

**1. OFF-SITE DELIVERY PROPOSAL
FORM OS**

OFF-SITE DELIVERY OF AN EXISTING PROGRAM FORM

Sponsoring Institution(s): Moberly Area Community College

Program Title: Associate of Science

Degree/Certificate: Associate of Science Degree

Institution Granting Degree: Moberly Area Community College

Delivery Site:

MACC – Columbia Higher Education Center
601 Business Loop 70 West
Columbia, MO 65203

MACC – Hannibal Area Higher Education Center
190 Shinn Lane
Hannibal, MO 63401

MACC – Kirksville Higher Education Center
2105 East Normal
Kirksville, MO 63501

Advanced Technology Center
2900 Doreli Lane
Mexico, MO 65265

Mode of Program Delivery: Traditional, online, hybrid, and virtual course instruction

CIP Classification: 14.0101

Implementation Date: Fall 2014

Cooperative Partners: None

AUTHORIZATION

Dr. Jeffery C. Lashley, President

Name/Title of Institutional Officer


Signature

March 31, 2014

Date

Ms. Deanne Fessler

Person to Contact for More Information

660-263-4110, x208

Telephone

(Complete proposal and forms are attached)

ASSOCIATE OF SCIENCE DEGREE EXPANSION COMPLETE PROPOSAL

2. NEED

A. Student Demand

The Associate of Science degree has experienced tremendous growth over the past decade. From 2003 to 2013, the number of declared Associate of Science majors increased by 78%, far outpacing the overall growth of the College, which was 29%, during that same time frame.

MACC anticipates that student interest will continue to be strong in the Associate of Science degree. Form SE included below projects enrollment for the next five years in the proposed program expansion, which includes MACC's off-campus sites in Hannibal, Columbia, Kirksville and Mexico. These projections are based on trends in overall enrollment at these locations, on the number of students currently commuting to the Moberly campus from other MACC sites to complete their Associate of Science degree, and on the number of declared AS majors currently enrolled at the Columbia, Hannibal, Kirksville, and Mexico sites. While the degree is currently offered at only the Moberly campus, over half of the declared majors reside in Boone County, where students are most likely to attend MACC's Columbia site. Thus, demand at that site is particularly strong.

Additional growth will also be influenced by the number of A+ students expected to impact enrollment at each site. The high schools located in communities where MACC has sites have gained A+ designation, and MACC is the only postsecondary institution in the northeast Missouri region where students can use their A+ benefits.

MACC students regularly request that additional courses in the Associate of Science degree be offered in their communities, but MACC is limited to those Associate of Science courses that are required for the AA degree since the Associate of Science degree is not yet approved at these sites. Currently, students must commute to the Moberly campus to complete their Associate of Science degrees. Considering the cost of fuel and the over 100 mile round trip distance for students in the Hannibal and Kirksville areas, the expense of traveling to another campus three to five times per week can be prohibitive. Delivering the complete degree program at additional MACC sites will be a much-needed service to students in the MACC service region. No limits to enrollment in the program are anticipated.

MACC anticipates that it will be able to readily sustain an AS program at its Columbia site. For its smaller sites in Mexico, Hannibal, and Kirksville, MACC will employ innovative and flexible course delivery options, such as virtual and online courses, that will allow students to complete their degree at the site.

Again, because of the travel distance from the Moberly campus, it is important to provide students at the Mexico, Hannibal, and Kirksville sites access to local opportunities for the Associate of Science degree.

FORM SE

Student Enrollment Projections (Hannibal)

Year	1	2	3	4	5
Full-time	5	5	6	7	7
Part-time	3	4	4	4	5
Total	8	9	10	11	12

Student Enrollment Projections (Columbia)

Year	1	2	3	4	5
Full-time	40	44	48	53	59
Part-time	18	19	20	21	22
Total	58	63	68	74	81

Student Enrollment Projections (Kirksville)

Year	1	2	3	4	5
Full-time	3	3	4	4	5
Part-time	1	2	2	3	3
Total	4	5	6	7	8

Student Enrollment Projections (Mexico)

Year	1	2	3	4	5
Full-time	3	3	4	4	5
Part-time	1	2	2	3	3
Total	4	5	6	7	8

B. Market Demand

According to the *Occupational Outlook Handbook 2012-2013*, most areas within the engineering field will experience a growth rate; all areas that require a bachelor's degree or higher are projected to experience growth. The areas expected to grow the strongest include biomedical engineering, environmental engineering, and civil engineering. Because of the aging population and the need for medical care, the biomedical engineering field is expected to grow by more than 62%. State and local government regulations regarding water will contribute for the increased growth in the environmental engineering field.

