COLLEGE OF SCIENCE AND MATHEMATICS

Dean: Lora Billings, Ph.D.
Associate Dean for Academic Affairs: Stefanie Brachfeld, Ph.D.
Associate Dean for Administrative Affairs: Scott Kight, Ph.D.

Welcome to the College of Science and Mathematics (CSAM) at Montclair State University. For over a century, CSAM has built distinguished academic programs that encompass many STEM fields.

CSAM provides students with academically rigorous programs resulting in disciplinary and interdisciplinary baccalaureate, certificate, master’s and doctoral degrees. Our success is based on a simple educational philosophy: outstanding and dedicated faculty, engaged students, and a commitment to academic and research excellence. Under the direction of our world class faculty, students have access to state-of-the-art equipment and facilities and the opportunity to participate in cutting-edge research. Discovery-based courses and numerous experiential learning opportunities result in an optimal environment for our students to succeed as our next generation of STEM leaders.

CSAM offers joint programs for health related careers combining (https://www.montclair.edu/chemistry-biochemistry/articulation-programs/) a BS degree at Montclair State University with degrees from Rutgers University. These include the Doctor of Medicine (MD) (https://www.montclair.edu/chemistry-biochemistry/articulation-programs/bmd-medical-rutgers/) and Doctor of Dental Medicine (DMD) (https://www.montclair.edu/chemistry-biochemistry/articulation-programs/bdmd-dental-rutgers/) from the Rutgers School of Medicine. We also offer a 7 year combined BS/PharmD (https://www.montclair.edu/chemistry-biochemistry/articulation-programs/bs-pharmd-doctor-pharmacy-rutgers/) program with the Ernest Mario School of Pharmacy at Rutgers University (New Brunswick). Students in the Health Careers Program can participate in an 8 year combined Doctor of Medicine (MD) (https://www.montclair.edu/csam/programs-and-opportunities/health-careers-program/health-careers-program-combined-bs-md-program-eight-year/) from the Rutgers School of Medicine.

CSAM is committed to the ongoing formation of academic/industry collaborations and partnerships to provide long-term economic benefits of New Jersey and beyond. We are home to several institutes, centers, and laboratories dedicated to advancing STEM research and education. These include the New Jersey Center for Water Science and Technology (https://www.montclair.edu/water-science/), the PSEG Institute for Sustainability Studies, the Clean Energy and Sustainability Analytics Center (https://www.montclair.edu/clean-energy-sustainability-analytics/), the Sokol Institute for Pharmaceutical Life Sciences, the Microscopy and Microanalysis Research Laboratory, the Statistical Consulting Center (https://www.montclair.edu/statistical-consulting/), and Professional Resources in Science and Mathematics (https://www.montclair.edu/prism/).

Departments and Programs

- Biology (http://catalog.montclair.edu/colleges/science-mathematics/biology/)
- Chemistry and Biochemistry (http://catalog.montclair.edu/colleges/science-mathematics/chemistry-biochemistry/)
- Computer Science (http://catalog.montclair.edu/colleges/science-mathematics/computer-science/)
- Earth and Environmental Studies (http://catalog.montclair.edu/colleges/science-mathematics/earth-environmental-studies/)
- Marine Biology and Coastal Sciences Program (http://catalog.montclair.edu/colleges/science-mathematics/marine-biology-coastal-science/)
- Mathematics (http://catalog.montclair.edu/colleges/science-mathematics/mathematics/)
- Office of the Dean (http://catalog.montclair.edu/colleges/science-mathematics/office-dean/)
- Physics and Astronomy (http://catalog.montclair.edu/colleges/science-mathematics/physics-and-astronomy/)

