

Introduction to System Safety Engineering and Management – Australian National University

16-20 April 2012

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	Session 1		Session 2		Session 3		Session 4		Session 5		Session 6		
Mon	Course Introduction		Case Study: Piper Alpha		Safety Concepts <ul style="list-style-type: none">Accident, hazard, risk, failure etc.	L U N C H	Safety Concepts (continued)		Safety Lifecycle	Preliminary Hazard Identification		Class Example: Automatic Guided Vehicle PHI	
Tues	Modelling Event Sequences <ul style="list-style-type: none">Event Trees		Case Study: Chemical containment event tree construction		Risk Assessment & Management <ul style="list-style-type: none">Severity, ProbabilityRisk ReductionRisk Acceptance		Case Study: AGV Risk Assessment		Functional Hazard Assessment	Case Study: Aircraft Deceleration FHA		HAZOP	
Wed	Case Study: Process Plant HAZOP		FMEA	Fault Tree Construction			Case Study: Automatic Guided Vehicle Fault Tree	Case Study: (continued)		Using Fault Trees <ul style="list-style-type: none">Analysis and PSSA		Systematic Failure and Safety Integrity Levels	Common Cause Analysis <ul style="list-style-type: none">PrinciplesZonal AnalysisPRA
Thur	Safety Cases <ul style="list-style-type: none">PurposeProblems in practiceGSN as a structuring approach				Case Study: Safety Case Construction		Safety Management Systems		Case Study: Post Office SMS		Safety Culture <ul style="list-style-type: none">Management & TeamsIndividual Competency		Systems of Systems Safety (Optional)
Fri	Safety Critical Software 1 <ul style="list-style-type: none">RequirementsArchitecture		Case Study: Selection of AGV control architecture	Safety Critical Software 2 <ul style="list-style-type: none">Software safety evidence			Case Study: AGV Software evidence points	Human Factors <ul style="list-style-type: none">Why humans failImplications for system safety		Conclusions			