In 2008, "Professional, Scientific, and Technical Services" and "Construction" were identified by the Missouri Economic Research and Information Center (MERIC) as "Cheetah" industry subsectors in Missouri. This designates the field as one of the state's fastest growing business sectors. Cheetah firms are characterized by extremely rapid increases in job growth, averaging 250% over the last five years. In a follow-up study done in 2011, 35% of the Professional, Scientific, and Technical Services firms and 14% of the Construction firms reviewed in the original study achieved continued growth from 2006-2009, even as the rest of the United States experienced a significant economic recession. Additionally, when resurveyed in 2011, 35% of these firms stated that they planned on increasing their employment levels in the next year. MACC's Associate of Science degree provides the foundation for many of the bachelor's degrees required in these positions, which leads to increased employability for MACC graduates once they complete their bachelor's degree.

Legislation involving A+ Schools is an additional compelling factor in market demand at the community college level in the state. Graduates from A+ designated schools could more easily take advantage of the opportunity to earn an Associate of Science degree with significant tuition subsidies if community college services and programs were more readily accessible in Adair, Audrain, Boone, and Marion counties. The high schools in Hannibal, Kirksville, Mexico, and Columbia are designated as A+ schools. Other schools in close proximity to these communities are also designated as A+, including the districts in Ashland, Hallsville, Centralia, Brashear, Novinger, Laddonia, Monroe City, Paris, Shelbina, Santa Fe, and Palmyra.

In addition to specific technical skills needed in the workplace, "soft skills" gaps are becoming an increasing concern of Missouri employers. "Soft Skills", which are generally defined as the cluster of social skills, personality traits, and personal habits that constitute a person, are becoming increasingly important in the workplace. The 2008 Missouri Skills Gap report indicates that soft skills gaps exist in all categories of occupations, and that some of the most common gaps occur in the areas of time management, reading comprehension, and basic math and writing skills. Many of these "soft skills" gaps are identified and addressed by students during the course of their academic career as they

continue to mature and acquire additional skills needed to complete the Associate of Science degree. Additionally, a strong general education component within the Associate of Science degree promotes the attainment of these skills.

A recent study by the national group Change the Equation (in partnership with the American Institutes for Research) reported that Missouri businesses have significant difficulty finding graduates in STEM (Science, Technology, Engineering, and Math) fields that they need to stay competitive. Additional findings indicate that in Missouri, STEM positions have remained in demand even through the recent recession. There are an estimated 3.1 jobs per person in STEM-related fields as compared to 1 job per 3.7 people in non-STEM fields. One recommendation this study makes to address the shortage of STEM graduates in Missouri is to ease the transition between high school and college. MACC is uniquely prepared to assist with this transition as part of its core mission, and offering the Associate of Science degree at each MACC site will assist the Missouri Department of Higher Education in implementing this recommendation.

C. Societal Need

Imperatives for Change: A Coordinated Plan for the Missouri Department of Higher Education envisions a system of postsecondary education that is of the highest quality, distinguished by a coordinated, balanced, and cost-effective system. That system will also include a range of career and technical, academic, and professional programs that are affordable and accessible to all citizens and differentiated by institutional missions. MACC and the state's community colleges are in a good position to assist the state in its *Imperatives for Change* goals.

Efforts to expand services to the Columbia, Kirksville, Mexico, and Hannibal areas will assist in meeting the *Imperatives for Change* objectives of increasing the percentage of Missouri residents who possess a postsecondary credential and increasing college attendance rates of both traditional and non-traditional students.

