

The Mathematics and Science Department consists of seventy eight full and part-time faculty and staff serving over 11,000 enrolled students per year. The disciplines represented in the department are diverse: Anatomy and Physiology, Biology, Botany, Chemistry, Computer Science, Environmental Science, Geology, Mathematics, Microbiology, Physical Education, Physics, and Pre-Engineering. Our stakeholders are numerous including other academic departments at Kirkwood, high schools and transfer institutions, and business and industry. We look forward to increasing the opportunities for our students in the next five years by engaging in the strategies listed below.

Shared Vision

Math/Science faculty and staff are committed to improving literacy in STEM (science, technology, engineering, and mathematics) disciplines by identifying community needs, providing accessible, quality education and training, and providing opportunities for lifelong learning. (See support bullets)

Major Initiatives

Develop seamless math and science educational pathways by:

- Partnering with area high schools to create STEM Career Edge Academies.
- Articulating entire programs of study with area transfer institutions.
- Increasing scholarship support for STEM majors.
- Developing or expanding advising and orientation opportunities for STEM students.
- Promoting STEM career exploration.
- Expanding professional tutoring for STEM majors.

Engage students in unique, effective, and compelling learning experiences by:

- Creating, maintaining, and directing effective learning environments.
- Increasing and improving direct (laboratory) learning experiences.
- Engaging students in inquiry methodologies.
- Embracing appropriate technologies.
- Assessing student performance (entry, in process, and exit) and providing useful feedback.

Explore curriculum development in the following areas:

- Liberal Arts Science and mathematics courses for non-majors.
- Biotechnology, medical technology, and forensic science.
- Pre-Engineering and Computer Science.
- Physical education.
 - Athletic training
 - Coaching authorization (in collaboration with Continuing Education)
 - Exercise science
 - Health/wellness/nutrition
 - Physical education
 - Sports management

Continuously improve processes by:

- Identifying trends or problems.
- Collecting and analyzing relevant data.
- Engaging stakeholders in discussion and interest - based decision making.
 - Arranging for meetings between departments.
 - Including key people regardless of location.
 - Seeking advice and counsel from external constituencies.
- Reorganizing, as needed, to implement decisions.
- Implementing decisions and communicating progress to all stakeholders.
- Evaluating results.
- Responding to curricular needs of other departments.
- Exploring alternatives to existing departmental structure.

Capacity

To accomplish the stated vision, the Math/Science faculty and staff will need to increase capacity on several levels.

Increase funding stream by:

- Advocating for increased equipment and supply allocations.
- Applying for grants and appropriations.
- Building well-documented proposals to influence decision making within Kirkwood.
- Identifying and influencing legislative priorities.

Increase curricular expertise and administrative support by:

- Increasing funding for faculty professional development.
- Increasing participation in professional development activities.
- Hiring faculty with curricular expertise tied to growth opportunities.
- Hiring additional administrative support staff.
- Ensuring curricular consistency at all locations and methods of delivery.
- Developing leadership with discipline-specific experience.

Increase learning opportunities by:

- Adding at least six classrooms.
- Creating a new computer science / pre-engineering laboratory.
- Upgrading the equipment available in the microbiology lab.
- Expanding Human Anatomy and Physiology lab space to support new curricular initiatives.
- Expanding the major's biology lab to include space for long term research projects.

Increase space for faculty, staff, and students by:

- Adding office space for at least ten faculty.
- Creating a new Math/Science Department office with a conference room.
- Creating quiet study areas for students in mathematics, science, engineering, and computer science.
- Creating new office space for math faculty.

Ownership & Support

Math/Science faculty and staff are committed to fulfilling the vision described because we value:

Academic freedom	Excellent facilities	Literacy	Small class size
Advising	Fun	Open mindedness	Staying ahead
Collaboration	High standards	Quality	Teamwork
Communication	Honesty	Relationships	Trust
Cooperation	Innovation	Responsibility	
Diversity	Leadership	Safety	

Dashboard Indicators

- Enrollment
- Number of sections
- Full time / Part time ratio
- Average section size
- Number of withdrawals
- Others to be determined