The Mary Kay O’Connor Process Safety Center is the world’s foremost university-based process safety center. The center serves industry, government, academia and the public, is a resource in education and research, and provides service to all stakeholders. Over the past 20 years, the body of work created by the center has led to its inarguable recognition as an unbiased science-based organization focused on creating dialogue and consensus on difficult scientific topics, amongst all stakeholders. The guidance of a steering committee of consortium member companies and a technical advisory committee of industry expert ensures that center activities are relevant to the actual practice of process safety.

STUDENTS

The center’s M.S./Ph.D. alumni are approaching 200, with current M.S. and Ph.D. students nearing 100. The center administers the safety engineering academic program, a multi-disciplinary endeavor consisting of a master’s program as well as certificates for undergraduate and graduate students. From this program, a process safety practice certificate program was developed for industry practitioners. To further networking and the exchange of ideas, the center hosts an annual international symposium, attracting over 600 individuals from industry, government and academia annually. Students are the center’s most important product. They are active participants in the symposium, and steering and technical advisory committee meetings that enhance the student experience, which has led to many successful careers.
RESEARCH

- Aerosols, mists and dust explosions
- Corrosion
- Flammability
- Human factors engineering
- Inherently safer design and optimization
- Materials for safety and environment
- Offshore process safety
- Reactive chemicals
- Renewable energy
- Resilient and sustainable engineering
- Safety culture
- Transportation and supply chain

TRAINING

- Conduct training programs, seminars, conferences
- Host annual symposia
- Develop industry courses, teach continuing education short courses onsite

EDUCATION

- Improve knowledge/awareness of process hazards and safety for all sectors of society
- Assist other universities to establish education and research activities in sustainable engineering topics
- Develop state-of-the-art education tools, undergraduate and graduate courses, continuing education programs

SERVICE

- Unbiased science-based forums for dialogue and consensus on difficult societal issues
- Inform all stakeholders on policy issues based on science
- Extend the center’s impact and activities by establishing satellite centers
- Evaluation/risk minimization service for businesses, government agencies, institutions, local emergency planning committees
- Independent incident investigation and analysis for government, industries and agencies

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