MACC represents the only open-admission public institution in the Columbia, Mexico, Kirksville, and Hannibal areas. John Wood Community College (JWCC) in Quincy, Illinois, and Indian Hills Community College (IHCC) in Ottumwa, Iowa, are geographically accessible to students in the Hannibal and Kirksville areas and have policies of open admissions. Both JWCC and IHCC offer Associate of Science in Engineering degree programs; however, Missouri students must pay out-of-state tuition and would not be able to utilize their A+ benefits. Even with increased costs, the geographic proximity of these programs to students in the Hannibal and Kirksville areas is such that many students may be currently choosing to complete their degrees at these out-of-state institutions rather than committing to a lengthy commute to MACC's

Moberly campus. Offering the full AS program at additional MACC sites will allow MACC to better retain students as well as recruit additional students from the northeast corner of its service region.

Offering the Associate of Science degree in Columbia, Hannibal, Kirksville, and Mexico will also provide increased statewide economic benefits and reduced social costs. A 2011 study conducted by Economic Modeling Specialists, Inc., found that as many as 93% of Missouri community college graduates stay in the state after graduation and become contributors to their local economy. In 2009-2010, community college graduates added over \$517 million to Missouri's Gross State Product (GSP) while reducing social costs by approximately \$28.3 million. These cost savings are measured through reduced crime rates, increased productivity, and reduced expenditures for public assistance programs and unemployment benefits.

The improved access to higher education, both geographically and financially, achieved through MACC's active presence at off-campus sites is responsive to the state and national priority for accessibility to higher education for all citizens. Combined with the economic benefits that MACC graduates bring to their communities, it is appropriate to increase MACC's current presence at off-campus sites by offering additional degree programs. The addition of courses toward the granting of the Associate of Science degree is a natural progression from the current state of providing selected courses in the degree program.

D. Methodology:

The following resources provided information and data used to determine market demand and societal need.

- Bureau of Labor Statistics, *Occupational Outlook Handbook 2012-2013*
- Missouri Economic Research and Information Center, *Chasing Cheetahs: Lessons from Missouri's Fastest Growing Companies* (2008)
- Missouri Research and Information Center, *Cheetahs continue: Lessons on how to survive and thrive from Missouri's fastest growing businesses* (2011)
- Economic Modeling Specialists, Inc., *Economic Contributions of Missouri Community College Associations' Member Colleges* (2011)
- Change the Equation/National Institutes of Research, *STEM Vital Signs Missouri State Report* (2012)

3. DUPLICATION AND COLLABORATION

As the designated community college service provider for 16 northeast Missouri counties including Boone, Adair, Marion, and Audrain, the Associate of Science degree is not currently available through any other public institution in the area. Articulation agreements with other colleges and universities throughout the service

region allow students many transfer opportunities to 4-year institutions. MACC's 42-hour block of general education courses is accepted at over 30 Missouri Institutions per CBHE's General Education and Credit Transfer (GECT) Policy.

Two other institutions in the mid-Missouri region offer Associate of Science degrees—Columbia College and State Fair Community College in Sedalia. Columbia College is a private institution within MACC's service region that can be cost-prohibitive for students due to increased tuition rates. Students attending Columbia College would also be unable to utilize their A+ funding. State Fair is over 50 miles from Columbia and is not in MACC's service region, making access difficult for working students.

In keeping with the College's mission to increase educational access throughout the region, MACC strives to develop collaborations with other area institutions to offer innovative educational programs for students. MACC's Associate of Science degree is designed for ease of transferability, and the College works with the University of Missouri and Missouri S&T to ensure that the AS program is seamlessly aligned with the engineering program curriculum at these institutions. Students choosing to pursue MACC's Associate of Science degree before transferring to another institution can realize several advantages, including significant cost savings through the A+ program, ease of transferring general education coursework to any Missouri institution, and the opportunity to earn an additional educational credential on the way to earning their bachelor's degree. In addition, as an open admissions institution, MACC provides increased access to students who may not meet the initial admissions requirements to the University of Missouri or Missouri S&T and gives them the opportunity to successfully acclimate to college life before transferring to a 4-year institution to complete their bachelor's degree.

