

Form NP

NEW PROGRAM PROPOSAL FORM

Sponsoring Institution(s): North Central Missouri College

Program Title: Fire Science Technology

Degree/Certificate: AAS

Options:Click here to enter text.

Delivery Site(s): North Central Missouri College 1301 Main Street, Trenton, MO 64683

CIP Classification: 43.0203

Implementation Date: January 2018

Cooperative Partners: Trenton Fire Department, Grand River Technical School, Hillyard Technical Center, Metropolitan Community College

AUTHORIZATION:

Brooke McAtee, Dean of Nursing & Health Sciences		1-20-17
Name/Title of Institutional Officer	Signature	Date
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Person to Contact for More Information	Telephone	

Rationale for the AAS Fire Science Technology at NCMC

The Fire Science Technology program will provide the educational background for employment in the broad field of fire protection and aid persons already employed to obtain credentials for advancement opportunities. This degree facilitates advancement into management positions within fire stations. Fire fighters, once hired, are having to receive their training and certifications offered by the Missouri Division of Fire Safety. Receiving this degree, will provide the student with certifications and training that would make them a more marketable employee. After meeting and discussing this degree with fire chiefs and assistants at area fire stations, along with directors and staff at area technical centers, all believe there is a need for this degree.

STUDENT ENROLLMENT PROJECTIONS

Year	1	2	3	4	5
Full Time	2	3	5	5	5
Part Time	2	3	5	8	8
Total	4	6	10	13	13

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

These numbers are based on past enrollment numbers in new programs. They are also based on the conversations with fire chiefs and assistants at area fire stations along with directors and staff at area technical centers. Given the number they produce each year, NCMC believes these projections are reasonable. In addition, there are a large number of students who are interested in our nursing and health science fields and this will allow them another avenue to explore. This program will be a good fit for some of those students.

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

According to data obtained from the U.S. Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, employment in firefighting occupations is expected to grow by 5% over 2014-2024. It states, "Competition for jobs will likely be strong. Physically fit applicants with high test scores, some post-secondary firefighter education, and EMT/paramedic training will have the best job prospects." It is difficult for fire departments to hire individuals because of the considerable amount of training (written and physical) requirements. With the AAS degree, our students will possess the certifications and training required to be the best candidate for job placement.

According to the Occupational Outlook Handbook, firefighters typically: drive fire trucks and other emergency vehicles, put out fires using water hoses, fire extinguishers, and water pumps, find and rescue victims in burning buildings or in other emergency situations, treat sick or injured people, prepare written reports on emergency incidents, clean and maintain equipment, conduct drills and physical fitness training, and provide public education on fire safety. It's important for firefighters to have the following qualities: communication skills, courage, decision-making skills, physical stamina, and physical strength.

Firefighter's duties may change several times while they are at the scene of an emergency. In some cases, they may remain at a scene for days rescuing trapped survivors and assisting with medical treatment. When they are not responding to an emergency, they are on

call at a fire station. During this time, they regularly inspect fire equipment and perform practice drills. Some firefighters also work in hazardous materials units and are specifically trained to control and clean up hazardous materials, such as oil spills and chemical accidents. They also eat and sleep and remain on call, as their shifts usually last 24 hours.

We met to discuss the need for this degree with two local fire departments and one area vocational schools who currently teach fire fighter classes. All three of these entities agreed that a need exists for an AAS program in Fire Science Technology and are very excited to get started. Currently an individual only needs to be 18 years old and have a high school diploma in order to be eligible to take courses in firefighter. They must be able to pass written and physical tests, complete a series of interviews, go through training at a fire academy and hold an EMT certification. Once hired, they must go through several trainings to obtain a variety of state certifications through the Missouri Division of Fire Safety. NCMC will require students to obtain five state certifications prior to obtaining their AAS degree in Fire Science Technology.

This program will provide our students a better opportunity to be hired over another individual that has not been through these specific trainings. By providing the AAS degree in Fire Science Technology, our students will have an advantage by possessing required state certifications in addition to their AAS degree. While AAS degrees are provided to meet the demand of workforce needs NCMC is working to provide a 2+2 articulation with University of Central Missouri (UCM). This articulation will provide NCMC Fire Science Technology graduate an opportunity to earn their bachelor's degree in Crisis and Disaster Management through UCM.

