NEW PROGRAM FORM

Certificate

Proposal Number 2223-034

SECTION I. PROGRAM INFORMATION AND RATIONALE

Requested Date of Implementation*Required

Fall 2023

Name of Program*Required

Lab Technician Certificate

Degree or Certificate/Award*Required

Certificate of Completion (CC) 29 or less credits

Academic Center
*Required

STEM

CIP Code *Required

41.0101

The CIP (Classification of Instructional Programs) code is a system used by the federal government for accurate tracking and reporting of fields of study and program completion. A CIP code needs to be included for every program and every course. CIP codes can be found on the federal user site at https://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55 (https://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55). Select the CIP code that best reflects your course content.

What is the rationale for the proposal? *Required

Describe how the program's mission statement is consistent with, or aligns with, the mission of the College.

This certificate program is designed to expand career training opportunities to NECC students and prospective students in nearby communities. This certificate program provides the hands-on skills necessary to work as an entry-level lab technician, and can be completed in one year. We have minimized the chemistry and math required to make it even more accessible to all students. However, it also is a first step in the path to an AAS degree in Lab Science and potential transfer to UML as well. Thus it serves a broad population of students. Additionally, since all of the Lab Science specific courses are taken in a single year, students that transfer into the program can potentially complete the AAS degree in one year. Currently, many students have chosen not to pursue the Lab Science degree because it would take two years even though they transferred in a significant number of classes

Location of Program*Required

Haverhill ☑ Lawrence ☐ Off Campus ☐ 100% Online ☐

Hybrid ☐ Other ☐

TRANSFER INFORMATION (IF APPLICABLE)

Provide specific information regarding the transferability of the program including the potential for articulation agreements.

The courses completed in this one year certificate can be used towards completion of the Lab Science AAS degree, which transfers to UML and Rivier.

The program will meet the Mass Transfer (Gen-Ed Foundation) Block *Required

Yes ○ No ◉

Program Attributes

Program attributes are associated with standardized content in the program description and/or additional program fees. Check all that apply. If program attributes are checked (except for Accreditation), content associated will be added to the program description. Standard content is found in the help ? If the program is accredited, check the box and provide the information about the accreditation agency.

- [ ] Accreditation
- [ ] CORI/CHRI/SORI
- [ ] CPR
- [ ] Criteria Based
- [ ] Drug Screening
- [ ] Health Immunizations
- [ ] Professional Liability Insurance
- [ ] Other

SECTION II: PROGRAM REQUIREMENTS, OUTCOMES AND CORE ACADEMIC SKILLS

Program Description

The Lab Technician certificate program is designed to build the essential skills and knowledge required for entry level employment as a lab technician. The curriculum allows students with minimal science and mathematics backgrounds to successfully complete the certificate.

A minimum of 26 credits is required for graduation.

Title

Requirements

Course List

BIO115 Physiological Chemistry (4)

BIO230 Cell Biology (4)

CHM203 Instrumental Analysis (4)

ENG101 English Composition I (3)

SCI105 Laboratory Methods (4)

SCI106 Biotechnology (4)

SCI107 Principles of cGMP and Quality Control in the Biosciences (3)

Requirement Notes

Title

Recommended Course Sequence/Pathway

Course List

Title

Year 1 Fall

Course List

SCI105 Laboratory Methods (4)

BIO115 Physiological Chemistry (4)

ENG101 English Composition I (3)

SCI107 Principles of cGMP and Quality Control in the Biosciences (3)

Requirement Notes

Title

Year 1 Spring

Course List

BIO230 Cell Biology (4)

CHM203 Instrumental Analysis (4)

SCI106 Biotechnology (4)

Requirement Notes

Requirement Notes

List the program learning outcomes and objectives *Required

Comprehend, translate, and use the language of biotechnology, biology and chemistry.
Perform standard laboratory practices and workplace functions.
Demonstrate ability to carry out standard laboratory techniques and operate common laboratory equipment used in standard science labs.
Conduct mathematical and computational operations involved in the laboratory, including the use of applicable software.

Describe how this program satisfies Core Academic Skills *Required

Core Academic Skills (https://facstaff.necc.mass.edu/faculty-resources/program-review-outcomes-assessment/core-academic-skills/)

The following Core Academic Skills will be competed upon completion of this certificate:
Information Literacy
Quantitative Reasoning
Science and Technology

Written Communication

SECTION III: MARKET SURVEY, IMPACT AND SPECIAL ARRANGEMENTS

Describe the job market survey conducted to determine the demand for graduates. Include a copy of that survey and the collated results. The survey must comply with current Federal Financial Aid "Gainful Employment" Guidelines.

