC staff using an expedited approval process. While changes to this process are still under review, the ultimate goal is to reduce the time for program approval while still assuring quality, student demand, uniqueness and institutional capacity.

Execute partnerships between higher education and industry: Further, THEC will encourage and facilitate partnerships between higher education and industry. Specifically, THEC will work with the 24 new academic programs (i.e., dual enrollment, certificates, etc.) established via the GIVE Act. In the next two years, these proposed programs will be fully operational; THEC will track student progress and evaluate the success of these programs.



THEC's chief of academic affairs officer, Betty Dandridge Johnson, at the University of Memphis in 2019 for a proposed program site visit.

CONCLUSION

This update to the 2015-2025 Master Plan challenged THEC to think differently about effective strategic planning processes. This *Competitive Edge* document, therefore, outlines tactical, action-oriented practices for higher education to improve student success, increase families' prosperity, and prepare for Tennessee's economy in the next decade and beyond. In setting ambitious, measurable goals throughout this report, it is our intention that this document not simply sit on a shelf, but that it serves as a guidepost over the next 10 years as public higher education continues to grow and evolve.

By featuring best practices across campuses, THEC encourages and will support institutions to implement student success initiatives in ways that best serve the unique needs of their student populations. These initiatives include, but are not limited to:

Inclusive dual enrollment opportunities

Prescriptive scheduling

Intrusive advising

Cohorting

Mentorship programs

One-stop-shops/single points of contact for incoming students

Further, institutions must commit to making higher education as affordable as possible for students and their families, as well as make clear the total costs associated with attendance and the potential return on investment to the student. While THEC aggregates this information at the state level, increased transparency at campus- and program-levels provides complete, digestible information for higher education's more important constituencies.

Perhaps most critically, higher education must adapt to meet the needs of Tennessee's future economy. Whether new Data Science degree programs, increased Computer Science course offerings, or pathways to stacked credentials leading to improved workforce mobility, innovation is critical for the wellbeing of public institutions and for employers across the state. THEC will facilitate this progress through modifications to its academic program approval processes.

The next decade will be a time of dramatic growth in Tennessee's economy. As such, the same must be true for public higher education. While the five years since the adoption of the 2015-2025 Master Plan reflect tremendous innovation in Tennessee higher education, we must maintain the momentum and continue to focus wholly on the needs of students, their families, and the state's economy.



Several members of the Gooch family from White County, Tennessee, used Reconnect to go back to college.


THECTSAC

HANOVER RESEARCH

MARKET ANALYSIS

Master's in Environmental Science

Prepared for Austin Peay State University

October 2021

In the following report, Hanover assesses demand for master's degree programs in environmental science, specifically highlighting demand trends within the Clarksville area, Tennessee, and throughout the Southeast. This report includes an examination of student and labor market demand, and an analysis of potential competitor programs.



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RECOMMENDATIONS

Based on an analysis of degree completions, labor market demand, and market competitors, Hanover recommends that Austin Peay State University (APSU) should:

PROCEED WITH THE DEVELOPMENT OF A MASTER'S PROGRAM IN ENVIRONMENTAL SCIENCE.

APSU's nearest competitor is over 100 miles away, and there are only two other programs in Tennessee despite high student demand in the state. Labor projections for graduates exceed the average growth rate both nationally and regionally. While there are not many current job listings in APSU's service region, state labor projections are around the average for all occupations in Tennessee.

EMPHASIZE FLEXIBILITY OF CURRICULUM IN ITS PROGRAM STRUCTURE.

An in-person option would allow APSU to take advantage of its underserved market, while an online option would make it competitive with other such programs regionally. The current plan to offer thesis and non-thesis tracks is sound as it will allow programmatic flexibility for all types of students. Further, choosing specific curricular categories that play to APSU's strengths in its extensive research centers will help distinguish the program and allow still greater flexibility. Few programs offer coursework in health-related environmental concerns; offering coursework (perhaps in conjunction with the College of Health and Human Performance) could allow military students to stand out as applicants for related environmental careers which generally emphasize human health. Finally, the most successful benchmarked programs all allotted as many credits to electives as to core courses. This approach allows students to pursue their own custom specializations tailored to their career goals without the institution setting additional specialized study tracks.

HIGHLIGHT RESEARCH FACILITIES AND OPPORTUNITIES TO ATTRACT STUDENTS.

Most successful competitors emphasize their dedicated research facilities and faculty research opportunities to attract students. APSU can leverage its Farm and Environmental Education Center, Center for Excellence for Field Biology, and Southeastern Grasslands Initiative to highlight student opportunities and demonstrate the hands-on experiences available for students. As facilities would be most beneficial for thesis students, requiring online students to choose the non-thesis track will ensure that they can perform well away from campus. Rather, practicum or internship requirements for both online and other non-thesis students will help ensure that they also get appropriate hands-on experience.

KEY FINDINGS

Despite regional decline, student demand trends for environmental science master's programs are encouraging. State degree completions are growing much faster than average, and national completions are average. At the regional level, substantial decline reflects a reorganization of Duke University's environmental studies program. Controlling for this program gives an overall annualized regional growth rate of 1 percent, below average but still promising. The student population in environmental studies grew more diverse over the past decade, with students pursuing graduate studies for increased career opportunities.

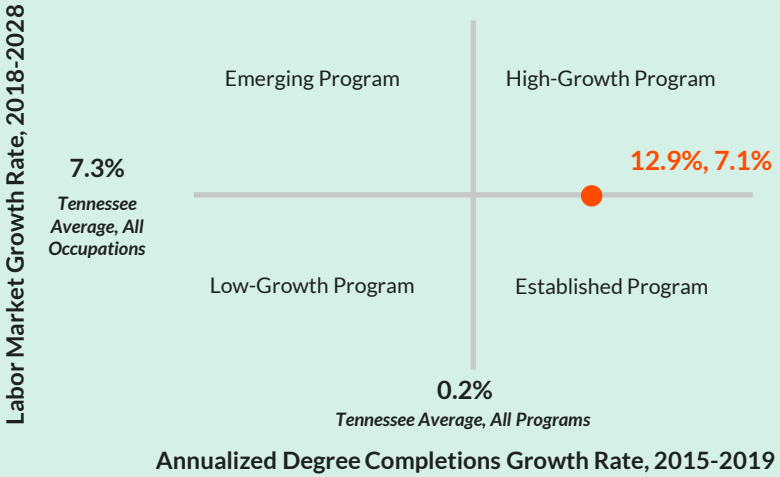
In the military, public, and private sectors, occupational forecasts are promising. At all geographical levels, projected growth rates for related careers meet or exceed the average. An aging and retiring workforce and increasing environmental concerns will drive growth in the public and private sectors. The military has several comparable occupations, though these usually pay less than civilian options. In APSU's service region, employers prefer technical skills over graduate education in job listings.

Most competitor programs offer tracks to allow student flexibility, though several programs allow flexibility in the curriculum itself. Most curricula allow flexibility through thesis or non-thesis tracks. In the curriculum, foundational environmental, scientific, and industry skills form the basis of core coursework. Electives provide students the opportunity to focus on their intended fields, occasionally through specializations. Non-thesis options usually require internships or other practical experiences.

Most programs leverage their existing facilities, research opportunities, and partnerships to try to attract students. Three of the most successful competitor programs, Tuskegee University, Louisiana State University, and University of Tennessee – Chattanooga, highlight their new and extensive research facilities. Their marketing directly connect their facilities and hands-on experiences to improved career trajectories for graduates.

STATE BENCHMARK ANALYSIS

Comparison of environmental science master's degree completions and relevant labor market to all completions and all occupations in Tennessee



FAST FACTS

9.4% Environmental science-related occupations are projected to grow at a rate of 9.4% over the next decade, outpacing average regional growth rates.

