

**STATE BOARD OF COMMUNITY COLLEGES**  
**Curriculum Program Applications - Fast Track for Action [FTFA\*]**

**Request:** The State Board of Community Colleges is asked to approve the curriculum program at the listed college on the condition that equipment funds are available to the college and operating funds generated by the budget formula will permit the offering of the program without any special allocation of funds.

Alamance Community College  
Practical Nursing (Diploma) (D45660)

Blue Ridge Community College  
Civil Engineering Technology (A40140)  
Environmental Engineering Technology (A40150)

Fayetteville Technical Community College  
Baking and Pastry Arts (A55130)

**Background:** Program applications must meet the following criteria in order to be placed on the Fast Track for Action (FTFA) program approval request presented to the State Board of Community Colleges as part of the consent agenda:

- The curriculum program title currently exists within the System and does not require the creation of a new program title and new curriculum standard;
- The application is complete, requires no further analysis or documentation, and has the endorsement of Academic Programs;
- There are no negative impact assessments from other colleges; and
- The college does not go outside of its service area for planning purposes.

**Contact(s):**

Michelle Lair  
Director of Academic Programs

**STATE BOARD OF COMMUNITY COLLEGES**  
**Program Application**  
**Summary Evaluation Report**  
**Alamance Community College**  
**Practical Nursing (D45660)**

**Program Planning:** Alamance Community College is seeking approval for the Practical Nursing Diploma (D45660) program to begin Spring, 2024. The planning area is defined as the college's service area of Alamance County. All colleges were notified of the planning process for this program.

The proposed program was approved by the Board of Trustees at Alamance Community College on November 14, 2022. Minutes from this Board meeting were attached to the program application. The President and the Board of Trustees of Alamance Community College have certified the following:

- The proposed program will enhance the workforce of North Carolina, will provide educational and training opportunities consistent with the mission of the college, and will not duplicate the opportunities currently offered.
- They have assessed the need for the proposed program and the resources required to maintain a viable program and certify that the college can operate the proposed program efficiently and effectively within the resources available to the college.
- The college will complete a program accountability report including student success measures, enrollment trends, completion rates, and employment data three years after implementation of the program.

**Program Rationale:** Alamance Community College (ACC) indicates the following:

- The Cecil G. Sheps Center for Health Services Research (part of the University of North Carolina at Chapel Hill) projects an estimated statewide shortage of more than 5,000 LPNs by 2033. The Center concludes that an increased number of LPN graduates will be the primary means of addressing this shortage.
- For the period 2020- 2029, the North Carolina Office of State Budget and Management projects the population, including many retirees, to increase in Alamance County by 9.97%. Persons aged 65 years and over already constitute 17% of the North Carolina population as of 2021. This rapidly growing population presents a challenge to the medical community in the area.
- In 2021, LinkedIn listed nursing as the fifth-most in-demand job in the United States. In that same year, the North Carolina Department of Commerce, Labor & Economic

Analysis Department Star Jobs listed Licensed Practical Nurses among the Top 15 Star Jobs.

- In May 2022, NC Health News reported that North Carolina could be among the top five states for nursing shortages: “By 2033, the state could have a shortage of nearly 17,500 nurses, according to NC Nursecast data presented to the State Board of Community Colleges. That statistic reflects an estimated shortage of nearly 12,500 registered nurses (RNs) by 2033 and slightly more than 5,000 licensed practical nurses (LPNs).” These projections are based on 2018 data, and with the later disruptions from COVID, the situation is expected to worsen.
- One strategy for managing the current shortage of RNs is to fill this critical need with increased training and licensing of LPNs, who primarily support RNs and doctors by providing routine patient care in a clinical setting. Leveraging existing faculty to train more community college students has been suggested in order to reduce worker shortages.
- Reports have also pointed out that community colleges enroll more diverse student populations in practical nursing programs, thus leading to more workforce diversity of healthcare to include long term care facilities, home care and hospice and ambulatory care practices. Salary ranges average \$23 -\$30 per hour.
- In 2030, the projected supply of 24,400 Licensed Practical Nurses (LPN) for 35,100 positions is a shortfall of 30.5%.
- The US Bureau of Labor Statistics projects a 5% growth in LPN job opportunities in North Carolina, during the period 2018-2028, faster than the national average for all occupations. In January 2022, the Bureau revised that projection to 9%. Other projections suggest that nursing home, extended care, and assisted living facilities, which employ the greatest number of LPNs, face a nearly 50% forecasted shortage of LPNs by 2033.
- Hospitals also face a large percentage shortfall (3.7%) of LPNs by 2033. Both metro and non-metro areas face similar levels of LPN shortages.
- The average salary for LPNs in Alamance County in May 2020 was \$47,080. According to the EMSI Burning Glass: Program Specific Economic Impact Studies (PSEIS) report, for every \$1 invested in a program by students, they receive \$4.20 back throughout their working lives, which becomes a POI of 8.4%.
- The program will complement the already established Associate Degree Nursing program. The practical nursing classes will be in the evenings to best utilize existing space and resources.