Applied Mathematics and Statistics

Undergraduate

Graduate
- Applied Mathematics (M.S.) (https://montclair-curr.courseleaf.com/programs/applied-mathematics-ms/)
- Applied Mathematics (M.S.) (Combined B.S./M.S.) (http://catalog.montclair.edu/programs/applied-mathematics-graduate-combined-bs-ms/)
- Statistics (M.S.) (https://montclair-curr.courseleaf.com/programs/statistics-ms/)
- Statistics (M.S.) (Combined B.S. Mathematics/M.S.) (http://catalog.montclair.edu/programs/statistics-ms-combined-bs-maths/)

Biology

Undergraduate
- Biology Major (B.S.) (http://catalog.montclair.edu/programs/biology-bs/)
- Biology Major (B.S.) (Combined B.S./M.A.T. Teaching with Teacher Certification in Biological Science (Preschool-Grade 12) and Teacher of Students with Disabilities) (http://catalog.montclair.edu/programs/teacher-certification-preschool-grade-12combined-bs-mat/)
- Biology Major (B.S.) (Combined B.S./M.B.A. Business Administration) (http://catalog.montclair.edu/programs/biology-combined-bs-mba/)
- Biology Major, Environmental Science/Biology Concentration (B.S.) (http://catalog.montclair.edu/programs/environmental-science-biology-concentration-bs/)
- Biology Minor (http://catalog.montclair.edu/programs/biology-minor/)
- Biology with Teacher Certification in Biological Science (Preschool-Grade 12) (B.S.) (http://catalog.montclair.edu/programs/teacher-certification-preschool-grade-12-bs/)
- Molecular Biology Major (B.S.) (http://catalog.montclair.edu/programs/molecular-biology-bs/)

Graduate
- Biological Science, Instructional Certification: Teacher Certification in Biological Science - Preschool through Grade 12 (http://
Chemistry and Biochemistry

Undergraduate
- Biochemistry Major (B.S.) (http://catalog.montclair.edu/programs/biochemistry-bs/)
- Chemistry Major (B.S.) (http://catalog.montclair.edu/programs/chemistry-bs/)
- Chemistry Major, Business Concentration (B.S.) (http://catalog.montclair.edu/programs/chemistry-business-concentration-bs/)
- Chemistry Major (B.S.) (Combined B.S./M.A.T. Teaching with Teacher Certification in Chemistry (Preschool-Grade 12) and Teacher of Students with Disabilities) (http://catalog.montclair.edu/programs/teacher-certification-chemistry-preschool-grade-12-students-disabilities-combined-bs-mat/)
- Chemistry Major (B.S.) (Combined B.S./M.S. Chemistry) (http://catalog.montclair.edu/programs/chemistry-bs-ms/)
- Chemistry Major with Teacher Certification in Chemistry (Preschool-Grade 12) (B.S.) (http://catalog.montclair.edu/programs/teacher-certification-chemistry-preschool-grade-12-bs/)
- Chemistry Minor (http://catalog.montclair.edu/programs/chemistry-minor/)

Graduate
- Chemistry (M.S.) (http://catalog.montclair.edu/programs/chemistry-ms/)
- Chemistry (M.S.) (Combined B.S./M.S.) (http://catalog.montclair.edu/programs/chemistry-combined-bs-ms/)
- Biochemistry Concentration (M.S.) (http://catalog.montclair.edu/programs/biochemistry-concentration-chemistry-ms/)
- Chemistry, Instructional Certification: Teacher Certification in Chemistry (Preschool-Grade 12) (http://catalog.montclair.edu/programs/teacher-certification-chemistry-preschool-grade-12-graduate/)
- Pharmaceutical Biochemistry (M.S.) (http://catalog.montclair.edu/programs/pharmaceutical-biochemistry-ms/)