PROGRAM STRUCTURE

- A. Total credits required for graduation: 61 credit hours
- B. Total contact hours per course; See below
- C. Residency requirements, if any: N/A
- D. General education: Total credits: 12 credit hours

Courses (specific courses OR distribution area and credits):

EN101	English 1	3 cr hr	45 contact hours
SP175	Speech	3 cr hr	45 contact hours
HI103	American History to 1877		
OR PL216	National Government	3 cr hr	45 contact hours
AH106	Math-AH	3 cr hr	45 contact hours
OR	College Algebra OR Elementary Statistics		

Major requirements: Total credits: 49 credit hours

AH160	Basic Medical Terminology	3 cr hr	45 contact hours
PY121	General Psychology	3 cr hr	45 contact hours
CH107	Intro to Chemistry	4 cr hr	75 contact hours
BT160	Microcomputer Applications	3 cr hr	45 contact hours
AH211	Medical Law & Ethics	3 cr hr	45 contact hours
AC136	Accounting I	3 cr hr	45 contact hours
BA150	Principles of Management	3 cr hr	45 contact hours

Will supply certifications for the following and give credit for prior learning:

- EMT-Basic 8 cr hr
- Fire Fighter I & II 7 cr hr
- Hazard Materials 3 cr hr

Will take the following courses at accredited college and transfer courses into NCMC:

- Fire Protection Systems 3 cr hr
- Fire Behavior & Combustion Processes 3 cr hr
- Building Construction for Fire Protection 3 cr hr
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E. Free elective credits: None

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

F. Requirements for thesis, internship or other capstone experience: This does not apply.

G. Any unique features such as interdepartmental cooperation: The following departments from NCMC will be working together to meet the needs of the area: Health Sciences Division, Communications Department, History Department, Physical Science Department, Business Technology Department, Psychology Department, Chemistry Department, Social Science Department, and Accounting Department.

PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

Institution Name: North Central Missouri College

Program Name: AAS in Fire Science Technology

Date: Program Start Date January 2018

(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. **Must have certifications for EMT-Basic, Fire Fighter I & II, and Hazardous Materials.**
- Characteristics of a specific population to be served, if applicable. **Firefighters/EMT's wanting to further their education or those beginning their educational pursuit in Fire Science.**

2. Faculty Characteristics

- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate. **Must meet HLC and NCMC policies and procedures**
- 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. **All the courses in this new program are already established courses. No additional full-time faculty will be needed; therefore, full-time faculty will continue to teach their same load.**
- Expectations for professional activities, special student contact, teaching/learning innovation. **Continued faculty development/Online teaching/ Blackboard Collaborate.**

3. Enrollment Projections

- Student Full Time Equivalent majoring in program by the end of five years. **Predict by end of year five will have 13 students (5 full-time and 8 part-time).**
- Percent of full time and part time enrollment by the end of five years. **Predict by end of year five will have 38% of students full-time with 62% designated as part-time.**

4. Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation. **Year 3 = 2 and Year 5 = 6**
- Special skills specific to the program. **Drive fire trucks and other emergency vehicles, put out fires using water hoses, fire extinguishers, and water pumps,**

find and rescue victims in burning buildings or in other emergency situations, treat sick or injured people, prepare written reports on emergency incidents, clean and maintain equipment, conduct drills and physical fitness training, and provide public education on fire safety.

- **Proportion of students who will achieve licensing, certification, or registration. 100% of students will acquire five state certifications for the EMT-Basic, Fire Fighter I & II, and Hazardous Materials.**
- **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. 100% of students will acquire five state certifications approved by the Missouri Division of Fire Safety. All students must earn a "C" or above in all general education courses at NCMC.**
- **Placement rates in related fields, in other field, unemployed. Anticipates at least a 90% placement rate in related field.**
- **Transfer rates, continuous study. NCMC is working on a 2+2 articulation agreement with a university to aid in transferability of an AAS degree toward credit for a bachelor's degree in Crisis and Disaster Management.**

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 reasons. NCMC currently has no plans to seek Fire and Emergency Services Higher Education (FESHE) accreditation at this time. Currently, FESHE is not a requirement for fire fighters to obtain specific job opportunities nor is it required for continued education.**

6. Alumni and Employer Survey

- **Expected satisfaction rates for alumni, including timing and method of surveys. 180-day surveys are conducted with 75% return expected.**
- **Expected satisfaction rates for employers, including timing and method of surveys. 180-day surveys are conducted with 75% return expected.**

7. Institutional Characteristics

With a few exceptions, NCMC already offers most of this program's courses on-ground and online. Online courses/programs have been offered by NCMC since 2013. We are in a very rural area that has recently been named as a new firefighting training site. With an increase in firefighters coming to our community for training, NCMC would like to offer them the opportunity to earn their AAS degree in Fire Science Technology.