

Unit Operational Plan

Due March 22nd, 2024

2024-2025

Name of Unit: Mathematics, Engineering, and Physical Sciences (MEP) - Jefferson

Primary Purpose: The Mathematics, Engineering, and Physical Sciences Department’s purpose is to offer a broad range of courses that transfer to baccalaureate degree-granting institutions, service the career programs of the college, and prepare students for college-level mathematics while upholding the mission of Jefferson State Community College.

Unit Goals	Unit Outcome	Institution Strategic Plan	Fundamental Principles
Maintain up-to-date curriculum to prepare students for transferring to four-year institutions	1. Provide and monitor astronomy, chemistry, mathematics, physics, and physical science courses that emphasize critical thinking and analysis and that are transferable to institutions of higher learning.	II.A – Increase the Fall-to-Fall Retention Rate II.B. – Support the continued growth and enrollment of Dual Enrollment students and programs II.E. – Increase the number of awards and credentials earned by students	FP 3.4 – Student academic, developmental, and support services that assist students in achieving their goals. FP 2.3 – General education courses that encourage the intellectual, civic, social, and physical development of students. FP 2.6 – Distance learning programs and classes that promote accessibility through new technologies. FP2.1 – University parallel degree programs that allow students to make a successful transition to senior colleges or universities.

		<p>II.E – Increase the number of awards and credentials earned by students</p>	<p>FP 2.1 – University parallel degree programs that allow students to make a successful transition to senior colleges or universities.</p> <p>FP 2.2 – Career and professional associate degree programs that integrate general and career-specific education and prepare students for immediate employment.</p> <p>FP 2.3 – General education courses that encourage the intellectual, civic, social, and physical development of students.</p> <p>FP 2.4 – Certificate programs and other learning opportunities that enable students to acquire specific training to prepare for employment or advancement in jobs requiring skilled employees.</p> <p>FP 2.5 – Dual enrollment programs that allow qualified high school students to earn credits for a high school diploma and/or a postsecondary degree.</p>
--	--	---	--

Provide remedial math tutoring	2. Provide and monitor developmental mathematics courses and courses relevant to the career and professional degree programs.	II A. – Increase the Fall-to-Fall Retention Rate	FP 3.4 – Student academic, developmental, and support services that assist students in achieving their goals.
Update classrooms, laboratories, and offices as needed	3. Provide and maintain quality teaching and learning environments for students and faculty in classrooms, laboratories, and offices.	III.B – Continue to improve aesthetics and infrastructure at all campuses	FR 3.2 – Physical facilities, technological resources, and other resources that promote learning. FR 4.3 – A working environment that supports employee wellness and job satisfaction.
Continue to provide chemicals and supplies needed for maintaining the chemistry lab	3. Provide and maintain quality teaching and learning environments for students and faculty in classrooms, laboratories, and offices. 4. Enhance instruction to provide a positive learning experience for all students by employing the most up-to-date classroom technology and offering opportunities for faculty professional development.	II A. – Increase the Fall-to-Fall Retention Rate II.B. – Support the continued growth and enrollment of Dual Enrollment students and programs II.D – Increase and enhance support for adult learners	FP 3.4 – Student academic, developmental, and support services that assist students in achieving their goals. FP 2.3 – General education courses that encourage the intellectual, civic, social, and physical development of students. FP 1.1 – Educational offerings available in places, at times, and in facilities that can best serve the people in the college service area. FP 1.3 – Collegiate and developmental education designed to meet the needs and abilities of the diversity

		<p>II.E – Increase the number of awards and credentials earned by students</p>	<p>of people within the college service area.</p> <p>FR 3.2 – Physical facilities, technological resources, and other resources that promote learning.</p>
<p>Enhance instruction through professional development opportunities for faculty</p>	<p>4. Enhance instruction to provide a positive learning experience for all students by employing the most up-to-date classroom technology and offering opportunities for faculty professional development.</p>	<p>II.F. – Implement and support the Canvas Learning Management System and evaluate the quality of online learning</p> <p>IV.B – Increase opportunities for professional development for all employees</p>	<p>FP 2.6 – Distance learning programs and classes that promote accessibility through new technologies.</p> <p>FP 3.5 – Necessary financial support, administrative structure, and institutional support services that facilitate the college’s operation.</p> <p>FP 4.2 – Professional development experiences that enable personnel to maintain currency in their respective fields, increase their awareness and use of alternative methods of meeting the needs of a diverse student population, and develop innovative approaches to fulfilling their roles in the institution.</p> <p>FP 4.3 – A working environment that supports employee wellness and job satisfaction.</p> <p>FP 4.4 – Continual improvement through ongoing evaluation and advocacy of innovation in teaching and learning.</p>