Computer Science

Undergraduate
- Computer Science Major (B.S.) (http://catalog.montclair.edu/programs/computer-science-bs/)
- Computer Science Major (B.S.) (Combined B.S./M.S. Computer Science) (http://catalog.montclair.edu/programs/computer-science-combined-bs-ms/)
- Computer Science Major (B.S.) (Combined B.S./M.S. Cybersecurity) (http://catalog.montclair.edu/programs/computer-science-combined-bs-ms-cybersecurity/)
- Computer Science Major (B.S.) (Combined B.S./M.S. Data Science) (http://catalog.montclair.edu/programs/computer-science-combined-bs-ms-data-science/)
- Computer Science Minor (http://catalog.montclair.edu/programs/computer-science-minor/)
- Data Science Major (B.S.) (http://catalog.montclair.edu/programs/data-sciences-bs/)
- Data Science Minor (http://catalog.montclair.edu/programs/data-science-minor/)
- Information Technology Major (B.S.) (http://catalog.montclair.edu/programs/information-technology-bs/)
- Information Technology Major (B.S.) (Combined B.S./M.S. Cybersecurity) (http://catalog.montclair.edu/programs/information-technology-combined-bs-ms-cybersecurity/)
- Information Technology Major (B.S.) (Combined B.S./M.S. Data Science) (http://catalog.montclair.edu/programs/information-technology-combined-bs-ms-data-science/)

Graduate
- Computer Science (M.S.) (http://catalog.montclair.edu/programs/computer-science-ms/)
- Computer Science (M.S.) (Combined B.S./M.S.) (http://catalog.montclair.edu/programs/computer-science-ms-combined-bs-ms/)
- Computing Technology Certificate Program (http://catalog.montclair.edu/programs/computing-technology-certificate/)
- Cybersecurity (M.S.) (http://catalog.montclair.edu/programs/cybersecurity-ms/)
- Cybersecurity (M.S.) (Combined B.S. Computer Science/M.S.) (http://catalog.montclair.edu/programs/cybersecurity-ms-comp-sci-bs/)
- Cybersecurity (M.S.) (Combined B.S. Information Technology/M.S.) (http://catalog.montclair.edu/programs/cybersecurity-ms-info-tech-bs/)
- Data Science (M.S.) (http://catalog.montclair.edu/programs/data-science-ms/)
- Data Science (M.S.) (Combined B.S. Computer Science/M.S.) (http://catalog.montclair.edu/programs/data-science-ms-comp-sci-bs/)
- Data Science (M.S.) (Combined B.S. Information Technology/M.S.) (http://catalog.montclair.edu/programs/data-science-ms-info-tech-bs/)
- Information Technology (M.S.) (http://catalog.montclair.edu/programs/information-technology-ms/)
- Information Technology, Applied Information Technology Concentration (M.S.) (http://catalog.montclair.edu/programs/information-technology-applied-information-technology-concentration-ms/)

Earth and Environmental Studies

Undergraduate
- Earth and Environmental Science Major (B.S.) (http://catalog.montclair.edu/programs/earth-and-environmental-science-bs/)
- Earth and Environmental Science Major (B.S.) (Combined B.S./M.B.A. Business Administration) (http://catalog.montclair.edu/programs/earth-and-environmental-science-combined-bs-mba/)
• Earth and Environmental Science Major (B.S.) (Combined B.S./M.A.T. Teaching with Teacher Certification in Earth Science (Preschool-Grade 12) and Teacher of Students with Disabilities) (http://catalog.montclair.edu/programs/earth-and-environ-sci-teacher-certification-earth-science-preschool-grade-12-students-disabilities-combined-bs-mat/)
• Earth and Environmental Science Major with Teacher Certification in Earth Science (Preschool-Grade 12) (B.S.) (http://catalog.montclair.edu/programs/earth-and-environ-sci-teacher-certification-earth-science-preschool-grade-12-bs/)
• Earth and Environmental Science Minor (http://catalog.montclair.edu/programs/earth-and-environmental-sci-minor/)
• Geographic Information Science Minor (http://catalog.montclair.edu/programs/geographic-information-science-minor/)
• Geographic, Environmental and Urban Studies Major (B.A.) (http://catalog.montclair.edu/programs/geography-environ-urban-studies-ba/)
• Geographic, Environmental and Urban Studies Major (B.A.) (Combined B.A./M.B.A. Business Administration) (http://catalog.montclair.edu/programs/geography-environ-urban-studies-ba-combined-ba-mba/)
• Geography Major with Teacher Certification in Social Studies (Preschool-Grade 12) (B.A.) (http://catalog.montclair.edu/programs/geography-teacher-certification-social-studies-preschool-grade-12-ba/)
• Sustainability Science Major (B.S.) (http://catalog.montclair.edu/programs/sustainability-science-bs/)
• Sustainability Science Major (B.S.) (Combined B.S./M.B.A. Business Administration) (http://catalog.montclair.edu/programs/sustainability-science-combined-bs-mba/)
• Sustainability Science Major (B.S.) (Combined B.S./M.S. Sustainability Science) (http://catalog.montclair.edu/programs/sustainability-science-combined-bs-ms/)
• Sustainability Science Minor (http://catalog.montclair.edu/programs/sustainability-science-minor/)
• Urban Studies Minor (http://catalog.montclair.edu/programs/urban-studies-minor/)