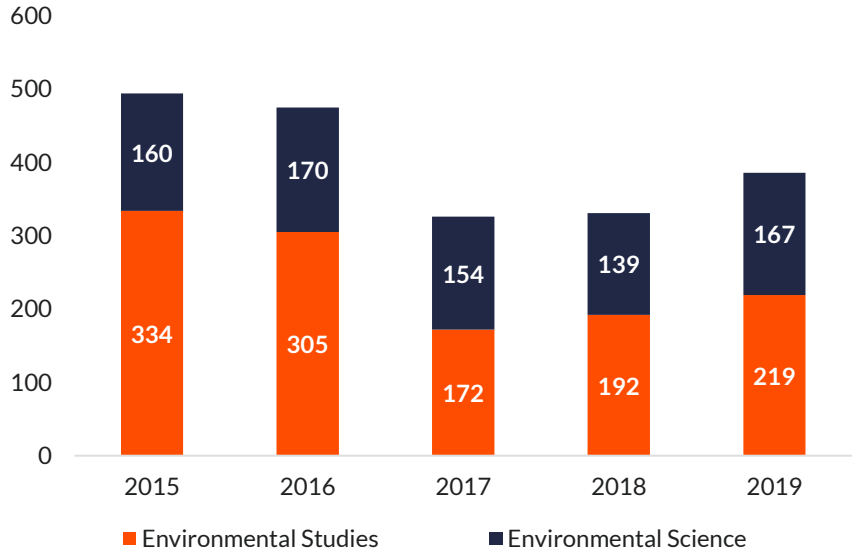
35 Average credits required to complete master's programs in environmental science programs.

50% Half of benchmarked competitor programs offer a fully online degree option.

STUDENT DEMAND ANALYSIS

SOUTHEAST DEGREE COMPLETIONS

Regional distribution of degree completions from 2015 to 2019



TOTAL DEGREE COMPLETIONS

Aggregate degree completions by geographic level (2019)

	State	Regional	National
Environmental Studies	4	219	1,300
Environmental Science	9	167	941
Total Completions, Observed Fields	**13**	**386**	**2,241**
Growth Rate, Observed Fields	**12.9%**	**-6.0%**	**2.3%**
Growth Rate, All Fields	**0.2%**	**2.3%**	**2.3%**

Source: IPEDS

ANALYSIS

Despite a significant regional decline in completions, environmental science programs still show promise at all geographical levels.

The sharp drop in Duke University's Environmental Studies program (from 141 completions in 2015 to 19 in 2019) likely drove regional decline. This drop is likely because Duke changed from reporting its program under "Environmental Studies" to "Natural Resources/Conservation, General" beginning in 2017 – the year of a significant drop in the environmental studies program. This new program's completion numbers (136 in 2019) indicate that Duke's numbers stayed consistent. When Duke's program is excluded from environmental studies regional totals, the field's annualized growth rate is 0.9 percent, and **both programs' combined annualized growth rate becomes 1 percent**. While this is still slower than the growth of other regional programs, it better reflects positive growth trends at the national and state levels.

The demographic composition of graduate programs in environmental science has grown more diverse over the past decade.

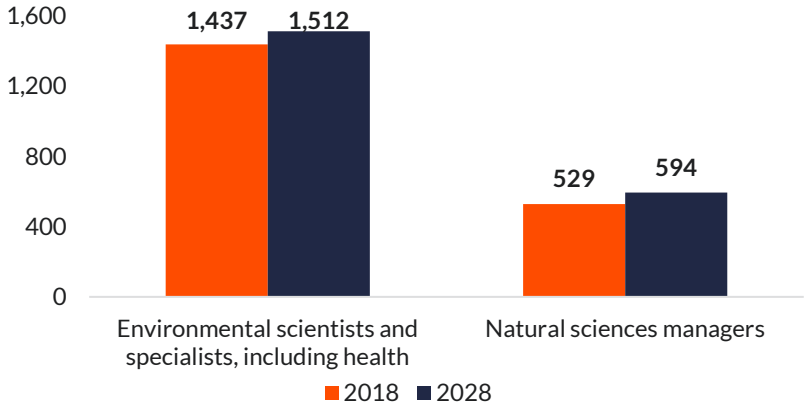
The American Geosciences Institute (AGI) notes that, in 2019, women earned 46 percent of national master's degrees in geoscientific degrees (of which environmental science was largest portion). Underrepresented minorities, in contrast, only earned 6.7 percent of master's degrees, well below their proportion of the U.S. population. Nonetheless, both metrics have experienced a substantial increase over the past decade, indicating an increasing diversification of the environmental sciences field.

Experts suggest that master's degrees make graduates more marketable and open more opportunities than bachelors' alone.

According to a report in U.S. News, master's graduates are more appealing to employers because of their specialized focus and expertise. Increased opportunities and marketability are likely driving students to pursue more advanced studies. Programs frequently have both in-person and online formats to allow students to study while working if desired.

TENNESSEE CURRENT AND PROJECTED EMPLOYMENT

State environmental science-related positions as of 2018 and 2028 (projected)



TOTAL LABOR MARKET

Aggregate projected employment growth by geographic level

	State	Regional	National
Estimated Current Employment	1,966	28,760	162,300
Projected 10-Year Employment	2,106	31,452	172,800
Employment Growth, Observed Occupations	**7.1%**	**9.4%**	**6.5%**
Total Annual Openings, Observed Occupations	**223**	**3,160**	**13,800**
Employment Growth, All Occupations	**7.3%**	**8.0%**	**3.7%**

Source: Projections Central
Note: Due to data update schedules, national data refer to the period 2019 to 2029.

ANALYSIS

Employment opportunities for environmental science graduates meet or exceed average occupational projections at all geographical levels.

For both examined fields, national and regional projected growth rates are above the overall growth rate for all occupations. While environmental science-related careers are growing slower in Tennessee than in other fields, the difference is negligible. While the U.S. Bureau of Labor Statistics (BLS) notes that typical entry into either of these careers requires a bachelor's degree, master's degrees are often necessary for advancement. Graduates of environmental studies master's programs can therefore expect to find numerous careers upon graduation and will be well-positioned to advance quickly in them.

Environmental concerns and an aging workforce will drive positive growth for environmental science-related positions in governmental and private industries.

BLS notes that most jobs will probably remain concentrated in state and local governments in the broad category of environmental scientists and specialists. As regulatory standards and consumer consciousness increases, however, businesses will also likely increase their efforts to minimize environmental impacts drawing on the skills of trained scientists or consultants. These same trends will drive growth for natural science managers. According to the AGI, over the next decade over a quarter of employees in environmentally-related fields will retire, leading to a significant workforce deficit for new graduates to fill. The AGI also reports that, after a significant downturn over the COVID pandemic, geoscientific occupations have begun to rebound over Q2 2021. Notable for environmental science graduates, environmental science-related positions have shown the most substantial growth over Q2 of all geoscientific occupations. In the military, graduates can find work either as an officer or an enlisted specialist. Both careers ensure that military supplies, servicemembers, and facilities are free of disease or other hazardous materials.

GENERAL SALARY OUTLOOK

Environmental science positions generally pay less for military service members. While the Military classifies occupations somewhat differently, the chart below illustrates some relevant positions in civilian (national) and military settings.

Occupation	Annual Median Pay (2020—national)	Typical Entry-Level Education
Environmental Scientists and Specialists, Including Health	$73,200	Bachelor's Degree
Natural Science Mangers	$137,900	Bachelor's Degree

U.S. Military		
	Average Pay	Military Rank
Environmental Health and Safety Officers	$66,777	Officer
Environmental Health and Safety Specialists	$63,073	Enlisted
Life Scientists	$59,857	Officer

Source: JobsEQ and Todays Military

REGIONAL SALARY OUTLOOK

Both entry-level and experienced positions in environmental science pay substantially better than average in both APSU's service region and in Tennessee. Graduates can expect higher-paying jobs as natural science managers, especially in the state.

Occupation	Entry-Level Annual Wage	
	Service Region*	Tennessee
Environmental Scientists and Specialists, Including Health	$46,700	$47,900
Natural Science Mangers	$64,100	$75,000
Average, All Occupations	**$22,900**	**$22,300**

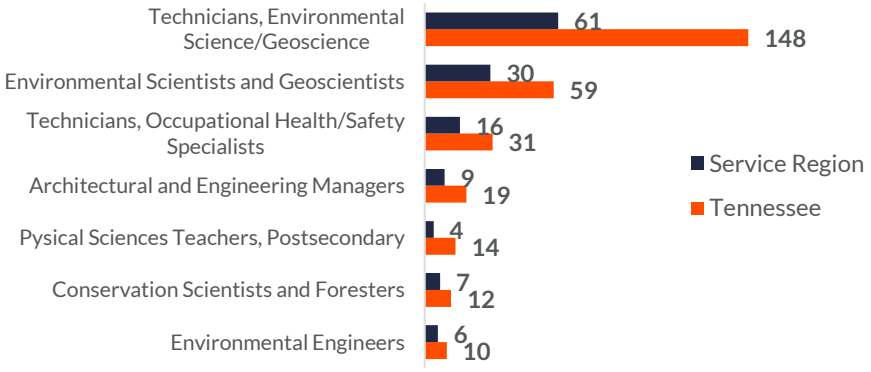
Occupation	Experienced-Level Annual Wage	
	Service Region*	Tennessee
Environmental Scientists and Specialists, Including Health	$76,900	$79,500
Natural Science Mangers	$129,300	$138,800
Average, All Occupations	**$60,500**	**$60,600**

