

MATA KULIAH	Nama Mata Kuliah : Process Safety
	Kode MK : VI231524
	Kredit : 3 SKS
	Semester : V

DESKRIPSI MATA KULIAH

MK Process Safety berada di semester V dengan bobot 3 sks. Matakuliah Process Safety ini termasuk dalam rumpun matakuliah Instrumentasi Safety di Departemen Teknik Instrumentasi FV –ITS. Mata kuliah ini membahas tentang konsep process safety serta penerapannya dalam sistem instrumentasi industri.

CAPAIAN PEMBELAJARAN LULUSAN YANG DIBEBANKAN MATA KULIAH

- Mampu berkomunikasi, menulis laporan serta membuat presentasi secara efektif. (CPL-4)
- Mampu mengidentifikasi, merumuskan, meneliti literatur dan menganalisis masalah teknik di bidang teknologi Instrumentasi untuk mencapai kesimpulan yang dapat dibuktikan dengan menggunakan alat analisis sesuai standar disiplin ilmu teknik instrumentasi. (CPL-6)
- Mampu merancang solusi untuk masalah teknologi dan rekayasa Instrumentasi serta dapat berkontribusi pada desain sistem, komponen maupun proses untuk memenuhi kebutuhan tertentu dengan mempertimbangkan standar keamanan, kesehatan dan keselamatan publik. (CPL-7)
- Mampu melakukan investigasi terhadap permasalahan instrumentasi industri, mencari, memilih data yang relevan dari literatur, merancang dan melakukan eksperimen untuk memberikan kesimpulan yang valid. (CPL-8)

CAPAIAN PEMBELAJARAN MATA KULIAH

- Mahasiswa mampu memahami basic process pada sistem instrumentasi.
- Mahasiswa mampu memahami standard process safety pada sistem instrumentasi.
- Mahasiswa mampu menganalisis permasalahan dan bentuk bahaya pada sistem instrumentasi.
- Mahasiswa mampu merancang safety instrument system pada pada studi kasus plant industri.

POKOK BAHASAN

- Konsep LOPA
- Basic Process 1
- Basic Process 2
- PFD
- P&ID
- Safeguard dan Potensi Bahaya
- Hazard Identification
- Standard Process Safety
- Merancang SIS
- Simulasi SIS
- Analisis SIS
- Studi Kasus Penerapan SIS

PRASYARAT

PUSTAKA

Utama:

Pendukung:

COURSE	Course Name : Process Safety
	Course Code : VI231524
	Credit : 3 SKS
	Semester : V

DESCRIPTION OF COURSE

The process Safety course is in semester V with a weight of 3 credits. This Process Safety course is included in the Instrumentation Safety class in the Instrumentation Engineering Department FV –ITS. This course discusses the concept of process safety and its application in industrial instrumentation systems.

LEARNING OUTCOMES

- Able to communicate, write reports and make presentations effectively. (CPL-4)
- Able to identify, formulate, research literature, and analyze technical problems in the field of Instrumentation technology to reach conclusions that can be proven by using analytical tools according to standard instrumentation engineering disciplines. (CPL-6)
- Able to design solutions to Instrumentation technology and engineering problems and be able to contribute to the design of systems, components, and processes to meet specific needs by considering safety, health, and public safety standards. (CPL-7)
- Able to investigate industrial instrumentation problems, search for, and select relevant data from the literature, and design, and conduct experiments to provide valid conclusions. (CPL-8)

COURSE LEARNING OUTCOME

- Students can understand the basic processes of instrumentation systems.
- Students can understand standard process safety in instrumentation systems.
- Students can analyze problems and forms of hazards in instrumentation systems.

<ul style="list-style-type: none">● Students can design safety instrument systems in industrial plant case studies.
MAIN SUBJECT
<ul style="list-style-type: none">● LOPA concept● Basic Process 1● Basic Process 2● PFDs● P&ID● Safeguards and Potential Hazards● Hazard Identification● Standard Process Safety● Designing an SIS● SIS Simulation● SIS analysis● Case Study of SIS Implementation
PREREQUISITES
REFERENCE
Main: Support: