

April 1, 2013

Dr. Crystal Kroner  
Missouri Department of Higher Education  
205 Jefferson Street  
P.O. Box 1469  
Jefferson City, MO 65102

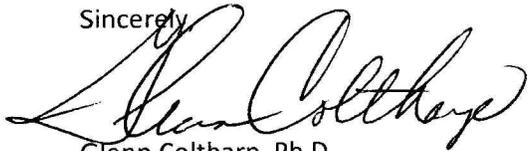
RE: Associate of Applied Science in Engineering Technology

Dear Dr. Kroner:

Crowder College is asking that MDHE approve the attached proposal to allow an Associate of Applied Science Degree in Engineering Technology. Crowder would like to offer this new program in Neosho, Cassville, Nevada, Webb City and online.

Please feel free to contact me if you have any questions.

Sincerely,



Glenn Coltharp, Ph.D.

Vice President Academic Affairs

Attachments



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NEW PROGRAM PROPOSAL FORM

Sponsoring Institution(s): Crowder College

Program Title: Engineering Technology

Degree/Certificate: Associate of Applied Science

Options: NA

Delivery Site(s): Crowder College in Neosho, Webb City, Cassville, Nevada and online

CIP Classification: 15.0000 (Please provide a CIP code)

Implementation Date: Fall 2013

Cooperative Partners: NA

AUTHORIZATION:

Dr. Glenn Coltharp, VP for Academic Affairs

*Glenn Coltharp*

4-1-13

Name/Title of Institutional Officer

Signature

Date

Rebekah Starkweather

417-455-5471

Person to Contact for More Information

Telephone

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### STUDENT ENROLLMENT PROJECTIONS

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Year	1	2	3	4	5
Full Time	5	10	10	10	10
Part Time	5	10	15	20	20
Total	10	20	25	30	30

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Form SE - Student Enrollment Projections

## **Need**

The mission of Crowder College is to build a civil, serving, literate, learning community of responsible citizens. We view the college as having an active role in economic and social development through continuing education and customized training, directed toward improving work skills and productivity, creating a more desirable work and social environment, and adding to the general quality of life within the region.

## **Market Demand**

According to the Occupational Outlook Handbook (2010-2011), job prospects and pay for graduates of Process Technology programs are good. Process Technicians are reported within the broader Science Technician category, where job growth during the 2008-18 decade is expected to average 12%. Pay is in the \$18-\$25 per hour range.

## **Societal Need**

The Center for the Advancement of Process Technology (CAPT) states, "Industry is looking for applicants that have an Associate in Applied Science Degree in Process Technology. Therefore, community colleges and technical schools will play a major role in educating the individuals needed for this career pipeline." Through business and industry communication at North America Process Technology Alliance (NAPTA) conference, area advisory board meetings, and discussions with industry leaders, the college has identified the need to develop the Process Technology program.

## **Program Duplication**

There are currently no accredited or certified Associate in Applied Science degree programs in Engineering Technology with a focus in Process Technology within the state of Missouri.



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PROGRAM STRUCTURE

A. Total credits required for graduation: 62

B. Residency requirements, if any: NA

C. General education: Total credits: 29

Courses (specific courses OR distribution area and credits):

Orientation	1cr.	Communications	6cr.	Mathematics	3cr.
Science	10cr.	MO Constitution	3cr.	Humanities	6cr.
_____	_____ cr.	_____	_____ cr.	_____	_____ cr.
_____	_____ cr.	_____	_____ cr.	_____	_____ cr.
_____	_____ cr.	_____	_____ cr.	_____	_____ cr.

D. Major requirements: Total credits: 33

PTEC130 Process Safety, Health and Environment	3cr.
PTEC140 Introduction to Process Technology	3cr.
PTEC150 Process Quality	3cr.
PTEC210 Process Technology Instrumentation I	3cr.
PTEC220 Process Technology Instrumentation I I	3cr.
PTEC230 Process Technology Equipment	3cr.
PTEC240 Process Technology Systems	3cr.
PTEC250 Process Technology Operations	3cr.
PTEC260 Process Technology Troubleshooting	3cr.
AMT102 Introduction to Industrial Electricity	3cr.
AMT162 Industrial Process Control I	3cr.
_____	_____ cr.
_____	_____ cr.