*Region is within 100 miles of Clarksville, TN
Source: JobsEQ

REAL-TIME JOB POSTINGS INTELLIGENCE

TOP ENVIRONMENTAL SCIENCE-RELATED OCCUPATIONS

Environmental science-related positions by occupation and geographic region



TOP CREDENTIALS AND SKILLS

Top Skills (Tennessee)

- Chemistry
- Microsoft Office
- Report Writing/Report Presentation
- Hazardous Waste Operations and Emergency Response Standard (HAZWOPER)
- Mathematics
- Technical Writing
- Health/Wellness

Top Locations (Service Region)

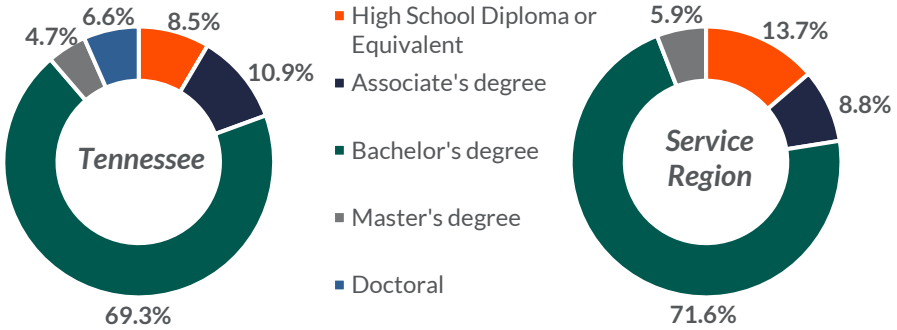
- Nashville, TN
- Bowling Green, KY
- Franklin, TN
- Jackson, TN
- Henderson, KY
- Owensboro, KY
- Clarksville, TN
- Murfreesboro, TN
- Brentwood, TN
- Smyrna, TN

Note: For this analysis, Hanover retrieved job postings data for environmental science-related positions from JobsEQ, a proprietary database providing real-time job postings aggregated from thousands of websites. There were 162 positions APSU's custom service region, and 345 in Tennessee. Jobs were determined by filtering results for "environmental science" as a keyword in the body of postings. All data reflect the 180-day period as of October 13, 2021.

ANALYSIS

While there are not many occupational opportunities near APSU, those that exist are varied. There are few significant differences between APSU's service region and Tennessee as a whole; except for fewer post-secondary teaching positions and no doctoral positions, all major occupations, skills, and education requirements are the same in both geographies. In general, these positions do not require education beyond a bachelor's degree. Employers seek applicants with technical skills and training in hard sciences and the elements of scientific business, such as technical writing.

EDUCATION REQUIREMENTS



Note: 60 regional and 134 state listings did not specify educational attainment requirements.

TOP EMPLOYERS

Service Region	Tennessee
• Bartlett Tree Experts	• Oak Ridge National Laboratory
• State of Tennessee	• S&ME Inc.
• ACRT, Inc.	• Bartlett Tree Experts
• GHD	• Hamilton County
• Metropolitan Government of Nashville and Davidson County	• State of Tennessee
	• Betchel Corporation

COMPETITOR ANALYSIS

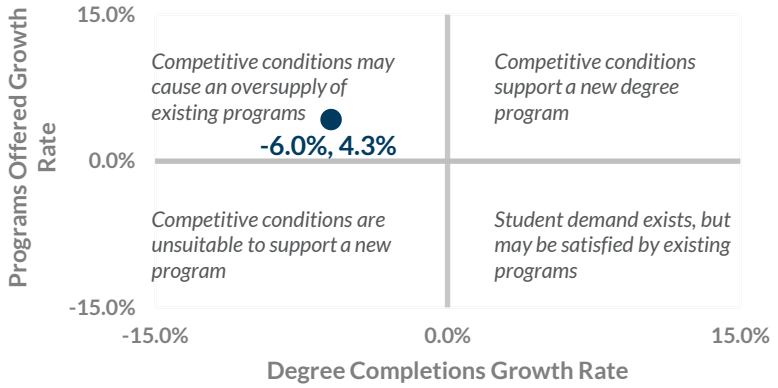
ANALYSIS

While regional trends indicate an oversaturated market, other factors show a promising outlook for environmental studies master's programs. Oversaturation is driven, again, by the issues with Duke's program, as discussed on p. 5. Considering these factors and using a regularized annual growth rate of 1.0 percent instead of -6.0 percent, the outlook for new programs in the region become must more positive.

There are only two competitor programs in Tennessee. APSU's nearest competitor, Tennessee Technological University is, just over 100 miles away. It is a newly established program, but its number of completions has been consistent since 2016. The next nearest competitor, The University of Tennessee – Chattanooga, is over 150 miles away and has shown moderate growth over the past five years. While completion volume is low in the region, general growth trends have been positive for benchmarked competitors.

REGIONAL MARKET SATURATION

Within the Southeast, do competitive conditions support an additional environmental science program?



TEN NEAREST COMPETITOR PROGRAMS IN THE SOUTHEAST BY GROWTH RATE

Institution	Location	Program(s)	2019 Degree Completions	Completions Growth Rate, 2015-2019
Kentucky State University	Frankfort, KY	MS in Environmental Studies	14	47.0%
Tuskegee University	Tuskegee, AL	MS in Environmental Science	10	35.1%
Columbus State University	Columbus, GA	MS in Natural Sciences	7	8.8%
Louisiana State University and Agricultural & Mechanical College	Baton Rouge, LA	MS in Environmental Sciences	8	7.5%
The University of Tennessee - Chattanooga	Chattanooga, TN	MS in Environmental Science	9	3.0%
Samford University	Birmingham, AL	MS in Environmental Management	6	N/A
Tennessee Technological University	Cookeville, TN	PSM in Environmental Informatics	4	N/A
Emory University	Atlanta, GA	MS in Environmental Sciences	3	N/A
Marshall University	Huntington, WV	MS in Environmental Science	7	-12.6%
Arkansas State University	Jonesboro, AR	MS in Environmental Sciences	1	-40.5%

Source: IPEDS

PROGRAM TRENDS

PROGRAM LENGTH

Most benchmarked master's programs report that students can complete the degree in one to two years. Programs or tracks with thesis requirements noted an average time-to-complete of two years. In contrast, the exclusively online program at Samford, which does not require a thesis, advertises the shortest time to completion of just one year.

CREDIT REQUIREMENTS

35

Benchmarked environmental science programs require students to complete an average of 35 credits to earn the degree. Several programs require 36 credits, whereas Arkansas State University requires only 30 credits. Specific credit allocation to categories varied substantially by track and institution, though most devote 12-18 to core courses and 3-18 for research or thesis.

TRACKS

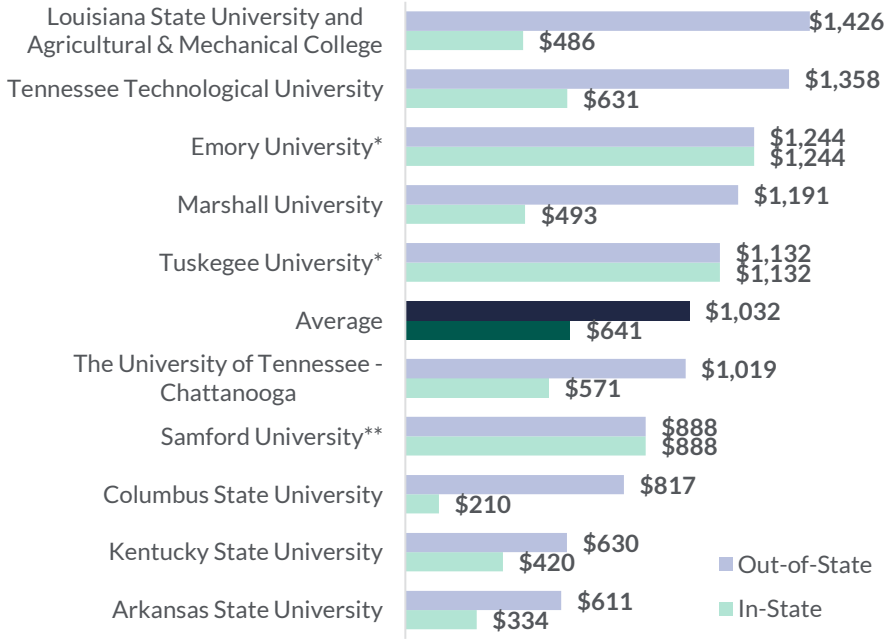
Six of ten benchmarked institutions divide their programs into thesis and professional/non-thesis tracks, and four do not. Marshall University does not allow specific tracks but allows students to choose between a thesis or a project. Samford's exclusively online program is non-thesis only, Emory requires a thesis of all students, and Tennessee Technological Institute's GIS-focused program requires an internship. Most programs without theses require or encourage research projects.

