



NEW PROGRAM PROPOSAL FORM

Sponsoring Institution(s): Ozarks Technical Community College

Program Title: Environmental Science Technician

Degree/Certificate: Associate of Applied Science Degree (2 yr - A.A.S) / Certificate (C1 - >=1 year but <2 yr)

Options: Click here to enter text.

Delivery Site(s): Ozarks Technical Community College; OTC-Waynesville; OTC-Lebanon

CIP Classification: 3.0104

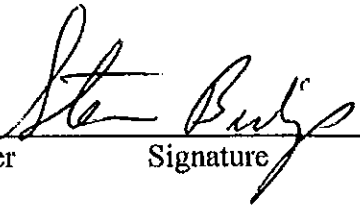
*CIP code can be cross-referenced with programs offered in your region on MDHE's program inventory highered.mo.gov/ProgramInventory/search.jsp

Implementation Date: Fall, 2014

Cooperative Partners: Click here to enter text.

*If this is a collaborative program, form CL must be included with this proposal

AUTHORIZATION:

Dr. Steve Bishop/Provost		6-30-14
_____ Name/Title of Institutional Officer	_____ Signature	_____ Date
Dr. Gavin O'Connor	417-447-8241	
_____ Person to Contact for More Information	_____ Telephone	



STUDENT ENROLLMENT PROJECTIONS

Year	1	2	3	4	5
Full Time	30	40	42	44	46
Part Time	15	20	22	24	26
Total	45	60	64	68	72

Please provide a rationale regarding how student enrollment projections were calculated:

The first year of the Environmental Science Technician Program will provide the opportunity for 30 full time and 15 part time students, working in cohort groups, to matriculate through the curriculum in pursuit of their academic goals. The second through fifth years of the program will build on the success of the initial year, and provide the opportunity for additional students to enroll in the program.

Provide a **rationale** for proposing this program, including **evidence of market demand and societal need supported by research**:

The Environmental Science Technician Program proposed by Ozarks Technical Community College will serve a diverse group of students from nine counties in Southern Missouri. The program will be initially funded through a Technology-Enabled Pathways to Healthcare grant focused on providing unemployed and underemployed adults with a pathway to attain skills which would improve their ability to pursue a career in a science, technology, engineering or mathematics (STEM) field. The Environmental Science Technician Program proposed by OTC is classified as NAICS code 54. Data from the U.S. Bureau of Labor Statistics indicate technician positions in the environmental sciences are poised for a growth rate exceeding 18 over the next 10 years (U.S. Department of Labor, 2013. Published in the U.S. Bureau of Labor Statistics. Retrieved June 1, 2013).

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The 38 hour certificate will provide students a credential that will benefit them in seeking employment. Employment in the field as an environmental science technician will increase the likelihood of degree completion. This program will provide veterans and active duty military personnel who have had prior training in the armed forces in chemical hazardous waste management (HAZMAT) and other specialized training which could be evaluated for credit for prior learning, thereby accelerating their progress through the proposed curriculum. The education center of OTC in Waynesville, Missouri, is ideally located in close proximity to the Fort Leonard Wood military base, providing the opportunity for individuals serving in the military, as well as retired veterans, to pursue enrollment in the program.

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Form SE - Student Enrollment Projections



PROGRAM STRUCTURE

A. Total credits required for graduation: 62

B. Residency requirements, if any: N/A

C. General education: Total credits: 24

Courses (specific courses OR distribution area and credits):

Course Number	Credits	Course Title
MTH 130	3	College Algebra
MTH 210	3	Statistics
ENG 101	3	Composition I
ENG 150	3	Technical Writing
COM 105	3	Public Speaking
HUM	3	Humanities elective
PLS 101	3	American Government and Politics
CIS 101	3	Computer Applications

D. Major requirements: Total credits: 38

Course Number	Credits	Course Title
BIO 105	4	Environmental Science
BIO 201	3	Introduction to Environmental Science Protection Technology
CHM 101	4	Introductory Chemistry
AGR 235	3	Soils
BIO 202	3	Water Quality Testing
BIO 203	3	Air Quality Testing
BIO 204	3	Hazardous Waste Management (HAZMAT)
CHM 225	3	Environmental Chemistry
PLS 255	3	Environmental Law
BIO 205	3	Occupational Health
BIO 290	6	Internship

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E. Free elective credits:

Humanities elective (3 credit hours)

(Sum of C, D, and E should equal A.)

F. Requirements for thesis, internship or other capstone experience:

Successful completion of a 6 credit hour internship class (BIO 155) would be required for students pursuing the 62 credit hour Associate of Applied Science degree as an Environmental Science Technician under this program proposal. The internship would be arranged with area business and industry partners, and student participants would be carefully monitored and provided the assistance needed to successfully complete their assigned internship experience.

