NOTES: 1: Several modules are suitable for more than one engineering course. Please coordinate with other faculty. Example: Block A can be assigned to any of the first 3 core courses, or distributed within them. 2: Some courses (e.g. Organic Chem or Materials) may be outside of typical ChE departments but usually part of core requirements for Chemical Engineers. The assignments below should be shared across department boundaries. 3: Some courses go together as a group as indicated below and are related to each other 4: it is highly recommended that all engineering graduates complete Block A at the beginning of their ChE education and Block F before graduation	Grouping	Introduction to Chemical Engineering OR Intro to Engineering	Material & Energy Balances	Thermodynamics	Material Science / Corrosion Engineering	Organic / Inorganic Chemistry	Rate Operations / Kinetics / Reaction Eng	Fluid Flow / Fluid Mechanics	Heat & Mass Transfer	Unit ups & Separation Processes (e.g. Distillation)	Process Control	Unit Ops Lab	Process / Engineering Design	Advanced Reaction engineering	Advanced Transport Phenomina	ChE process Modeling / Simulation	Chemical Engineering Practice / Leadership for Chemical Engl.	Special Topics in Process Safety	Graduate program (MS, PhD)	Process Safety (standalone course)
No. Course Title																				
ELA 950 Introduction to Process Safety																				
ELA 951 Hazard Recognition	A																			
ELA 952 Identifying & Minimizing Process Safety Hazards																				
ELA 953 An Introduction to Managing Process Safety Hazards																				
ELA 954 Introduction to Lab Safety																				
ELA 961 Toxicological Hazards	- В																			
ELA 962 Chemical Reactivity Hazards																				
ELA 963 <u>Fire Hazards</u>																				
ELA 964 Explosion Hazards																				
ELA 965 Source Models	с				_															
ELA 967 Atmospheric Dispersion					_					L										
ELA 969 Understanding Hazards & Risk	_				_															
ELA 970 Hazards and Risk: What Can Go Wrong?	D																			
ELA 971 Hazards and Risk: Introduction to Pressure Protection																				
ELA 973 Hazards and Risk: Safeguards Other Than Relief Systems																				
ELA 974 Hazards and Risk: Introduction to Hazard Identification and Risk Analysis					_															
ELA 975 Process Safety Ethics – A Brief Introduction	A																			
ELA 980 Risk Review Using Layer of Protection Analysis (LOPA)					_															
ELA 981 Human Factors in Process Safety																			-	
ELA 982 Managing Lab Process Safety 1			<b> </b>							<b> </b>		<u> </u>	+							
ELA 983 Hazards and Risk: Hazard Identification and Risk Management	E																			
ELA 984 Inherently Safer Designs																				
ELA 985 Practical Process Safety 1	E																			
ELA 986Managing Lab Process Safety 2ELA 987Practical Process Safety 2	- F		<u> </u>									<u> </u>	+							
ELA 987Practical Process Safety 2ELA 988Damage Mechanisms: Asset Integrity and Reliability	E																			
	+		}							<u> </u>		<u> </u>						}	+	
ELA 989Runaway Reactor and Overpressure ProtectionELA 990Facility Siting	+		<u> </u>		+					<u> </u>		<u> </u>								
ELA 990 Role of Inert Gases in Process Safety																				
ELA 991 <u>Dust Explosions</u>					+															
ELA 993 Common Chemicals and Their Major Hazards													1							
ELA 995 Risk Based Process Safety - Commit to Process Safety													+							
ELA 996 Risk Based Process Safety - Manage Risk: Training and Procedures																				
ELA 997 Risk Based Process Safety - Manage Risk. Training and Procedures	F												+							
ELA 998 Risk Based Process Safety - Manage Risk: Asset Integrity			<u> </u>							<u> </u>										
Insk based Hotess surety Manage Misk. Asset Integrity	-											1								