ADMISSION REQUIREMENTS

Most benchmarked master's programs require a specific GPA for bachelor's work of 2.5 or higher, though several require higher standards at 3.0. Five require GRE scores, but few have set scores. Most note either specific scientific prerequisites or emphasize that students should have a scientific background, making clear that those without proper training may have to take extra foundational courses.

PER-CREDIT TUITION

Tuition ranges from $1,426 per out-of-state credit at Lousiana State University to $210 per in-state credit at Columbus State University. If the client develops an environmental studies program, a tuition rate around or lower than $641 per in-state credit and $1,032 per out-of-state credit will be competitive on price.



*This institution does not differentiate between in-state and out-of-state tuition
**This institution only offers an online program

DELIVERY FORMAT

5 of 10 benchmarked master's programs offer fully-online formats

9 of 10 benchmarked master's programs offer an on-campus format

CURRICULUM

TYPICAL COURSEWORK

Most programs center their core coursework around sciences, industry skills, and foundational environmental studies while allowing students to specialize their degree with their electives. While most programs heavily emphasize the flexibility of their curriculum, nearly all have a few set courses students must take. Electives center on both industry and agricultural studies and more technical, specialized career paths. General themes and example course titles appear in the graphic below.

Core Curriculum

SCIENCES/SKILLS
Biostats
Environmental Chemistry
Agribusiness Management
Grant Writing

ENVIRONMENTAL FOUNDATIONS
Energy and the Environment
Environmental Law and Regulations
Environmental Justice and Society
Population and Community Ecology

Electives

AGRICULTURE
Plant Propagation and Production
Soil Chemistry
Sustainable Agriculture Systems
You are What You Eat

SPECIALIZATIONS
GIS Applications
Aquatic Ecology
Conservation Biology
Climate Change and Climate Modeling

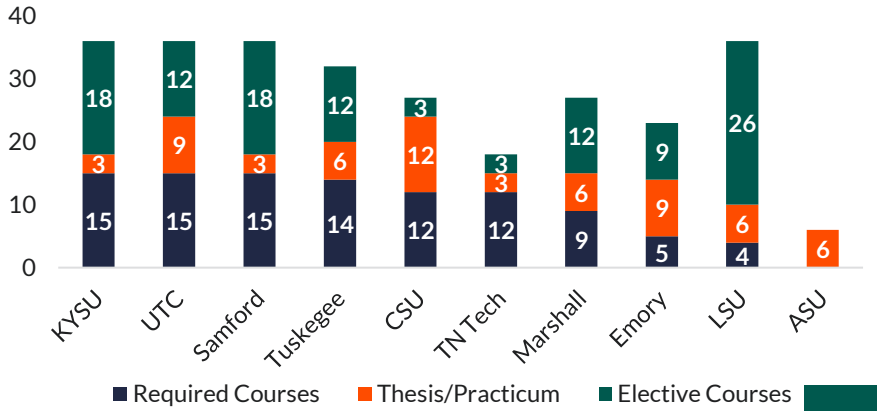
CONCENTRATION AREAS

Three programs break credits into categories from which students must pick their courses, allowing flexibility even in required topics. Typical example topics are included below.

- Biophysical Systems
- Environmental Planning and Management
- Environmental Assessment and Analysis
- Environmental Policy
- Geosciences
- GIS

PROGRAMMATIC CREDIT BREAKDOWN*

In general, programs divide their credits between core environmental studies credits, elective credits, and thesis, internship, or practicum credits. Most programs dedicate the majority of their credits to core courses and thesis/practicum credits. Those credits not included in the graph below are for other required courses that are not included in the core.



Note: When programs required different credits for a thesis or a practicum, this chart uses thesis credits. This also affects number of required elective credits.

PROGRAM BENCHMARKING

Benchmarked programs are offered by institutions located in the Southeast region with preference given to the programs nearest to APSU. They are organized from highest-growth to lowest-growth as on Slide 9. Unless otherwise noted, data refers to all delivery formats.

Institution	Program Length	Program	Admissions Requirements	Program Structure	Delivery Format	Tuition (Per Credit)	Tracks	Notable Features
Kentucky State University	Two Years	MS in Environmental Studies	▪ Bachelor's degree ▪ 3.0+ GPA ▪ College Algebra ▪ GRE score of 296+	▪ 36 total credits ▪ 18 credits (six courses) core classes ▪ 18 credits of electives or thesis research	On-Campus and Online	In-State: $420 Out-of-State: $630 Online: $500	▪ Thesis Option ▪ Capstone Project Option	▪ Online option has the same credit requirements, but only allows capstone option ▪ Offers limited research assistantships to thesis-track students ▪ Advertises several dedicated facilities ▪ Offers online graduate certificates
Tuskegee University	12-18 months (non-thesis) 24 months (thesis)	MS in Environmental Science	▪ BS undergrad degree ▪ Prefers Environmental Sciences or biology ▪ 3.0+ GPA ▪ GRE score but no minimum	▪ 30-32 total credits depending on track ▪ 14 core credits ▪ 12 credits of concentration ▪ Remaining credits either thesis or elective ▪ Offers various specialties in climate change, watershed management, etc.	On-Campus and Online	On-Campus: $1,132* Online: $717	▪ Thesis Option for on-campus Environmental Science ▪ Non-thesis option for programs	▪ The non-thesis option requires a professional project ▪ Marketing notes new lab facilities ▪ Emphasizes career trajectories in government, academia, industry, or further study. ▪ Also offers a MS in Environmental Management
Columbus State University	Three Semesters†	MS in Natural Sciences - Environmental Science	▪ Bachelor's degree ▪ 3.0+ GPA ▪ GRE score of 290+	▪ 36 total credits ▪ 12 core credits ▪ 2-4 supplemental courses ▪ 3-7 credits elective ▪ 3-12 credits for internship or thesis research	On-Campus	In-State: $210 Out-of-State: $817	▪ Thesis track ▪ Non-Thesis track	▪ Emphasizes flexibility of study and curriculum ▪ Non-thesis track requires an internship ▪ Notes variable career trajectories

Source: Institutional websites (see embedded hyperlinks)
*Tuition rates given by semester. Per-credit rate determined by dividing semester tuition by an average full-time credit load of 9.
†Columbus restricts graduate students to a maximum of 12 credits per semester or 10 credits if on an assistantship.

PROGRAM BENCHMARKING

Institution	Program Length	Program	Admissions Requirements	Program Structure	Delivery Format	Tuition (Per-Credit)	Tracks	Notable Features
Louisiana State University and Agricultural & Mechanical College	Two years	MS in Environmental Sciences	▪ Bachelor's degree ▪ 3.0+ GPA ▪ General Biology and General Chemistry courses ▪ GRE scores	▪ 36 total credits ▪ 4 core credits ▪ 21 credits divided between three groups: Biophysical Systems, Environmental Planning and Management, and Environmental Assessment and Analysis ▪ 5-8 elective credits ▪ 6 credits for research or internship	On-Campus or Online	In-State: $486* Out-of-State: $1,426* Online: $546	▪ Thesis option ▪ Professional option	▪ Also offers a graduate minor and graduate certificates ▪ Professional option requires an internship ▪ Notes many different types of lab facilities
The University of Tennessee – Chattanooga	Unspecified	MS in Environmental Science	▪ These reflect general graduate requirements; UTC does not provide programmatic requirements ▪ Bachelor's degree ▪ GPA of 2.7-3.0+	▪ 36 total credits ▪ 15 core credits ▪ 6-9 credits for thesis or internship/research ▪ 12-15 elective credits	On-Campus	In-State: $571^ Regional: $795^ Out-of-State: $1,019^	▪ Thesis track ▪ Non-Thesis track	▪ Also offers an MS in Environmental Administration and Management ▪ Multiple research and learning facilities
Samford University	One year	MS in Environmental Management	▪ Bachelor's degree ▪ 3.0+ GPA or three years work experience and 2.5+ GPA ▪ Scientific courses	▪ 36 total credits ▪ 15 core credits ▪ 18 elective credits ▪ 3 capstone credits	Online	$888	---	▪ Also offers graduate certificates in Environmental Management or GIS. ▪ Offers combined programs with an MBA in Business Management or a JD ▪ This is a non-thesis program

Source: Institutional websites (see embedded hyperlinks)

*Cost given by total credits. LSU considers 9 credits full-time, and their recommended course sequence has 9-10 credits per-semester. This number was determined by dividing total tuition for 9 credits by 9; out-of-state tuition was found by adding the out-of-state fee divided by 9.