Over the past several years, MACC has also developed a close-working relationship with Truman State University. MACC is one of three community colleges collaborating with Truman on a grant awarded through the National Science Foundation resulting in the Missouri Pre-STEM Pathways Program. This program is designed to help community college students achieve a baccalaureate degree in Science, Technology, Engineering, or Mathematics by providing scholarship opportunities, targeted academic advising assistance with the transfer process, and enhanced career awareness. MACC faculty have collaborated with Truman faculty to ensure that MACC students are completing coursework appropriate for transfer into a STEM discipline at Truman.

Additionally MACC annually awards the David W. Stamper Memorial Transfer Scholarship to outstanding sophomores majoring in science or a related area. All of the Stamper Scholarships awarded in the past five years have been awarded to Associate of Science graduates.

Transfer data is regularly monitored to determine where additional programming needs exist and articulation agreements can be tailored to better meet student needs. According to the National Student Clearinghouse data, since 2009

the majority of MACC's Associate of Science graduates have transferred to either the University of Missouri-Columbia or Missouri University of Science and Technology in Rolla.

4. FINANCIAL PROJECTIONS Forms FP attached to this document project expenditures and revenues for the Associate of Science degree program at the Columbia, Hannibal, Kirksville, and Mexico sites for a five-year period beginning FY 2014.

5. PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

A. Student Preparation

The open-door admission policy at Moberly Area Community College allows student admission into College programs based on aptitude, interest, abilities, and specific program entrance requirements. No special preparation or qualifications which exceed regular College admissions policies will be required for entry into the Associate of Science program. It is anticipated that the program will serve both traditional and non-traditional college students who reside in the Columbia, Hannibal, Kirksville, Mexico, and surrounding areas. Additionally, MACC offers a full sequence of developmental coursework to assist students with deficient math and English skills. These courses, designed to increase student success, are available to all students at the Columbia, Hannibal, Kirksville, and Mexico sites.

B. Faculty Characteristics

MACC employs faculty who have earned, from accredited institutions, the degrees appropriate to the level of instruction offered by the institution and program. Faculty members who teach in the Associate of Science degree program are required to have a Master's degree or higher plus 18 or more hours in their specific discipline. These same standards apply to full-time and part-time faculty.

MACC strongly supports professional growth as well as service and leadership activities among faculty members and participation in these activities is an integral part of the faculty evaluation process. All full-time faculty have the same professional growth opportunities, including membership in professional associations, travel to state and national conferences, participation in the MACC staff development program, and attendance at orientation/topical workshops at the beginning of each year. Adjunct faculty are invited to participate in all faculty workshops as well as sessions focused specifically to their instructional needs. An adjunct faculty professional development program was implemented in 2012 to encourage adjunct faculty to engage in professional growth opportunities. All new faculty members are provided orientation sessions prior to their first semester of teaching at the College.

Full-time faculty maintain a minimum of ten office hours per week. Part-time faculty who teach nine or more hours maintain a minimum of three office hours per week. To increase accessibility, students may meet with instructors in either their physical offices at each campus site or in their virtual offices via Blackboard Collaborate. Students also have access to the campus e-mail system and an internet portal, which allow additional means of communication with faculty.

A combination of traditional delivery methods, online, and web-synchronous classroom instructional methodologies are incorporated in delivering the courses in this program. Approximately 38% of general education coursework and 63% of discipline-specific coursework in this degree program will be delivered by full-time faculty.

C. Enrollment and Graduation Projections

It is anticipated that the Associate of Science degree program will enroll 70 FTE's per year by the end of five years at the Columbia site, 9.5 FTE's at the Hannibal site, and 6.5 FTE's at the Mexico and Kirksville sites. The following tables show the number of expected graduates based on projected student enrollment for each site.

