University of Minnesota Twin Cities

STEM-RELATED Majors

If you enjoy working with numbers, math, and analyzing complex data...

- Applied Economics
- Astrophysics
- Bioproducts and Biosystems Engineering
- Chemical Engineering
- Computer Engineering
- Computer Science
- Data Science
- Economics
- Electrical Engineering
- Finance
- Materials Science and Engineering
- Mathematics
- Mechanical Engineering
- Statistics

If you enjoy communicating, teaching, and connecting with others...

- Agricultural Communication and Marketing
- Agricultural and Food Business Management
- Kinesiology
- Nutrition
- Agricultural Education
- Speech-Language-Hearing Sciences
- Ecology, Evolution and Behavior
- Chemistry
- Biology
- Psychology
- Nursing

If you enjoy interacting with the environment, animals, and the molecules of life...

- Animal Science
- Biochemistry
- Biology
- Cellular and Organismal Physiology
- Chemistry
- Ecology, Evolution and Behavior
- Fisheries, Wildlife and Conservation Biology
- Forest and Natural Resource Management
- Genetics, Cell Biology and Development
- Human Physiology
- Microbiology
- Neuroscience
- Physics
- Plant and Microbial Biology
- Plant Science
- Environmental Engineering
- Environmental Geosciences

If you enjoy the idea of working in a global environment...

- Biology, Society, and Environment
- Earth Sciences
- Food Science
- Geoengineering
- Geography
- Management Information Systems
- Sustainable Agriculture and Food Systems
- Sustainable Systems Management

If you enjoy being creative and outside-the-box thinking...

- Architecture
- Industrial and Systems Engineering
- Product Design
- Aerospace Engineering and Mechanics
- Civil Engineering
- Landscape Architecture
- Biomedical Engineering

IF YOU ENJOY...

...working with numbers, math, and data

...communicating, teaching, and connecting with others

...the idea of working in a global environment

...being creative and outside-the-box thinking

...interacting with the environment and animals

The MAJOR KEY (majors.umn.edu) is a great tool to help you explore these options!

The University of Minnesota has a variety of programs available for students interested in a STEM-related degree. For more information about these majors, please visit the Major Key at **majors.umn.edu**

Aerospace Engineering and Mechanics (CSE) – Develop and apply your engineering skills to real world problems beyond aircraft and spacecraft alone.

Agricultural Communication and Marketing (CFANS) – Learn to be an expert voice in the food and agriculture industry by exploring the intersection of science and communication.

Agricultural Education (CFANS) – Prepare to teach agriscience, agribusiness, animal science, horticulture, food science, agricultural mechanics, and natural resource science.

Agricultural and Food Business Management (CFANS & CSOM) – Utilize business tactics, economics and applied science to identify, analyze, and solve management issues.

Animal Science (CFANS) – Learn about the care and management of farm animals, zoo animals, horses, pets or business within the animal industry.

Applied Economics (CFANS) – Gain a solid foundation in economics and learn how it is applied in the real world to improve people's lives.

Architecture (CDES) – Practice design, learn fabrication techniques and explore the history of architecture from the studio, workshop and classroom.

Astrophysics (CLA, CSE) – Study the physics of the universe along with interactions between objects in outer space; interpret data with mathematics and physical laws.

Biochemistry (CBS) – Focus on biosynthesis, metabolism, function, and regulation of molecules of life in order to understand disease.

Biology (CBS) – Understand the fundamental nature of living things, and cover the full range of life sciences, from cancer genes to marine mammals.

Biology, Society, and Environment (CLA) – Receive comprehensive biology training and study biology's influence on and relationship to philosophy, sociology and other disciplines.

Biomedical Engineering (CSE) – Study the fundamentals of biology, chemistry, physics, and mathematics to solve problems in the medical field.

Bioproducts and Biosystems Engineering (CFANS & CSE) – Design products and systems to meet the world's growing needs for materials, energy, and food to address environmental sustainability.

Cellular and Organismal Physiology (CBS) – Study underlying physiological mechanisms in organisms ranging from microorganisms to large animals.

Chemical Engineering (CSE) – Tackle some of the planet's greatest challenges and work on projects that chemically and physically transform matter.

Chemistry (CLA, CSE) – Interact with nature on a fundamental level, studying molecular structure, and the reactions that convert one material into another.

Civil Engineering (CSE) – Build the infrastructure of the world, including roads, bridges, buildings, water supply networks, sewage systems, pollution control facilities, and transportation hubs.

Computer Engineering (CSE) – Create, build, test, and install high-tech computing devices for everything from supercomputers to toys.

Computer Science (CLA, CSE) – Design computer software and hardware, apply computational techniques to other sciences, investigate social uses of computing, determine what programming language to use for a given problem, and advance new technologies such as artificial intelligence and robotics.