^This figure reflects tuition + fees as UTC does not provide tuition figures separately. These numbers were calculated by taking full-time rates and dividing by 9 credits (UTC's full-time credit load), Regional and out-of-state figures were found by dividing tuition fees by 9 and adding them to the per-credit tuition.

PROGRAM BENCHMARKING

Institution	Program Length	Program	Admissions Requirements	Program Structure	Delivery Format	Tuition (Per-Credit)	Tracks	Notable Features
Tennessee Technological University	24 months	PSM in Environmental Informatics	▪ Bachelor's degree in science, technology, engineering, or mathematics ▪ 3.0+ GPA or 300 on the GRE with a 3.5+ on analytic writing	▪ 33 total credits ▪ 12 core credits ▪ 18 GIS credits ▪ 3 elective credits ▪ 3 internship credits	In-Person or Online	In-State: $632* Out-of-State: $1,358*	---	▪ Focuses specifically on GIS ▪ Offers a fast-track option for undergraduate juniors and seniors ▪ Also offers graduate certificates in Managerial Environmental Informatics and Technical Environmental Informatics
Emory University	Two years	MS in Environmental Sciences	▪ Bachelor's degree ▪ Optional GRE score Requires applicants to choose a faculty mentor	▪ 35 total credits ▪ Highly flexible curriculum ▪ Few required courses; credits must fit into certain categories ▪ Requires a thesis	In-Person	$1,244**	---	▪ Students serve as a teaching assistant for at least one semester ▪ Research is usually done with faculty, but outside experiences are also encouraged
Marshall University	Unspecified	MS in Environmental Science	▪ Bachelor's degree ▪ 2.5+ GPA ▪ Likely requires GRE scores.	▪ 36 total credits ▪ 12 core credits ▪ 12 required credits ▪ 12 elective credits	In-Person	In-State: $493^ Metro: $875^ Out-of-State: $1,191^	▪ Allows either a Thesis or a Project	▪ Also offers a graduate minor in Environmental Science
Arkansas State University	Four semesters	MS in Environmental Sciences	▪ Bachelor's degree ▪ 3.0+ GPA ▪ Pre-requisite science, math, economics, and political science classes ▪ GRE score of 150+ on verbal and quantitative	▪ 30 total credits ▪ Course choices in multiple categories ▪ Students choose a specialty area and take remaining credits in that area ▪ 6 credits for thesis/ practicum/internship	In-Person	In-State: $334 Out-of-State: $611	• Thesis option • Practicum option	▪ Associated with several field stations ▪ Advertises their Ecotoxicology Research Facility

Source: Institutional websites (see embedded hyperlinks)

*Tuition rates given per-semester. This number was found by dividing per-semester cost by full-time credits (9). Also note that, while online courses inly have a different cost for students, the exact tuition rate for online study not apparent on Tennessee Technological Institute's website.

** Tuition rates given annually. This rate found by dividing this total by 18 full-time annual credits.

^ Tuition rates given by semester. This rate was found by dividing semester rates by a full-time credit load of 9.

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Austin Peay State University

POLICIES

Faculty Appointments

Issued: May 12, 2022

Responsible Official: Provost and Senior Vice President for Academic Affairs

Responsible Office: Office of Academic Affairs

Policy Statement

It is the policy of Austin Peay State University to provide for a variety of faculty appointment types in order to support the mission of the university and effectively respond to the needs of students, enrollment demands, and ensure the quality of the academic programs.

Purpose

The purpose of this policy is to establish the types of faculty appointments and criteria for such appointments.

Contents

Procedures
-General Employment Practices for Faculty Members
-Type of Appointments
-Tenure and Tenure-Track Faculty Appointments
-Non-Tenurable Faculty Appointments
-Criteria for Appointment, Reappointment, and Annual Renewal for Fixed-Term Faculty
-Tenure Track and Tenured Initial Appointments
-Searches

Links
-APSU Policy Website

Procedures

General Employment Practices for Faculty Members

The primary objective of faculty personnel procedures at Austin Peay State University (AP SU) is to develop an academic climate conducive to excellence in teaching, research, and artistic expression among faculty, students, and the community at large. The heart of an academic climate includes cultural and

intellectual freedom, diversity, and debate in pursuit of the classical goals of truth, beauty, and justice.

To gain this end, the University must recruit, retain, and encourage the finest possible faculty members and allow them freedom of instruction, research, and artistic production within their areas of expertise.

The quality of the faculty of APSU must be maintained through responsible, thorough evaluation of colleagues by members of the faculty and the administration. The purpose of such evaluations is to build and maintain an excellent faculty and to offer just recognition and encouragement of achievement.

Evaluation alone, no matter how just the procedures, cannot ensure that the University should have a program to encourage faculty development, either independently or in cooperation with other University offices.

A. The University's general employment policies for the teaching and research faculty are formulated in accordance with and subject to the Austin Peay State University policy.

B. The Austin Peay State University Board of Trustees empowers the President of the University to appoint individuals to faculty positions. Faculty members – instructors and those holding professorial ranks – receive one (1) year appointments. Full-time employees in one (1) of these ranks may be granted continuing employment under the provisions of the tenure policies and then may be terminated only in accordance with APSU policies and state law.

C. The terms of every new appointment shall be stated in writing and be in the possession of both the prospective faculty member and the administration before the appointment is confirmed. Each time a faculty member is reappointed, the terms of the reappointment – including salary, contract year, department of assignment, and rank – shall be stated in writing and be in his/her possession before the expiration of his/her previous assignment, to the extent possible. Since no agreement may become final until the Austin Peay State University Board of Trustees has approved annual budgets, and since such approvals may sometimes not be given until after termination of the academic year, it may not be possible to guarantee an upcoming year's salary before the expiration of a previous appointment. In such instances, a faculty member will be furnished in writing the

terms of his/her reappointment, which will become effective with the approval of the University's budget.

D. At the time of employment, a new faculty member shall be informed of the current University, college, and department standards by which he/she can expect to be judged for tenure and shall be provided electronic access to the Faculty Handbook and APSU Policies (https://www.apsu.edu/policy/index.php.)

Types of Appointments

Two broad categories of faculty appointments can be made at Austin Peay State University (APSU):

1) tenure/tenure-track appointments; and
2) non-tenurable (special purpose) appointments.

The University recognizes special needs and circumstances in which non-tenurable faculty appointments can be justified. The following constitute the types of faculty appointments that can be made at APSU: tenure, tenure-track, temporary, and fixed-term appointments.

Tenure and Tenure-Track Faculty Appointments

The minimum rank criteria for appointment in tenure and tenure-track appointments are outlined in APSU Policies and Procedures for Promotion 2:063.

A. Tenure-track Appointments are appointments for regular full-time faculty with academic rank, and may be for the academic or fiscal year. Tenure-track appointments are for faculty who are employed in a probationary period of employment prior to consideration for tenure. Tenure-track appointments shall not include any right to permanent or continuous employment, shall not create any manner of legal right, interest, or expectancy of renewal or any other type of appointment, and shall be subject to annual renewal by the institution.

B. Tenure Appointments are appointments of full-time faculty who have been awarded tenure by the Austin Peay State University Board of Trustees pursuant to the provisions of APSU Policy 1:025: Policy on Academic Tenure. To protect academic freedom, tenure appointments include the assurance of continued employment for the academic year for an indefinite period, subject to expiration, relinquishment, or termination of tenure as provided herein or by any APSU policy or state law.

Non-Tenurable Faculty Appointments

A. Temporary Appointments are appointments for a specific purpose for a time appropriate to that purpose or for an unspecified period, which appointments may be terminated according to the terms of the contract of employment or appointment. Temporary appointments ordinarily should be used only for lecturers, adjunct or part-time faculty, faculty employed to replace regular faculty on leave of absence, and faculty employed pursuant to grants or for projects funded in whole or in part by non-appropriated funds.