- Our current clinical partners for our established Associate Degree Nursing program already have a tremendous number of open LPN positions: Cone Health (51), UNC Health (77), and Duke University Medical Center (12). Indeed (2022) listed 857 jobs for LPNs in North Carolina with 562 in Alamance County. Glassdoor (2022) had 6,981 LPN jobs in North Carolina with 1,733 appropriate for newly licensed LPNs (no experience required).
- Letters of support were received from Cone Health, UNC Health, UNC Sheps Center, NC Correctional Institute for Women, and White Oak of Burlington.

**Impact of the Proposed Program on Other Programs:** Forty-one community colleges are approved to offer the Practical Nursing program. This program contains a clinical component; therefore, each college was provided with a program impact assessment from Alamance Community College. **Forty-one colleges approved to offer the program were in agreement with the impact assessment. No negative impact assessments were received.**

**Implementation of Collaborative Plan:** Not Applicable

**Curriculum Design:** The proposed program of study is in compliance with the State Board approved curriculum standard.

**Curriculum Description as Designated on Curriculum Standard:** *The Practical Nursing curriculum provides knowledge and skills to integrate safety and quality into nursing care to meet the needs of the holistic individual which impact health, quality of life, and achievement of potential. Course work includes and builds upon the domains of healthcare, nursing practice, and the holistic individual. Content emphasizes safe, individualized nursing care and participation in the interdisciplinary team while employing evidence-based practice, quality improvement, and informatics. Graduates are eligible to apply to take the National Council Licensure Examination (NCLEX-PN) which is required for practice as a Licensed Practical Nurse. Employment opportunities include hospitals, rehabilitation/long term care/home health facilities, clinics, and physicians' offices.*

**Contact(s):**

Dr. Lori H. Byrd  
Associate Director

**STATE BOARD OF COMMUNITY COLLEGES**  
**Program Application**  
**Summary Evaluation Report**  
**Blue Ridge Community College**  
**Civil Engineering Technology (A40140)**

**Program Planning:** Blue Ridge Community College is seeking approval for the Civil Engineering Technology (A40140) program to begin Fall 2023. The planning area is defined as the college's service area of Henderson and Transylvania counties. All colleges were notified of the planning process for this program.

The proposed program was approved by the Board of Trustees at Blue Ridge Community College on November 14, 2022. Minutes from this Board meeting were attached to the program application. The President and the Board of Trustees of Blue Ridge Community College have certified the following:

- The proposed program will enhance the workforce of North Carolina, will provide educational and training opportunities consistent with the mission of the college, and will not duplicate the opportunities currently offered.
- They have assessed the need for the proposed program and the resources required to maintain a viable program and certify that the college can operate the proposed program efficiently and effectively within the resources available to the college.
- The college will complete a program accountability report including student success measures, enrollment trends, completion rates, and employment data three years after implementation of the program.

**Program Rationale:** Blue Ridge Community College (Blue Ridge CC) indicates the following:

- Graduates of the Civil Engineering Technology program will be qualified for technician-level jobs with both public and private engineering, construction, and surveying agencies. They will also be able to pursue entrepreneurial opportunities.
- According to Data USA, employment opportunities in Civil Engineering Technology for 2020 expected a 1.55% growth in the western region of North Carolina, including the service area of Blue Ridge CC.
- According to the NC Department of Commerce's 2020-2030 job outlook, the projected average annual openings for civil engineering technicians is 333 jobs statewide. According to the Bureau of Labor Statistics, the median yearly salary for Civil Engineering Technology related jobs is \$55,280.

- In addition to employment opportunities related to civil engineering technology, the college indicates that the proposed program prepares students for jobs related to material engineering technology, and construction engineering technology.
- A keyword search using “Civil Engineering Technician” (20), “Materials Engineering Technician” (27), and “Construction Engineering Technician” (24) was conducted on January 6, 2023, using Indeed.com. The search yielded seventy-one (71) jobs within the western part of North Carolina, which includes the service area of Blue Ridge CC.
- Current qualified Blue Ridge CC engineering faculty are available to teach the courses required for the proposed degree. Classrooms, labs, and required technology are available to support the proposed program.
- Emails and letters of support for the proposed program were received from WGLA Engineering, Gentry Geotechnical Engineering, North Carolina Department of Agriculture, Metropolitan Sewerage District of Buncombe County (which also serves portions of Henderson County), S&ME Inc., City of Hendersonville Engineering Department, and SEPI Engineering. These companies and organizations offered support for the program and willingness to hire graduates from the proposed program.
- If approved for implementation, Blue Ridge CC will provide additional educational pathways for high school students to earn post-secondary Career and Technical Education (CTE) credentials with market value through Career and College Promise (CCP).