Support the I-3 Academy and the transition for MEP	3. Provide and maintain quality teaching and learning environments for students and faculty in classrooms, laboratories, and offices.	II.B. – Support the continued growth and enrollment of Dual Enrollment students and programs	FP 5.4 – Educational consortia that promote articulation of educational efforts among secondary schools, two-year colleges, and four-year colleges/universities.
Support Mu Alpha Theta, math society	3. Provide and maintain quality teaching and learning environments for students and faculty in classrooms, laboratories, and offices.	II.E – Increase the number of awards and credentials earned by students	FP 2.1 – University parallel degree programs that allow students to make a successful transition to senior colleges or universities.
To the extent the ACCS curriculum allows, cover mathematics topics to provide a knowledge base for courses taught in other disciplines	5. Help to prepare students for college-level courses that depend on a knowledge of mathematics.	<p>II A. – Increase the Fall-to-Fall Retention Rate</p> <p>II.B. – Support the continued growth and enrollment of Dual Enrollment students and programs</p> <p>II.D – Increase and enhance support for adult learners</p>	<p>FP 3.4 – Student academic, developmental, and support services that assist students in achieving their goals.</p> <p>FP 2.3 – General education courses that encourage the intellectual, civic, social, and physical development of students.</p> <p>FP 2.6 – Distance learning programs and classes that promote accessibility through new technologies.</p> <p>FP 1.1 – Educational offerings available in places, at times, and in facilities that can best serve the people in the college service area.</p> <p>FP 1.2 – Educational opportunities within the financial reach of the great majority of the</p>

		<p>II.E – Increase the number of awards and credentials earned by students</p>	<p>people of the college service area.</p> <p>FP 1.3 – Collegiate and developmental education designed to meet the needs and abilities of the diversity of people within the college service area.</p> <p>FP 2.1 – University parallel degree programs that allow students to make a successful transition to senior colleges or universities.</p> <p>FP 2.2 – Career and professional associate degree programs that integrate general and career-specific education and prepare students for immediate employment.</p> <p>FP 2.3 – General education courses that encourage the intellectual, civic, social, and physical development of students.</p> <p>FP 2.4 – Certificate programs and other learning opportunities that enable students to acquire specific training to prepare for employment or advancement in jobs requiring skilled employees.</p> <p>FP 2.5 – Dual enrollment programs that allow qualified high school students to earn credits for a high school</p>
--	--	---	---

			diploma and/or a postsecondary degree.
--	--	--	--

Unit Plan for 2024-2025

- 1. Goals** – The activities through which the outcome will be achieved. Each Unit Outcome should have at least one goal.
- 2. Method of Assessment** – How the unit will determine if the objective has been met.
- 3. Funding/Rationale** – Provide an estimate of the cost of achieving the objective. Also, include a description of how these funds will be used to accomplish the objective.

Goal	Assessment	Funding/Rationale
Maintain up-to-date curriculum to prepare students for transferring to four-year institutions	Faculty designees will attend ACCS meetings regarding curriculum to assess potential changes. Faculty will continue to teach from the ACCS guidelines per course.	None
Explore the need and possibility of teaching engineering courses	Discuss the implementation of engineering courses with VP Coburn. Survey MTH 113, MTH 125S, MTH 126, MTH 227, MTH 238, PHY 213S, PHY 214S, CHM 111, and CHM 112 students for interest.	None currently
Continue to develop, implement, and monitor written Student Learning Outcomes (SLO's) for all courses	Faculty will test SLO's, collect data, and compile the one-year summary report.	None
Provide remedial math tutoring	Continue to staff the on-campus Math Lab and the Virtual Math Lab.	Funding is from the school budget, not the department budget.
Update classrooms, laboratories, and offices as needed	Instructors have new desks but need pencil drawers for writing and graphing supplies.	6 @ \$82 each including installations = \$492 (Interior Elements)
Continue to provide chemicals and supplies needed for maintaining the chemistry lab	Inventory will periodically be taken to determine the needs.	Open Purchase Order \$5000

Enhance instruction through professional development opportunities for faculty	<ol style="list-style-type: none"> 1. Survey instructors for needs in this area. 2. Schedule workshops for implementing Canvas and the Newlines. 3. Secure funds for 5 faculty members to attend the regional AMATYC conference in Atlanta, GA, Nov. 14-17, 2024. 	5 @ \$1700 = \$8500
Support the I-3 Academy and the transition for MEP	Work with I-3 administrators on curriculum, and, in general, to ensure a smooth transition for our faculty and theirs.	None currently
Support Mu Alpha Theta, math society	Work with Nareiko Stephens for a list of eligible students. Schoolwide the math instructors will support the club activities. (An initiation ceremony will be held at the Shelby Campus.)	None currently
To the extent the ACCS curriculum allows, cover mathematics topics to provide a knowledge base for courses taught in other disciplines	Survey students at the beginning of a course to determine their majors. Emphasize topics related to their majors to the extent the ACCS guidelines allow.	None