A temporary appointment (typically one year) made to fill a vacancy of a regular faculty member shall have the modifier of "visiting." The four levels of this appointment are:

Visiting Professor
Visiting Associate Professor
Visiting Assistant Professor
Visiting Instructor

B. Fixed-Term Faculty Positions

B.1. GENERAL

B.1.1 Fixed-term faculty members holding titles such as instructor, clinical professor, professor of practice, coordinator, and research professor are used when a department has need for faculty other than those that are tenured or in the tenure-track process.

B.1.2. Fixed-term faculty members may or may not have the terminal degree, but must have the master's degree.

B.1.3. Fixed-term faculty appointments may range from half-time (50%) to full-time (100%) for a set contract period not in excess of three years. Generally speaking, the contract period will be more than one year. The contract for fixed-term faculty members may be renewable based on satisfactory performance, university need, and availability of funds. While each appointment is for a fixed term not to exceed three (3) years, annual renewal is required. Terms are renewable indefinitely. Neither renewal within a fixed term nor reappointment to a new fixed term requires a new search.

B.1.4 Fixed-term faculty members will be evaluated for teaching effectiveness, professional growth and activities, and non-teaching activities supportive

of university programs. The weights assigned to each area will vary with assignment.

B.2 Faculty in instructor appointments participate in academic programs primarily by teaching. Faculty in the instructor ranks may also have limited appointments in non-teaching activities supportive of university programs. For the instructor track, the three rank levels are
1) Instructor
2) Senior Instructor
3) Master Instructor

B.3. Faculty in clinical-track appointments participate in academic programs by providing professional services, by exposing students to their professional expertise, and by directing students' educational experiences in clinical/professional settings where the faculty members practice. Clinical-track appointments may be supported, in whole or in part, by appropriated funds or funding from grants or contracts, from clinical practice or clinical/professional facilities, or from other sources. Individual job descriptions developed in the department will further define job duties. For the clinical track, the four rank levels are as follows:

1. Clinical Instructor: An individual appointed as a Clinical Instructor is expected to possess at least a master's degree in the discipline or at least a master's degree with a minimum of 18 graduate semester hours in the discipline.

2. Clinical Assistant Professor: An individual appointed as a Clinical Assistant Professor should, at a minimum, possess a master's degree (except Nursing); must have demonstrated ability as a clinician; and must have shown definite evidence of growth in clinical achievement.

3. Clinical Associate Professor: An individual appointed as a Clinical Associate Professor should possess at least a doctoral degree or its equivalent, but must also give evidence of an established reputation in clinical achievement.

4. Clinical Professor: An individual appointed as a Clinical Professor should possess at least a doctoral degree or its equivalent. In addition, the clinical

professor should have a record of outstanding clinical performance. This rank is reserved for individuals with proven stature as a clinician.

B.4. Faculty in research-track appointments participate in the academic programs by conducting independent research projects and by mentoring students involved in the research process. Research-track appointments may be supported, in whole or in part, by appropriated funds or funding from grants or contracts, or other sources. Individual job descriptions developed in the department will further define job duties. For the research track, the three rank levels are as follows:

1. Research Assistant Professor. The assistant research professor should possess a doctoral degree or its equivalent; must have demonstrated ability as a researcher; and must have shown definite evidence of growth in scholarly, artistic, or professional achievement.

2. Research Associate Professor. The associate research professor should possess the same qualifications as the assistant research professor, but must also give evidence of an established reputation in scholarly, artistic, or professional achievement.

3. Research Professor. In addition to the characteristics of the members of the preceding ranks, the research professor should give evidence of a marked capacity for creative work and of leadership in his or her field of specialization. This rank should be reserved for persons of proven stature in research.

B.5. Promotion of Fixed-Term Faculty

Fixed-Term Faculty will have rank dependent on qualifications and experience level. Generally speaking for ranks other than the entry level, five years of experience is required to be eligible for promotion to the next rank.

Generally speaking, advancement to a higher rank occurs at the time of annual reappointment, once specified criteria have been met and the advancement has been approved by the President. Procedures for advancement to the next rank are described below.

Faculty in these appointments may participate in department/college/university governance decisions related to their position category. They may not participate in tenure or tenure-track personnel decisions.

Appointments are possible at all ranks and should be the result of a search process similar to hiring a tenure-track faculty member. Faculty in these positions must hold degrees in an area appropriate for the appointment. In certain areas, licenses or certifications may be required.

Criteria for Appointment, Reappointment, and Annual Renewal for Fixed-Term Faculty

Annual renewal and reappointment for a new term both require satisfactory performance of assigned duties. To be eligible a candidate must have the degree in an area appropriate for the appointment, reappointment, or renewal.

In addition, to be eligible for appointment, reappointment, or renewal, a candidate must:

a. Demonstrate quality work appropriate to the appointment type and discipline;
b. Demonstrate a willingness to collaborate with APSU colleagues to ensure a quality program; and
c. Hold appropriate certifications/licenses required by the position.

Additional or more specific appointment or review criteria may be developed by any department/school/program unit offering one of these positions. Changes to the criteria must be approved by the Dean, the Provost, and the President.

Tenure Track and Tenured Initial Appointments

While all personnel decisions affect the quality and vitality of the University faculty, none is more important than the initial appointment to a tenure-track position. Candidates for initial appointment should be carefully evaluated so that new faculty members will not merely fill positions but will also bring greater intellectual or artistic distinction to the University.

A. Minimal Criteria. Initial appointment to a full-time probationary position requires possession of, or significant progress toward completion of, the doctorate or appropriate terminal degree. Exceptions may be made in the instance of candidates, whose academic, scholarly, or professional achievements make a unique contribution to the University. The basis of such an exception shall be made a permanent part of the faculty member's record and shall be considered in retention and tenure decisions. The following conditions

and requirements shall apply to faculty having had teaching or equitable experience before appointment to the faculty at Austin Peay State University.

1. Only full-time college and University teaching or full-time equated experience shall be considered.

2. No distinction shall be made between two-year and four-year institutions of higher education in crediting years of academic experience.

3. Countable years of experience shall be in the discipline or closely-related area. The following minimum rank qualifications must be met for initial appointment to an academic rank:

    1. Assistant Professor

        a. Potential ability in instruction, public service, and research.
        b. Evidence of good character, mature attitude, and stable personality.
        c. Earned doctorate from an accredited institution in the instructional discipline or related area. Or Master's degree in the instructional discipline when that Master's degree is the recognized terminal degree in that instructional discipline. Master's degree in the instructional discipline or related are plus 30 semester hours (45 quarter hours) beyond the Master's in that instructional discipline or related area plus appropriate professional experience in the instructional discipline or related area.

    2. Associate Professor

        a. Documented ability (beyond mere potential) in instruction, public service, and research.
        b. Evidence of good character, mature attitude, and stable personality.
        c. Earned doctorate or appropriate terminal degree from an accredited institution in the instructional discipline or related area. Plus Five (5) years appropriate professional experience in the instructional discipline or related area.

    3. Professor

a. Documented ability (beyond mere potential) in instruction, public service, and research.
b. Evidence of good character, mature attitude, stable personality and high degree of academic maturity and responsibility.
c. Documented evidence of a substantial quality of professional productivity, and state, regional or national recognition in the academic discipline.
d. Earned doctorate or appropriate terminal degree from an accredited institution in the instructional discipline or related area plus Ten (10) years appropriate professional experience in the instructional discipline or related area.

4. Exceptions to these minimum rank qualifications can be approved by the Provost; however, such exceptions and will be made only in extraordinary circumstances. This determination will be made at the time of hire.

B. Evidence.

Candidates for appointment shall present, along with their applications, a curriculum vita containing proof of appropriate education and, whenever possible, evidence of teaching ability, as well as of scholarly or artistic achievement.

Searches

A. Primary responsibility for defining the academic assignment and for determining the precise qualifications for candidates rests with the department in which the new faculty member will serve, or, when a new department or division is being formed, with the college.

B. All steps and actions should comply with Affirmative Action/Equal Opportunity guidelines.

C. A search committee shall be appointed and convened by the department chair. The committee shall include at least one tenure-track faculty member and at least one tenured faculty member. A department chair may serve on a search committee. The department chair may chair the committee, appoint the committee chair, or choose to permit the committee to select its own chair. Insofar as possible, the search committee shall include members of protected groups in order to comply with Affirmative Action/Equal Opportunity Guidelines (see B, above), which may include the addition of an APSU staff member on the faculty search committee.