Graduate
• Earth and Environmental Science (M.S.) (http://catalog.montclair.edu/programs/earth-environmental-sci-ma/)
• Earth Science, Instructional Certification: Teacher Certification in Earth Science - Preschool through Grade 12 (http://catalog.montclair.edu/programs/teacher-certification-earth-science-preschool-grade-12-graduate/)
• Environmental Science and Management (Ph.D.) (http://catalog.montclair.edu/programs/environmental-science-and-management-phd/)
• Sustainability Science (M.S.) (http://catalog.montclair.edu/programs/sustainability-science-bs/)
• Sustainability Science (M.S.) (Combined B.S./M.S.) (http://catalog.montclair.edu/programs/sustainability-science-bs-ma/)
• Sustainability Science, Sustainability Leadership Concentration (M.S.) (http://catalog.montclair.edu/programs/sustainability-science-sustainability-leadership-concentration-bs/)

Marine Biology and Coastal Sciences Program
Undergraduate
• Marine Biology and Coastal Sciences Major (B.S.) (http://catalog.montclair.edu/programs/marine-biology-bs/)
• Marine Biology and Coastal Sciences Major (B.S.) (Combined B.S./M.S. Marine Biology and Coastal Sciences) (http://catalog.montclair.edu/programs/marine-biology-bs-combined-bs-ms/)

Graduate
• Marine Biology and Coastal Sciences (M.S.) (http://catalog.montclair.edu/programs/marine-biology-ms/)
• Marine Biology and Coastal Sciences (M.S.) (Combined B.S./M.S.) (http://catalog.montclair.edu/programs/marine-biology-bs-combined-bs-ms/)

Mathematical Sciences
Undergraduate
• Mathematics Major (B.S.) (http://catalog.montclair.edu/programs/mathematics-bs/)
• Mathematics Major (B.S.) (Combined B.S./M.A. Social Research and Analysis) (http://catalog.montclair.edu/programs/mathematics-combined-bs-ma-social-research/)
• Mathematics Major (B.S.) (Combined B.S./M.A.T. Teaching with Teacher Certification in Mathematics (Preschool-Grade 12) and Teacher of Students with Disabilities) (http://catalog.montclair.edu/programs/teacher-certification-mathematics-preschool-grade-12-students-disabilities-combined-bs-mat/)
• Mathematics Major (B.S.) (Combined B.S./M.A.T. Teaching with Teacher Certification in Grades K-6 and Teacher of Students with Disabilities) (http://catalog.montclair.edu/programs/teacher-certification-mathematics-preschool-grade-12-students-disabilities-combined-bs-mat/)
• Mathematics Major (B.S.) (Combined B.S./M.A. Business Administration) (http://catalog.montclair.edu/programs/mathematics-combined-bs-mba/)
• Mathematics Major (B.S.) (Combined B.S./M.S. in Applied Mathematics) (http://catalog.montclair.edu/programs/mathematics-combined-bs-ms-applied-math/)
• Mathematics Major (B.S.) (Combined B.S./M.S. in Mathematics) (http://catalog.montclair.edu/programs/mathematics-combined-bs-ms-mathematics/)
• Mathematics Major (B.S.) (Combined B.S./M.S. in Statistics) (http://catalog.montclair.edu/programs/mathematics-combined-bs-ms-statistics/)
• Mathematics Major with Teacher Certification in Elementary School Teacher in Grades K-6 (B.S.) (http://catalog.montclair.edu/programs/teacher-certification-mathematics-elementary-grades-k-6/)
• Mathematics Major, Mathematics Education Concentration with Teacher Certification in Mathematics (Preschool - Grade 12) (B.S.) (http://catalog.montclair.edu/programs/mathematics-education-concentration-teacher-certification-preschool-grade-12-bs/)
• Mathematics Minor (http://catalog.montclair.edu/programs/mathematics-minor/)
Graduate

