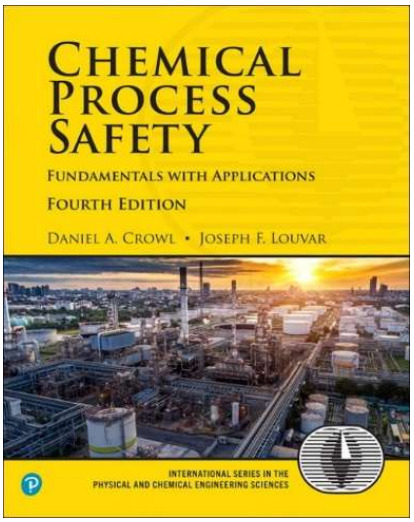
Process Safety! Spring 2022

- Foundational instruction in Chemical Process Safety. Focused to provide high value to upper division, graduate, and early professional Chemical Engineers; especially those entering industry. Chemistry, Energy/Utility, Environmental, Biochemical, Material Science, and other production-related disciplines will also benefit from the course principles and insight.

- 4 Technical Elective Units. TWRF 11:00-11:50am.
  - Including 2 weekly discussion sections on important process safety case studies



- Pre-requisites: Integral Calculus and some Chemistry. Upper division standing is recommended. Heat/mass transfer, organic chemistry, kinetics, and statistics would be helpful, but are not required. The necessary mathematics and principles will all be taught in-course and with the text.

- Incorporating state-of-the-art commercial process safety software, ioMosaic's SuperChems X

- Built to expand upon the seminal text by Crowl & Louvar
  - 4th Edition, ©2019. Required for lecture & homework.
  - https://www.pearson.com/us/higher-education/program/Crowl-Chemical-Process-Safety-Fundamentals-with-Applications-4th-Edition/PGM1983891.html

- Planned course topics include chemical toxicity, hazard identification, risk analysis, design for mitigation, hazardous gas dispersion, facility siting to mitigate fire and explosion, over-pressure reliefs, inherent safety, and more.

- Case studies include essential modern industry learnings, from the Chemical Safety Board (www.csb.org) (public source) and the authoritative What Went Wrong? By Trevor Kletz
  - Open access through UC Davis Libraries: https://www.elsevier.com/books/what-went-wrong/kletz/978-0-12-810539-9