At the discretion of the department, it is encouraged that a person outside the department serves on the search committee. Names of all search committee participants shall be forwarded to the college Dean as soon as they have been selected. Final voting on the candidate(s) shall be restricted to the appointed members (including APSU staff) of the search committee who are full-time employees of the institution.

Non-APSU employees from outside the university who may serve on a faculty search committee in special situations may submit feedback on a candidate, but they shall not be permitted a final vote. Although students may not serve on faculty search committees, students' input on candidates shall be solicited and considered in committee deliberations.

D. Having defined in writing the assignment and qualifications, the department, upon decanal approval, should conduct a national search through, among other sources, advertising in those professional journals serving that discipline.

E. Applications with curriculum vitae thus gathered should be carefully screened and ranked according to the stated criteria, remembering that one major goal is to improve academic climate. Informal interviews of the candidates by appropriate personnel by telephone or at professional meetings are also encouraged.

F. The search committee, in collaboration with the Dean, may then select two (2) or more candidates for formal on-campus interviews, subject to the availability of funds.

G. The search committee, in collaboration with the Dean, then should select the best available candidate in terms of the written criteria used from the beginning of the search and recommend that person for appointment to the Dean, the Provost, and the President.

H. This process is time-consuming, often requiring at least six (6) months to complete. No appointment to a tenure-track position should be hurried. Thus, if an emergency condition exists, the post should be filled with temporary or adjunct faculty until a proper search can be conducted.

I. If any of these steps is omitted or slighted, the department head and the Dean must present written justifications to the Provost.

J. Initial appointments to academic-administrative posts with rights to a teaching post shall be reviewed by the appropriate department for the academic area in which tenure-track status is requested. Criteria for gaining such tenure shall be identical with that of other faculty in that area, i.e., Effectiveness in Academic Assignment, Scholarly and Creative Activity, and Professional Contributions and Activities.

K. Credit for prior service toward tenure shall be determined in writing at the time of initial appointment. Any number of years of prior service credit may be awarded. Past service time can be awarded on hire, and these years of service awarded shall count at the front rather than added on at the year preceding tenure year, per the Tenure Procedures & Guidelines. Recommendations on prior service are the responsibility of the Provost after consultation with the appropriate Dean, department chairperson, and department personnel committee. The departmental chairperson shall notify all faculty within the relevant department of the amount of credit for prior service awarded to newly appointed tenure-track faculty at the time of employment and such information shall become a permanent part of the faculty member's record.

L. Credit toward completion of the probationary period may, at the discretion of the President, be given for (1) full-time service at other colleges, universities, or institutes, provided that the prior service is relevant to the institution's own needs and criteria; (2) previous full-time service in a temporary faculty appointment at APSU; (3) previous full-time service in a tenure-track appointment at APSU which has been followed by a break in service.

	Links
APSU Policies	https://www.apsu.edu/policy

	Revision Dates
	APSU Policy 2:051 – Rev.: May 12, 2022 APSU Policy 2:051 – Rev.: December 11, 2019 APSU Policy 2:051 – Rev.: May 30, 2019 APSU Policy 2:051 (previously 5:062) – Rev.: January 12, 2017 APSU Policy 2:051 – Rev.: July 19, 2016 APSU Policy 2:051 – Rev.: April 29, 2014

APSU Policy 2:051 – Issued: August 10, 2012

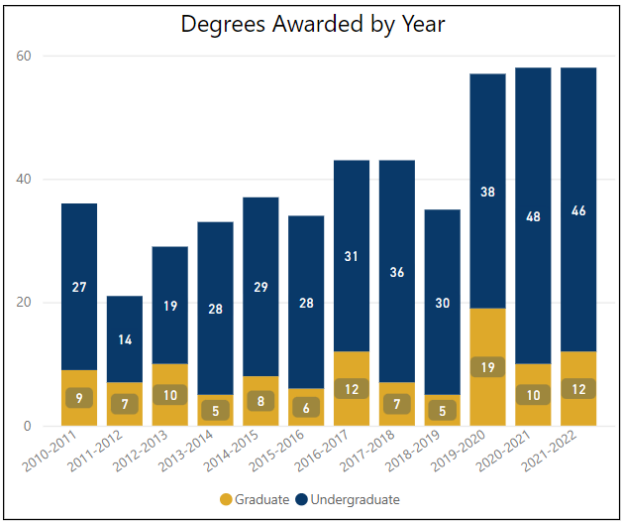
Subject Areas:

Academic	Finance	General	Human Resources	Information Technology	Student Affairs
☑					

Approved

President: signature on file

University of Tennessee, Chattanooga Enrollment Data



OPEIR Notes

* Data conform to UTC internal reporting standards and may differ slightly from official reports provided for external constituents such as the Tennessee Higher Education Commission. Differences in reporting date can also cause minor discrepancies.

* Program names, department names, and departmental affiliations are as of Fall 2022. Programs that were different in previous years are mapped to these current definitions.
*For this dashboard, Summer term is considered the *last* term in the year. For example, Summer 2017 graduates are included in year 2016-2017.
* Missing bars are always the result of a count of zero degrees. This is caused either by a program not existing in the selected time period or having zero degrees granted for the selected filters.
* Race/Ethnicity or Gender values of "Unknown" indicate that information was not disclosed by the student.
* Race/Ethnicity and Gender charts will reflect all years selected; select year(s) from filter to isolate.
* Summer 2022 is the last term included in this update.

Student College	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022
Arts & Sciences	**3,413**	**3,519**	**3,386**	**3,299**	**3,326**
Art	257	272	260	253	277
Biology, Geology, & Environmental Sciences	866	870	810	735	737
Chemistry & Physics	190	196	168	155	142
Communication	384	391	341	308	330
English	171	151	141	130	133
History	73	79	69	54	70
Interdisciplinary Studies	58	39	37	30	29
Mathematics	66	81	88	66	64
Modern & Classical Languages & Literatures	44	44	38	31	27
Performing Arts	102	106	102	129	152
Philosophy & Religion	31	35	24	19	22
Political Science & Public Service	195	200	195	215	182
Psychology	559	631	697	775	773
Social, Cultural, & Justice Studies	417	424	416	399	388
Total	**3,413**	**3,519**	**3,386**	**3,299**	**3,326**

Student College	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022
Arts & Sciences	**130**	**126**	**159**	**144**	**147**
Biology, Geology, & Environmental Sciences	24	19	25	28	28
English	13	17	19	16	23
Mathematics	6	4	10	12	10
Political Science & Public Service	21	21	26	24	15
Psychology	51	47	52	51	56
Social, Cultural, & Justice Studies	15	18	27	13	15
Total	**130**	**126**	**159**	**144**	**147**

MS Environmental Science Survey

42 Responses | 00:29 Average time to complete | Active Status

1. What is your current degree program?

BS Agriculture	14
BS Chemistry	8
BS Earth and Environmental Scie...	20



2. What is your current year?

Freshman	2
Sophomore	5
Junior	8
Senior	27



3. Have you ever been interested in pursuing an environmental science career?

Yes	29
No	3
Maybe	10

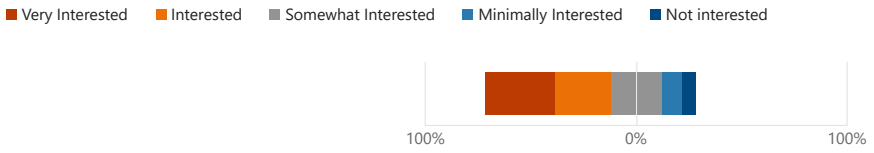


4. Have you ever been interested in pursuing a master's degree?

Yes	32
No	3
Maybe	7



5. Please indicate your interest in enrolling in a Master of Science in Environmental Science program at Austin Peay State University.



creative thinking. **custom solutions.** ®

February 16, 2024

Tennessee Higher Education Commission
312 Rosa L Parks Avenue, 9th Floor
Nashville, Tennessee 37243

Re: Master of Environmental Science – Austin Peay State University

Dear Education Commission:

I am writing to enthusiastically support Austin Peay State University's College of Science, Technology, Engineering and Mathematics (STEM) proposal to offer a Master of Science in Environmental Science. Graduating with a Geology degree from APSU in 1987, I embarked on an exciting career as an Environmental Consultant, and now over three decades later, as a business owner, I can attest to the current market demand for advanced STEM talent.

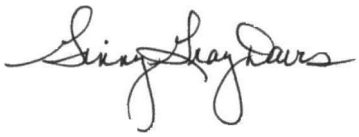
Our company, EnSafe, founded in Memphis, Tennessee in 1980, will directly benefit from the pipeline of talent that an advanced degree program like this can provide. We hired 90+ employees in 2023 and anticipate this demand to continue, even with the recent tightening of the job market overall. We support pre-graduation internships and regularly recruit at career fairs as well.

