**Engg 404 SYLLABUS**

COURSE NAME: Engineering Safety & Risk Management- Leadership in Risk Management- Engg 404  
DETAILS: 3 hour lectures, 3/2 hour Seminar   
TERM: Fall

COURSE DESCRIPTION

\*3 (fi 8) (either term or Spring/Summer, 3-3S/2-0) Basic concepts of risk and consequences of loss incidents; risk management principles and practices; incident investigation, causation, root cause analysis; process safety management; the roles of government agencies, professional bodies and industry associations; workplace safety; risk-based decision-making processes; leadership and the human-factors side of risk management. The course focuses on the principles and practices of leadership towards the effective application and implementation of risk management in major organizations across all engineering disciplines. Industry virtual tours, case studies, seminars and team projects specific to the student's engineering program will be used to develop competencies and proficiencies in applying leadership and organizational effectiveness for successful risk management.

REQUIRED MATERIAL

“*A Handbook for Engineering Safety and Risk Management, Leadership in Risk Management*”; custom courseware for ENGG404, by Prof. Winkel and Prof. Cocchio; available at The U of A Bookstore. Courseware modules will not be distributed electronically. If there is new information presented, and then it will be posted on eClass or hard-copies distributed. Excerpts of lecture presentations will be posted on eClass. Recommended additional reading materials are noted in the courseware.

LECTURE CONTENT

The Course Plan is the detailed schedule of all course content. Refer to the separately published ENGG404 Course Plan posted on eClass for the detailed scheduled dates for lecture topics, seminar topics, assignment due dates, midterm exam, and final exam. Schedule management for external presenters may result in changes, and these will be posted. Although the lectures will generally follow the order of modules, some course content will weave through the lectures to provide the technical and practical components to complement the theoretical teaching. As indicated earlier, due to the schedules of our industry and government guest lecturers, the order cannot always be maintained.