E. Free elective credits: (Sum of C, D, and E should equal A.)

F. Requirements for thesis, internship or other capstone experience: An industry test measuring job readiness in the field of process technology will be required.

G. Any unique features such as interdepartmental cooperation: Process technology equipment and two courses from the advanced manufacturing program will be utilized in the engineering technology program.



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## PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

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Institution Name      Crowder College  
Program Name          Engineering Technology  
Date    April 1, 2013

(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.)

### 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 admissions procedures or student qualifications beyond regular college admissions and standards.

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

NA

### Faculty Characteristics

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

An adjunct instructor strong in instrumentation knowledge to complement instructional and program development.

- 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.  
Full-time Faculty will teach no more than 12 program credit hours. The average load will be four 3-hr credit courses. Adjunct faculty will teach at least one 3-hr credit courses.
- Expectations for professional activities, special student contact, teaching/learning innovation.  
Participation in activities provided by industry partners, the North American Process Technology Alliance (NAPTA), the Center for the Advancement of Process Technology (CAPT) and Accreditation Board for Engineering and Technology (ABET) will be encouraged and/or required for instructors and students.

### Enrollment Projections

- Student FTE majoring in program by the end of five years.  
10 students FTE.

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- Percent of full time and part time enrollment by the end of five years.  
An estimation of full time enrollment is approximately 35%, while part time enrollment is estimated at 65%.

#### Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation.  
5 graduates per annum at three years and 10 graduates per annum at five years after implementation.
- Special skills specific to the program.  
NA
- Proportion of students who will achieve licensing, certification, or registration.  
NA
- 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.  
NOCTI.org currently reports a total average score of 72.6 overall for the national norm for Pre-Engineering/Engineering Technology. Students graduating from this program are expected to test above the 50th percentile range.
- Placement rates in related fields, in other fields, unemployed.  
The expected opportunity for placement of graduates from the engineering technology program into work specific to the skills or a closely related field is 100%.
- Transfer rates, continuous study.  
Crowder College awards the Associate of Applied Science degree as a workforce preparation degree. Students seeking to transfer to a baccalaureate program in engineering technology or a related field may wish to pursue additional selected coursework as electives. The college will pursue articulation agreements with institutions who award such a degree and maintain this information for students.

#### Program Accreditation

- Institutional plans for accreditation, if applicable, including accrediting agency and timeline. If there are no plans to seek specialized accreditation, please provide reasons. In year three, the program will apply for accreditation through the Accreditation Board for Engineering and Technology (ABET). Additionally, certification of the program will be sought through the North American Process Technology Alliance.

#### Alumni and Employer Survey

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- Expected satisfaction rates for alumni, including timing and method of surveys. Through the office of Career Services, Crowder College uses the Perkins 180-day follow-up survey/questionnaire that is sent to all career and technical program (degree and certificate) graduates.
- Expected satisfaction rates for employers, including timing and method of surveys. Through the office of Career Services, Crowder College conducts its own employer satisfaction survey 300 days after students graduate. We anticipate an 80% or higher satisfaction rate.

## **Institutional Characteristics**

Crowder College is accredited by the Missouri Department of Elementary and Secondary Education and the Coordinating Board for Higher Education. The college is also fully accredited by the Higher Learning Commission, a member of the North Central Association. Crowder College provides opportunities for people to pursue associate degrees, certificate and diploma programs, plus continuing education to include: a program of Arts and Sciences directed toward transfer to baccalaureate degree granting institutions and to general intellectual enrichment, career education leading to economic self-reliance, both developmental and honors education to allow greater opportunity to fully exercise each individual's academic potential, endeavors to enrich life through cultural and a vocational opportunity, and partnerships with business, industry and others designed to support a greater quality of life and an economic base in the community.