As a National Alumni Board Member, a member of APSU's LeadHER advisory board and an active participant in the Department of Earth and Environmental Sciences educational events, I can attest to the relevance and value of the current staff, curriculum, and initiatives underway to ensure that students graduate with the requisite skills and aptitude to immediately add value in the workforce. Approval of this Master's degree will only enhance that reputation.

Personally, I would love to partner with APSU's College of STEM and be offered the opportunity to serve as an advisory board member for the Department and/or the degree, should it be approved. The need for environmental talent is a consistent, stable trend over last three decades, will continue in the foreseeable future and is a valuable investment for APSU as they build a stronger, sustainable future.

If you have any questions, or desire additional information or feedback, I would be happy to discuss with the commission at their convenience. Thank you for your consideration of this important advancement for Austin Peay and STEM.

Kindest regards,



By: Ginny Gray Davis, PG
Vice President, Business Development
EnSafe Inc.

Goodwyn Mills Cawood

3310 West End Avenue
Suite 420
Nashville, TN 37203

T (615) 333-7200
F (615) 333-0529

www.gmcnetwork.com

Christopher Gentry, Ph.D.
Professor of Geography and Department Chair
Department of Earth and Environmental Sciences
Austin Peay State University
PO Box 4418
Clarksville, Tennessee 37044

February 15, 2024

RE: Letter of Support; Austin Peay State University Mater of Science in Environmental Science

Dear Dr. Gentry,

Goodwyn Mills Cawood (GMC) is one of the premier architecture and engineering firms in the Southeast providing services such as environmental assessments, ecological restoration and mitigation, GIS, permitting, disaster recovery, geophysics, geotechnical engineering, construction materials testing, and design of water and wastewater systems. We employ individuals with a variety of backgrounds in full-time, part-time, and internships positions in our twenty offices across the southeastern United States. In reviewing the proposed curriculum for the Masters of Science in Environmental Science at APSU, a graduate from this program will obtain the necessary education to be considered a qualified candidate for employment in a number of different positions with GMC.

Sincerely,

Mark Van Aken, P.G.
Geotechnical Services Manager

1922 Old Murfreesboro Pike, Suite 905
Nashville, TN 37217
P (615) 333-6444
F (615) 333-6443
Terracon.com

March 25, 2024

Austin Peay State University
Department of Earth and Environmental Sciences
PO Box 4418
Clarksville, TN 37044

Attn: Ms. Kallina DUnkle, Ph.D – Associate Dean College of STEM
P: 931-221-7451
Email: dunklek@apsu.edu

Re: MS Environmental Science

Dear Dr. Dunkle:

Thank you for thinking of us relative to the planned degree offering at APSU.

Terracon engages and retains staff with a variety of degrees in the earth sciences and would be interested in supporting APSU's offering of this advanced degree.

The described coursework and leadership develop of students would well serve the students, their employers, and their communities.

Do let us know how we can engage and contribute to your faculty and students as you progress.

Sincerely,
Terracon Consultants, Inc.

John E. Agee, P.E.
Regional Manager – Senior Principal

Tennessee Higher Education Commission
Appendix A: THEC Financial Projections Form
AUSTIN PEAY STATE UNIVERSITY
Masters of Science in Environmental Science

Seven-year projections are required for doctoral programs.
Five-year projections are required for baccalaureate and Master's degree programs
Three-year projections are required for associate degrees and undergraduate certificates.
Projections should include cost of living increases per year.
Planning year projections are not required but should be included when appropriate.

	Planning Year	Year 1	Year 2	Year 3	Year 4	Year 5
I. Expenditures						
A. One-time Expenditures	Support of marketing the new program will be requested in the planning year					
New/Renovated Space[1]	$ -	$ -	$ -	$ -	$ -	$ -
Equipment	$ -	$ -	$ -	$ -	$ -	$ -
Library	$ -	$ -	$ -	$ -	$ -	$ -
Consultants	$ -	$ -	$ -	$ -	$ -	$ -
Travel	$ -	$ -	$ -	$ -	$ -	$ -
Other	$ 5,000	$ -	$ -	$ -	$ -	$ -
Sub-Total One-time	$ 5,000	$ -	$ -	$ -	$ -	$ -
B. Recurring Expenditures						
Personnel						
Administration						
Salary	$ -	$ -	$ -	$ -	$ -	$ -
Benefits	$ -	$ -	$ -	$ -	$ -	$ -
Sub-Total Administration	$ -	$ -	$ -	$ -	$ -	$ -
Faculty/FTE		**1**	**1**	**1.5**	**1.5**	**2**
Salary	$ -	$ 79,575	$ 81,166	$ 82,789	$ 84,445	$ 86,134
Summer Compensation	$ -	$ 14,920	$ 15,219	$ 15,523	$ 15,833	$ 16,150
Benefits	$ -	$ 31,034	$ 31,654	$ 32,288	$ 32,934	$ 33,593
Sub-Total Faculty	$ -	$ 125,529	$ 128,039	$ 195,900	$ 199,818	$ 271,753
Support Staff	Additional support staff will not be needed					
Salary	$ -	$ -	$ -	$ -	$ -	$ -
Benefits	$ -	$ -	$ -	$ -	$ -	$ -
Sub-Total Support Staff	$ -	$ -	$ -	$ -	$ -	$ -
Graduate Assistants	During the first several years graduate student support will not be requested					
Salary	$ -	$ -	$ -	$ -	$ -	$ -
Benefits	$ -	$ -	$ -	$ -	$ -	$ -
Tuition and Fees* (See Below)	$ -	$ -	$ -	$ -	$ -	$ -
Sub-Total Graduate Assistants	$ -	$ -	$ -	$ -	$ -	$ -
Operating	Current department operating budgets will support the ancillary operating costs					
Travel	$ -	$ -	$ -	$ -	$ -	$ -
Printing	$ -	$ -	$ -	$ -	$ -	$ -
Equipment	$ -	$ -	$ -	$ -	$ -	$ -
Other	$ -	$ -	$ -	$ -	$ -	$ -
Sub-Total Operating	$ -	$ -	$ -	$ -	$ -	$ -
Total Recurring	**$ -**	**$ 125,529**	**$ 128,039**	**$ 195,900**	**$ 199,818**	**$ 271,753**
TOTAL EXPENDITURES (A + B)	**$ 5,000**	**$ 125,529**	**$ 128,039**	**$ 195,900**	**$ 199,818**	**$ 271,753**

***If tuition and fees for Graduate Assistants are included, please provide the following information.**

Base Tuition and Fees Rate	$ -	$ -	$ -	$ -	$ -	$ -
Number of Graduate Assistants	-	-	-	-	-	-

	Planning Year	Year 1	Year 2	Year 3	Year 4	Year 5
II. Revenue						
Tuition and Fees[2]	$ -	$ 101,070	$ 175,188	$ 216,290	$ 262,782	$ 319,381
Institutional Reallocations[3]	$ -	$ -	$ -	$ -	$ -	$ -
Federal Grants[4]	$ -	$ -	$ -	$ -	$ -	$ -
Private Grants or Gifts[5]	$ -	$ -	$ -	$ -	$ -	$ -
Other[6]	$ -	$ -	$ -	$ -	$ -	$ -
BALANCED BUDGET LINE	**$ (5,000)**	**$ (24,459)**	**$ 47,149**	**$ 20,390**	**$ 62,964**	**$ 47,628**

Notes:

(1) Provide the funding source(s) for the new or renovated space.

(2) In what year is tuition and fee revenue expected to be generated? Tuition and fees include maintenance fees, out-of-state tuition, and any applicable earmarked fees for the program. Explain any differential fees.

APSU anticipates about 10 students to enroll in the first year with about 20% increased enrollment each subsequent year resulting in 36 total students enrolled by year five The degree program is 30 credit hours with the option to take some of the sources online or F2F Tuition and fees were calculated based on in-state fees at $561.50/credit hour. Tuition and fee estimates include attrition estimates, graduation estimates, and enrollment variations when possible. Other variables could not be controlled for.

(3) Identify the source(s) of the institutional reallocations, and grant matching requirements if applicable.

(4) Provide the source(s) of the Federal Grant including the granting department and CFDA(Catalog of Federal Domestic Assistance) nur

(5) Provide the name of the organization(s) or individual(s) providing grant(s) or gift(s).

(6) Provide information regarding other sources of the funding.