Hannibal Student Enrollment Projections

Year	1	2	3	4	5
Full-time	5	5	6	7	7
Part-time	3	4	4	4	5
Total	8	9	10	11	12
FTE (PT students =.5)	6.5	7	8	9	9.5
Graduates	1	1	2	2	2

Columbia Student Enrollment Projections

Year	1	2	3	4	5
Full-time	40	44	48	53	59
Part-time	18	19	20	21	22
Total	58	63	68	74	81
FTE (PT students = .5)	49	53.5	58	63.5	70
Graduates	12	18	19	21	24

Kirksville Student Enrollment Projections

Year	1	2	3	4	5
Full-time	3	3	4	4	5
Part-time	1	2	2	3	3
Total	4	5	6	7	8
FTE (PT students = .5)	3.5	4	5	5.5	6.5
Graduates	0	0	1	1	1

Mexico Student Enrollment Projections

Year	1	2	3	4	5
Full-time	3	3	4	4	5
Part-time	1	2	2	3	3
Total	4	5	6	7	8
FTE (PT students = .5)	3.5	4	5	5.5	6.5
Graduates	0	0	1	1	1

Based on enrollment projections, it is estimated that one student in Kirksville and Mexico, two students in Hannibal, and nineteen students in Columbia will earn the AS degree in the third year of implementation. It is anticipated that in the fifth year after implementation, that one student in Kirksville and Mexico, two students in Hannibal, and twenty-four students in Columbia will earn the AS degree at these sites. These estimates are based on a 30% average completion rate for full-time students and reflect average completion rates for full-time students enrolled in coursework on the Moberly campus.

D. Student and Program Outcomes

The learning outcomes of the Associate of Science degree are three-fold: 1) students will demonstrate proficiency in the core general education curriculum, including reading, writing, math, critical thinking, and science reasoning; 2) students will gain admission to baccalaureate degree programs; and 3) students will successfully complete a baccalaureate degree program.

Students enrolled in the Associate of Science degree are required to complete core writing, math, and science courses. Students' proficiency in the general education curriculum is measured at both the course level and program level. Objectives for each general education course are listed on the common syllabus for that course. Assessment of these objectives occurs primarily at the course level. Instructors individually determine how to assess these objectives within their courses. At the program level, general education learning outcomes have been identified, courses have been aligned with these outcomes, and outcomes are assessed through a purposeful sampling of student artifacts across a broad range of general education courses. Faculty-developed rubrics are used to assess these artifacts in terms of the identified outcomes. The collection of student artifacts becomes an institutional portfolio reflecting student progress toward general education outcomes at MACC. Artifacts will be collected from courses at the Columbia, Hannibal, Kirksville, and Mexico sites.

The following is a summary of findings resulting from the most recent assessment cycle (spring 2013) and program review process (fall 2013) regarding student performance and assessment in key disciplines related to the AS degree.

- **Writing:** English faculty examined a variety of student essays collected across sections of Composition I and II and American History to 1865. They found students were performing at levels from fair to good in the following areas:
 - Demonstrating effective written and oral communication considering audience and situation through invention, arrangement, drafting, revision, and delivery.
 - Constructing logical and ethical arguments with evidence to support the conclusions.
 - Conforming to the rules of Standard English.
- **Math:** Math faculty used pre-test/post-test questions asking students to distinguish between an expression and an equation. As in the last AS program review in 2009, students improved their scores from pre- to post-test, indicating an increase in their computational skills and how to use them to solve problems and make informed decisions.
- **Science:** The science faculty administered pre- and post-tests in Biology and Chemistry I to assess student learning in the sciences. Results of these measures indicated that student learning was progressing satisfactorily in both courses.

Additionally, the Collegiate Assessment of Academic Proficiency (CAAP) test is used as an external assessment tool to gauge student learning in general education. Since spring 2004, two sections of the CAAP have been embedded in classes in which students have been exposed to the measured outcomes. The critical thinking subtest is administered each year, and the other four subtests (writing, mathematics, reading, and science reasoning) are administered

in alternating years. Students enrolled in courses at the Columbia, Hannibal, Kirksville, and Mexico sites are included in CAAP testing.

E. Program Accreditation

Moberly Area Community College is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools.