• Mathematics Education (Ph.D.) (http://catalog.montclair.edu/programs/mathematics-education-phd/)

• Mathematics, Instructional Certification: Teacher Certification in Mathematics (Preschool-Grade 12) (http://catalog.montclair.edu/programs/teacher-certification-mathematics-preschool-grade-12-graduate/)

• Mathematics, Instructional Certification: Teacher Certification in Elementary School with Subject Matter Specialization: Mathematics Grades 5-8 (http://catalog.montclair.edu/programs/teacher-certification-elementary-school-subject-matter-specialization-mathematics-grades-5-8-graduate/)

• Mathematics (M.S.) (http://catalog.montclair.edu/programs/mathematics-ms/)

• Mathematics, Mathematics Education Concentration (M.S.) (http://catalog.montclair.edu/programs/mathematics-education-concentration-ms/)

• Teaching Middle Grades Mathematics (M.A.) (http://catalog.montclair.edu/programs/teaching-middle-grades-mathematics-ma/)

• Teaching Middle Grades Mathematics Certificate Program (http://catalog.montclair.edu/programs/teaching-middle-grades-mathematics-certificate-graduate/)

Office of the Dean

Graduate

• Science, Instructional Certification: Teacher Certification in Elementary School with Subject Matter Specialization: Science Grades 5-8 (http://catalog.montclair.edu/programs/teacher-certification-elementary-school-subject-matter-specialization-science-grades-5-8-graduate/)

Physics and Astronomy

Undergraduate

• Physics Major (B.S.) (http://catalog.montclair.edu/programs/physics-bs/)

• Physics Major, Astronomy Concentration (B.S.) (http://catalog.montclair.edu/programs/physics-astronomy-concentration-bs/)

• Physics Major, Pre-Medical Concentration (B.S.) (http://catalog.montclair.edu/programs/physics-premedical-concentration-bs/)

• Physics Major, with Teacher Certification in Physical Science (Preschool-Grade 12) (B.S.) (http://catalog.montclair.edu/programs/physics-teacher-certification-physical-science-preschool-grade-12-bs/)

• Physics Major (B.S.) (Combined B.S./M.A.T. Teaching with Teacher Certification in Physical Science (Preschool-Grade 12) and Teacher of Students with Disabilities) (http://catalog.montclair.edu/programs/teacher-certification-physical-science-preschool-grade-12-students-disabilities-combined-bs-mat/)

• Physics Major, with Teacher Certification in Physics (Preschool-Grade 12) (B.S.) (http://catalog.montclair.edu/programs/physics-teacher-certification-physical-science-preschool-grade-12-bs/)

• Physics Major (B.S.) (Combined B.S./M.A.T. Teaching with Teacher Certification in Physics (Preschool-Grade 12) and Teacher of Students with Disabilities) (http://catalog.montclair.edu/programs/teacher-certification-physics-preschool-grade-12-students-disabilities-combined-bs-mat/)