

**SACChE Recommendations for
ABET Safety Content in Chemical Engineering**

February 18, 2010

The Safety and Chemical Engineering Education (SACChE) Committee makes the following recommendations with regard to student understanding to meet ABET curriculum requirements.

1. The graduate must understand the importance of process safety and the resources and commitment required. This should include the important incidents that define process safety, and how these incidents affected the practice of chemical engineering.
2. The graduate must be able to characterize the hazards associated with chemicals and other agents. This must include toxic, flammable, and reactive hazards.
3. The graduate must understand and be able to apply concepts of inherently safer design.
4. The graduate must understand how to control and mitigate hazards to prevent accidents. This should include generally accepted management systems, plant procedures and designs to prevent accidents.
5. The graduate should be familiar with the major regulations that impact the safety of chemical plants.
6. The graduate should understand the consequences of chemical plant incidents due to acute and chronic chemical releases and exposures.
7. The graduate should be reasonably proficient with at least one hazard identification procedure.
8. The graduate should have an introduction to the process of hazard evaluation and risk assessment.

Resource materials to assist in meeting these requirements can be found on the SACChE web site: www.sache.org.

ABET Curriculum Statement approved in October 2011 (bold text added for emphasis); be certain to check the ABET web site (abet.org) for the most up to date requirements:

1. Curriculum

The curriculum must provide a thorough grounding in the basic sciences including chemistry, physics, and biology, with some content at an advanced level, as appropriate to the objectives of the program. The curriculum must include the engineering application of these basic sciences to the design, analysis, and control of chemical, physical, and/or biological processes, **including the hazards associated with these processes.**