**Impact of the Proposed Program on Other Programs:** Eight community colleges are currently approved to offer the Civil Engineering Technology (A40140) program. An impact assessment was sent to two contiguous colleges that offer the same degree. **No Negative impact assessments were received.**

**Implementation of Collaborative Plan:** Not Applicable

**Curriculum Design:** The proposed program of study is in compliance with the State Board approved curriculum standard.

**Curriculum Description as Designated on Curriculum Standard:**

*The Civil Engineering Technology curriculum is designed to prepare students through the study and application of principles from mathematics, natural sciences, and technology and applied processes based on these subjects. Course work includes mathematics, natural sciences, engineering sciences and technology. Graduates should qualify to obtain occupations such as technical service providers, materials and technologies testing services, engineering technicians, construction technicians and managers, industrial and technology managers, or research technicians. This course of study prepares students to use basic engineering principles and technical skills to carry out planning, documenting and supervising tasks in sustainable land*

*development and public works and facilities projects. Includes instruction in the communication and computational skills required for materials testing, structural testing, field and laboratory testing, site analysis, estimating, project management, plan preparation, hydraulics, environmental technology, and surveying. Graduates should qualify for technician-level jobs with both public and private engineering, construction, and surveying agencies.*

**Contact(s):**

Dr. Hilmi Lahoud

Senior Program Administrator

**STATE BOARD OF COMMUNITY COLLEGES**  
**Program Application**  
**Summary Evaluation Report**  
**Blue Ridge Community College**  
**Environmental Engineering Technology (A40150)**

**Program Planning:** Blue Ridge Community College is seeking approval for the Environmental Engineering Technology (A40150) program to begin Fall 2023. The planning area is defined as the college's service area of Henderson and Transylvania counties. All colleges were notified of the planning process for this program.

The proposed program was approved by the Board of Trustees at Blue Ridge Community College on November 14, 2022. Minutes from this Board meeting were attached to the program application. The President and the Board of Trustees of Blue Ridge Community College have certified the following:

- The proposed program will enhance the workforce of North Carolina, will provide educational and training opportunities consistent with the mission of the college, and will not duplicate the opportunities currently offered.
- They have assessed the need for the proposed program and the resources required to maintain a viable program and certify that the college can operate the proposed program efficiently and effectively within the resources available to the college.
- The college will complete a program accountability report including student success measures, enrollment trends, completion rates, and employment data three years after implementation of the program.

**Program Rationale:** Blue Ridge Community College (Blue Ridge CC) indicates the following:

- Graduates of the Environmental Engineering Technology program will be qualified to work in both public and private engineering, construction, and environmental testing agencies.
- According to the Bureau of Labor Statistics, employment of Environmental Engineering Technologists is projected to grow by 4% from 2021-31 nation-wide and 0.7% across North Carolina. The median yearly salary for Environmental Engineering Technology related jobs is \$48,390.
- According to Data USA, employment opportunities related to environmental engineering technology in 2020 expected a 1.37% to 1.55% growth in the western region of North Carolina, which includes the service area of Blue Ridge CC.



- According to the O\*NET online 2021-2031 Wages and Employment Trends, the projected job openings total is 1600 statewide, and the projected growth is averaged at 4% to 7%. In addition to employment opportunities related to environmental engineering technology, the college indicates that the proposed program prepares students for jobs related to storm water inspection, environmental design, environmental science entry level, environmental protection, and wastewater management.
- A keyword search using “Environmental Engineering” (15), “Storm Water Inspector” (4), “Environmental Design” (2), “Environmental Science Entry Level” (1), “Environmental Protection” (7), was conducted on January 9, 2023, using Indeed.com. The search yielded twenty-nine (29) jobs within the western part of the state, which includes the service area of Blue Ridge CC.
- Current qualified Blue Ridge CC engineering faculty are available to teach the courses required for the proposed degree. Classrooms, labs, and required technology are available to support the proposed program.
- Emails and letters of support for the proposed program were received from WGLA Engineering PLLC, Gentry Geotechnical Engineering, North Carolina Department of Agriculture, S&ME Inc., City of Hendersonville Engineering Department, and SEPI Engineering. These companies and organizations offered support for the program and willingness to hire Blue Ridge graduates.
- If approved for implementation, Blue Ridge CC will provide additional educational pathways for high school students to earn post-secondary Career and Technical Education (CTE) credentials with market value through Career and College Promise (CCP).