F. Graduate Satisfaction Survey

The Office of Institutional Effectiveness and Planning administers a Graduate Satisfaction Survey to all students completing a degree or certificate program at MACC. The survey is included in the packet of graduation materials given to students each semester and can be turned in at any of the off-campus sites or mailed to the Moberly campus. Survey results gauge graduates' level of satisfaction with MACC's advising and instruction, as well as overall satisfaction with their educational experience.

In the most recent survey, approximately 75% of spring 2013 graduates stated they were "satisfied" or "very satisfied" with the quality of instruction they received and the quality of their overall educational experience. MACC has participated in alumni and employer surveys sponsored by the CBHE. As these surveys are implemented in the future, students at off-campus sites and employers of graduates will be included. As additional survey strategies are developed, students at these sites will be included.

6. QUALITY ASSURANCE FOR OFF-SITE PROGRAM

A. General Oversight

Key administrators responsible for oversight of AS degree programs are listed below.

Dr. Paula Glover	Vice President for Instruction
Dr. Jackie Fischer	Dean of Academic Affairs
Michele McCall	Dean of Off-Campus Programs/Instructional Technology
Amy Frey	Director, MACC - Columbia Higher Education Center
Wendy Johnson	Director, MACC - Hannibal Area Higher Education Center
Artie Fowler	Director, MACC - Kirksville Higher Education Center
Caroline Groves	Director, Advanced Technology Center

Associate of Science course offerings and schedules are generated by the directors and staff at each site and are then approved by Dean Fischer and Dean McCall. Course enrollment, registration, and placement testing for students at off-campus sites are managed by Dean McCall with assistance from the site directors. Faculty employment, supervision, and evaluation across all sites are the responsibilities of Dean Fischer. Daily operation and oversight of the

program at each site are the responsibilities of site directors. Dean Fischer and Dean McCall are chiefly responsible for reporting to the Vice President for Instruction and the President of MACC regarding the status of off-campus programs.

B. Faculty Qualifications

All staff engaged in the delivery of instructional services at each MACC site are subject to MACC's customary hiring, orientation, evaluation, and development standards. MACC requires the same educational credentials of faculty at each off-campus site as it does those who teach on Moberly campus. Ongoing instructional technology training as well as other professional development activities is provided to faculty and staff at all MACC sites to stay abreast of current technological advances and teaching practices.

C. Support Services

Just as care is taken to ensure the quality of instruction, MACC provides support services to off-campus students equal to those available at the Moberly campus. MACC's Hannibal, Mexico, Columbia, and Kirksville sites provide the full compendium of support services including Access and ADA services, financial aid and business office services, and resource center and tutoring services.

The following positions provide direct support services at the MACC's off-campus sites:

- Site Director
- Assistant Director/Evening Supervisor
- Resource Center Staff
- Technical Support Staff
- Clerical Support Staff
- Financial Aid Staff
- Business Office Staff
- Academic Advisors
- Bookstore Staff
- Access and ADA Services Staff

These personnel administer placement testing, conduct registration and enrollment, collect fees, provide faculty support and bookstore services, deliver financial aid counseling and academic advisement, assist with transfers and job placement, and disseminate informational materials.

Computer labs are installed and equipped with the appropriate hardware, software, peripherals and instructional aids to accommodate the computer information technology curriculum at all sites. A Resource Center holds basic library references and is equipped for Internet access to enable electronic information search and retrieval. Such access enables students to search the

library resources of colleges and universities on the Internet, to communicate through e-mail with the librarian and other personnel at MACC, and to access the MACC library database. MACC also subscribes to MOBIUS, permitting access to all academic library holdings at public 2-year and 4-year educational institutions in the state.

MACC has worked to develop systems to provide timely delivery of borrowed materials from the main campus library to off-campus sites. A courier is responsible for delivering materials to off-campus sites. MACC strives to provide students with avenues of information that are up-to-date and easily accessible.

The delivery of support services is an ongoing priority at MACC, and feedback is solicited annually through various student satisfaction surveys. Recent survey data indicates that students are consistently satisfied with the overall quality of the support services provided by MACC. Satisfaction scores will continue to be monitored and program adjustments made as necessary based on student feedback.