The Massachusetts Biotechnology Council estimated that the state's biopharmaceutical industry will grow by at least 40,000 jobs by 2024. The MassBioEd Mass Life Sciences Employment Outlook report - assembled by the firm TEConomy Partners LLC - listed several promising trends in the Life Sciences sector. First, the report predicts significant talent deficits are likely for life sciences technicians (a deficit of up to 4,300 positions over 5 years). Specifically, the life sciences industry is projected to grow by 9.2% from 2021 through 2026, adding a projected 11,200 new jobs and serving as a key growth driver for the state economy. To help meet these projected worker shortfalls, MassBioEd has promoted increasing new and existing associate degree and certificate programs. They suggest incorporation of creative approaches in these programs, such as including flexibility, fast tracked micro-credentialling

What evidence of student interest is available? Please indicate the number of students the institution expects to enroll and the number it expects to graduate for each of the first five years of the program's operation.

The demand for a career path to work as a lab technician is evidenced by the fact that biotech programs are being added in local high schools. There are at least 6 high schools within 30 minutes of NECC that have biotech programs. By creating a one-year path to employment we provide those students a fast, cost-effective pathway to good paying jobs. Moreover, the one-year pathway makes this a much more feasible option for adults who need to re-train in a new profession. Likewise, we have lost many transfer students who wanted to join the Lab Science program, but didn't because of the in-flexible two-year pathway. With the Lab Science specific courses in the first year, students who have alot of credits may be able to transfer into the program and complete their associates degree in one year. Prior to adding the certificate program, we were enrolling around 20 students each year (prior to Covid). We expect that

Will any programs be inactivated or revised as a result of the proposal? *Required Yes ◉ No ○

Select Program(s) that will be inactivated or revised. *Required

Laboratory Science, Associate in Applied Science

Explanation *Required

Programs selected will need Program Revision and/or Program Inactivations completed for the Academic Affairs Committee.

We have reorganized the course pathway of the Lab Science program.

Select the Academic Centers or Other Areas that may be impacted or may need to be notified about the program revision. (For example, if you are changing course requirements, check what Academic Center or Other Area they fall under if not the one for the program revision. View Academic Centers (https://necc.smartcatalogiq.com/current/Catalog/Academic-Centers) chart.
Do NOT select the Academic Center or Other Area that oversees the program being revised or it will create an additional unnecessary step in the workflow.

- [ ] Business and Accounting
- [ ] Health
- [ ] Liberal Arts
- [ ] Professional Studies
- [ ] STEM
- [ ] Cooperative Education
- [ ] Honors
- [ ] Individualized Option
- [ ] International Studies

List any other post-secondary institutions within commuting distance (50-mile radius) offering similar/comparable programs. Identify the similarities and differences of the proposed program to them. Also, state the number of students in the most recent spring graduating class if possible from each of these programs.

North Shore Community College: NSCC has 28 credit certificate program, but the curriculum is very general. The only program certificate-specific courses are Basic Lab Applications and Biotechnology Applications. The other courses are part of the Biology program. Additionally, their math and chem requirements are at a higher level that will be required in this certificate option. We have seen that those higher requirements are a barrier to many students, which is one of the driving forces behind our creating this certificate option. This proposed certificate option will have more applied labs and lab skill development.
5 enrolled for fall 2022

Describe any special arrangements required for this program including but not limited to: Inter-institution agency contracts or agreements , Field experiences/practicums, Job placement of students upon graduation, Recruitment and admission of students for the program

As with any new program, it will be necessary to publicize the availability of this new program. Lab Science faculty will meet with the advising team to make them aware of the new opportunity. We will also need to reach out to the neighboring high schools - especially those with biotech programs - to make them aware of the new program.

SECTION IV. RESOURCES

The existing resources in place are adequate for the following:

- Equipment
- Space (traditional classrooms, labs, special facilities, etc)
- Library
- Computer Resources (labs, special software, etc)
- Personnel (faculty, staff, support, counselors, administrators)

*Required

Yes ◉

No ○

SECTION V. FOR ADMINISTRATIVE USE ONLY

CIP Code

Major Code

Program Code

Department

Department Chair Needs Workflow Notification ☐

EXTERNAL APPROVALS

NECC Board of Trustees

Sent Date

Enter date

Approval Date

Enter date

Department of Higher Education (DHE)

Sent Date

Enter date

Approval Date

Enter date

New England Commission of Higher Education (NECHE)

Sent Date

Enter date

Approval Date

Enter date

DHE Financial Aid approval (for certificates 29 credits or less only)

Sent Date

Enter date

Approval Date

Enter date

Attach any forms or correspondence confirming the approvals.