**Impact of the Proposed Program on Other Programs:** Two community colleges are currently approved to offer the Environmental Engineering Technology (A40150) program. An impact assessment was sent to one contiguous college that offers the same degree. **No negative impact assessments were received.**

**Implementation of Collaborative Plan:** Not Applicable

**Curriculum Design:** The proposed program of study is in compliance with the State Board approved curriculum standard.

**Curriculum Description as Designated on Curriculum Standard:**

*The Environmental Engineering Technology curriculum is designed to prepare students through the study and application of principles from mathematics, natural sciences, and technology and applied processes based on these subjects. Course work includes mathematics, natural sciences, engineering sciences and technology. Graduates should qualify to obtain occupations such as*

*technical service providers, materials and technologies testing services, engineering technicians, construction technicians and managers, industrial and technology managers, or research technicians. This course of study prepares students to use mathematical and scientific principles to modify, test, and operate equipment and devices used in the prevention, control and remediation of environmental problems and development of environmental remediation devices. Includes instruction in environmental safety principles, environmental standards, testing and sampling procedures, laboratory techniques, instrumentation calibration, safety and protection procedures, equipment maintenance, and report preparation.*

**Contact(s):**

Dr. Hilmi Lahoud  
Senior Program Administrator

**STATE BOARD OF COMMUNITY COLLEGES**  
**Program Application**  
**Summary Evaluation Report**  
**Fayetteville Technical Community College**  
**Baking and Pastry Arts (A55130)**

**Program Planning:** Fayetteville Technical Community College is seeking approval for the Baking and Pastry Arts (A55130) program to begin Fall 2023. The planning area is defined as the college's service area of Cumberland County. All colleges were notified of the planning process for this program.

The proposed program was approved by the Board of Trustees at Fayetteville Technical Community College on October 17, 2022. Minutes from this Board meeting were attached to the program application. The President and the Board of Trustees of Fayetteville Technical Community College have certified the following:

- The proposed program will enhance the workforce of North Carolina, will provide educational and training opportunities consistent with the mission of the college, and will not duplicate the opportunities currently offered.
- They have assessed the need for the proposed program and the resources required to maintain a viable program and certify that the college can operate the proposed program efficiently and effectively within the resources available to the college.
- The college will complete a program accountability report including student success measures, enrollment trends, completion rates, and employment data three years after implementation of the program.

**Program Rationale:** Fayetteville Technical Community College (FTCC) indicates the following:

- The Baking and Pastry Arts (BPA) program is designed to provide students with the skills and knowledge for employment in the baking/pastry industry. Jobs requiring this specialized skill set can include restaurants, hotels, independent bakeries and pastry shops, wholesale and retail markets, and high-volume bakeries. Graduates may choose to explore small business ownership and entrepreneurship in the baking and pastry field. The program would also support further academic studies through transfer opportunities with schools offering bachelor's degrees in baking and pastry arts.
- The Bureau of Labor Statistics has reported a 5% expected growth in the need for baker skills over the next ten years. The same report indicates a much higher projected rate of growth for people in the industry that have a degree. Specialized positions such as Head Bakers and Pastry Chefs show a projected growth rate of 13% and Restaurant Pastry Chefs show a growth rate of 22% over the next ten years.

- According to Payscale.com, the average national salary of jobs for Bakers can increase between 8-18% from entry-level to early/mid-career positions through experience and increased education.
- FTCC assessed student interest amongst current and past Culinary Arts students to specialize in this field. This is evident through the participation and retention in baking and pastry-related electives in the last two years of instruction. FTCC have offered one baking elective each semester with 100% retention in each course. FTCC surveyed current Culinary and Hospitality students to confirm student interest. Of the students who responded, 24.2% of students were considering a Baking and Pastry degree and another 51.5% intended to enroll in a Baking and Pastry program if offered.
- A letter of support was received from Sabrina Santucci, owner of Superior Bakery.

**Impact of the Proposed Program on Other Programs:** Nine colleges are approved to offer the Baking and Pastry Arts (A55130) program. Two impact assessments were sent to contiguous colleges offering the same degree, as a result; ***one college agreed with the impact assessment. The other college did not agree with the impact assessment but did support the college applying for the program.***

**Implementation of Collaborative Plan:** Not Applicable

**Curriculum Design:** The proposed program of study is in compliance with the State Board approved curriculum standard.

**Curriculum Description as Designated on Curriculum Standard:**

*This curriculum is designed to provide students with the skills and knowledge required for employment in the baking/pastry industry, including restaurants, hotels, independent bakeries/pastry shops, wholesale/retail markets, and high-volume bakeries, and/or further academic studies. Students will be provided theoretical knowledge/practical applications that provide critical competencies to meet industry demands, including environmental stewardship, operational efficiencies, and professionalism. Course work includes specialty/artisanal breads, desserts/pastries, decorative work, high-volume production, and food marketing. Graduates should qualify for entry-level positions, such as pastry/bakery assistant, area pastry chef and assistant pastry chef. American Culinary Federation certification may be available to graduates.*

**Contact(s):**

Dr. Mary Olvera  
Program Administrator