Data Science (CSE) - Learn the fundamentals of statistical and algorithmic tools and use those tools to extract meaningful insights from large data sets.

Earth Sciences (CLA, CSE) – Utilize tools from physics, chemistry, biology, chronology and mathematics to better understand how the Earth system works.

Ecology, Evolution and Behavior (CBS) – Build a foundation for success in various paths including graduate study, teaching, and entry-level scientist positions in a wide range of sectors.

Economics (CLA) – Master critical thinking, become an expert in economic principles, and customize your degree with quantitative training.

Electrical Engineering (CSE) – Learn to generate technological advances that impact virtually every aspect of modern life.

Environmental Engineering (CSE) – Prepare to design systems that resolve issues of environmental concern from wastewater treatment to protecting public health.

Environmental Geosciences (CLA, CSE) – Understand natural geologic processes and complete fieldwork to ensure the sustainability of our environment.

Environmental Sciences, Policy and Management (CFANS) – Address complex environmental challenges using science, policy, ethics, management models and communication theory.

Finance (CSOM) – Develop effective financial decision-making, and gain skills to assist in answering how to improve value, evaluate projects, measure risk, and understand markets.

Fisheries, Wildlife and Conservation Biology (CFANS) – Learn to research, plan and implement care and management plans for wildlife, fish, or aquatic resources.

Food Science (CFANS) – Apply chemistry, microbiology, and engineering to the science of making foods.

Forest and Natural Resource Management (CFANS) – Learn from a curriculum that covers the managerial, behavioral, and ecological sciences of our natural resources.

Genetics, Cell Biology and Development (CBS) – Focus on the mechanisms by which genetic information is used by cells to develop into complete organizations.

Geoengineering (CSE) – Plan, analyze, and design water and waste systems, tunnels, dams, and other facilities on or under the Earth's surface.

Geography (CLA) – Explore the ways both human and non-human forces shape the world, through social, political, economic, and ecological processes.

Human Physiology (CLA) - Concentrate on understanding the functions of the human body from individual cells to organ systems.

Industrial and Systems Engineering (CSE) – Design, plan, and manage large-scale and complex systems including global supply chains, healthcare delivery systems, business and financial services, infrastructures.

Kinesiology (CEHD) – Study physical activity and human movement to prepare for careers in health science, fitness, sport, and wellness.

Landscape Architecture (CDES) – Learn to respond to multiple environmental challenges using sustainable models of landscape design practice.

Management Information Systems (CSOM) – Become proficient in your ability to plan for, design, use, and manage the digital assets of an organization.

Materials Science and Engineering (CSE) – Understand the properties and origins of metals, ceramics, semiconductors, polymers, and composites, used in a wide range of industries.

Mathematics (CLA, CSE) – Go beyond numbers and formulas to understand how and why, and learn to solve complex real-world problems in diverse fields.

Mechanical Engineering (CSE) – Acquire and apply knowledge from and across a variety of disciplines including energy, transportation, medical device design, bioengineering and more.

Microbiology (CBS) – Examine the role of microbes such as bacteria, fungi, and viruses in our world and understand the impact on human health.

Neuroscience (CBS) – Study the building blocks of brain function in both animals and humans, as well as disease causing abnormalities.

Nursing (NURS) – Learn the practices and procedures that ensure the health and safety of patients to prepare for a career in nursing.

Nutrition (CFANS) – Discover how nutrients and foods aid the body in growth and development and in maintaining health and wellness.

Physics (CLA, CSE) – Explore the fundamental properties, laws, and structure of all forms of matter, living and non-living.

Plant and Microbial Biology (CBS) – Work to enhance the nutritional value of crops and their resistance to disease, pests, and drought while working to reduce the need for pesticides, fertilizer, and irrigation.

Plant Science (CFANS) – Prepare for diverse careers in areas such as plant breeding/genetics, sustainable food and plant production, and landscape management.

Product Design (CDES) – Utilize a hands-on, team-based approach to discover methods and tools used to invent the future.

Psychology (CLA) – Apply the scientific method and quantitative reasoning to examine human behavior through environmental and physiological determinants.

Speech-Language-Hearing Sciences (CLA) – Study the production and comprehension of human communication through speech and language.

Statistics (CLA) – Gain a B.A. or B.S. in statistical practice or statistical science to measure and communicate societal advancements.

Sustainable Agriculture and Food Systems (CFANS) – Learn all about the systems that feed the human population, encompassing an interconnected set of biological, technological, economic, and social activities.

Sustainable Systems Management (CFANS) – Advance sustainability through systems solutions that integrate the goals of economic growth, public health, and environmental protection.

CDES College of Design
CEHD College of Education and Human Development
CFANS College of Food, Agricultural and Natural Resource Sciences
CBS College of Biological Sciences
CSE College of Science and Engineering
CSOM Carlson School of Management
CLA College of Liberal Arts
NURS School of Nursing