G. Any unique features such as interdepartmental cooperation:

The development of the curriculum of this proposed program represents the culmination of extensive cooperation within several academic departments at Ozarks Technical Community College. There are courses within the program sequence which, depending on the prospective student's academic level, include technical writing, public speaking, environmental law, mathematics and statistics, chemistry, and computer applications.



PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

Institution Name Ozarks Technical Community College
Program Name Environmental Science Technician
Date August 18, 2014

(Although all of the following guidelines may not be applicable to the proposed program, please carefully consider the elements in each area and respond as completely as possible in the format below. Quantification of performance goals should be included wherever possible.)

1. Student Preparation

- Any special admissions procedures or student qualifications required for this program which exceed regular university admissions, standards, e.g., ACT score, completion of core curriculum, portfolio, personal interview, etc. Please note if no special preparation will be required.

No special student preparation will be required for entrance to this program.

- Characteristics of a specific population to be served, if applicable.

Potential students who are active duty U.S. military personnel, and or veterans from the armed forces, will be encouraged to apply for this program. Many of these students may have completed specialized training and or coursework which would be suited for consideration for evaluation of credit for prior learning.

2. Faculty Characteristics

- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate.

Faculty who instruct the assigned courses within the Environmental Science Technician program curriculum will meet or exceed the standards established for employment at Ozarks Technical Community College. Instructors will have completed a minimum of 18 graduate hours within their respective discipline, and priority will be given to those instructors who have completed at least a Master's Degree.

- Estimated percentage of credit hours that will be assigned to full time faculty. Please use the term "full time faculty" (and not FTE) in your descriptions here.

The estimated percentage of credit hours assigned full time faculty members instructing courses for the Environmental Science Technician program is 50 percent. This estimation is based on full time faculty members instructing 12 credit hours during both the fall and spring sixteen week semesters, and 6 credit hours during eight week summer semesters.

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- Expectations for professional activities, special student contact, teaching/learning innovation.

The faculty who instruct courses in this program would be encouraged to belong to professional organizations, and attend seminars and pursue other opportunities for professional development in their respective fields of study. A majority of the courses in the program would be delivered in a hybrid format, with face-to-face class meetings once a week, and the remainder of the course material presented online. During the weekly meetings, the students will be provided the opportunity to interact with their peers and instructors, to participate in laboratory exercises, and complete proctored assignments and exams.

3. Enrollment Projections

- Student FTE majoring in program by the end of five years.
There could potentially be a total of 309 students majoring in this Environmental Science Technician program by the end of the first five years (SE form).
- Percent of full time and part time enrollment by the end of five years.
If the projected student enrollment submitted on the SE form is achieved, there will be a total of 202 full time (65%), and 107 part time (35%) students enrolled by the end of the fifth year of the program.

4. Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation.
Based on the projected number of students who may enroll in the Environmental Science Technician program presented on the SE form, there could be 127 of the 169 students who complete the program at the end of the third year, which would represent a 75% retention rate. The same 75% retention rate applied to the total number of graduating students five years after the program began would generate 105 additional graduates from the Environmental Science Technician program.
- Special skills specific to the program.
Graduates will have the entry-level skills necessary to function as an environmental laboratory or field technician.
- Proportion of students who will achieve licensing, certification, or registration.
Industry recognized credentials are currently being evaluated.

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- Performance on national and/or local assessments, e.g., percent of students scoring above the 50th percentile on normed tests; percent of students achieving minimal cut-scores on criterion-referenced tests. Include expected results on assessments of general education and on exit assessments in a particular discipline as well as the name of any nationally recognized assessments used.

Students will be expected to score at or above the national average on the ACT WorkKeys Assessment. Other industry recognized assessments are being evaluated for use.

- Placement rates in related fields, in other fields, unemployed.
Job placement in related fields is anticipated at 95% for completers of this program. Approximately 5% are anticipated to be employed in other fields.
- Transfer rates, continuous study.
Although this is an Associate of Applied Science degree, graduates will have the ability to transfer many of the courses to other science related programs at 4-year institutions.

5. Program Accreditation

- Institutional plans for accreditation, if applicable, including accrediting agency and timeline. **If there are no plans to seek specialized accreditation, please provide a rationale.**
Specialized accreditation opportunities are being evaluated.

6. Alumni and Employer Survey

- Expected satisfaction rates for alumni, *including timing and method of surveys*.
Graduate surveys will be conducted within six months of graduation. A response rate of 90% with a 100% level of satisfaction will be expected from our graduates.
- Expected satisfaction rates for employers, including timing and method of surveys.
Employer surveys will be conducted within six months of graduation on employed students. A response rate of 90% with a 100% level of satisfaction will be expected from employers.

7. Institutional Characteristics

- Characteristics demonstrating why your institution is particularly well-equipped to support the program.
Ozarks Technical Community College is uniquely suited to offer an Associate of Applied Science degree in Environmental Science Technician because we have an excellent reputation in providing science based curriculum. Our classrooms and laboratories are well equipped to support this program with state-of-the-art audiovisual, computer, and science equipment.

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