

## COURSE DETAILS

**Units of Credit** 6

Contact hours 4 hours per week

**Lecture** Tuesday, 10,.fr a2- TJETQq155.83

BJECTIVES				
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## **COURSE PROGRAM**

we provide a general overview of the course and a big picture of river and estuaries.  Specific topics covered include: Open channel flow and Channel design and Mixing  Students will be asked to describe a River/Estuary of their choice during the interactive portion of the lecture.  Thresholds of sediment motion  Bed load  Suspended load  *livestreaming of sediment transport lab  River geomorphology  Floodplain modelling  *livestreaming of river lab  ** The following content which would normally	KS KS
flow and Channel design and Mixing  Students will be asked to describe a River/Estuary of their choice during the interactive portion of the lecture.  Thresholds of sediment motion Bed load Suspended load  *livestreaming of sediment transport lab  River geomorphology Floodplain modelling *livestreaming of river lab	
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Floodplain modelling *livestreaming of river lab	KS
*livestreaming of river lab	
** The following content which would normally	
be in week 4 will be pre-recorded to allow for a field trip in Week 9	
River engineering structures	
River management	
Natural channel design	
s for ** Week 9 content will be presented here to	Guest
·	Lecture
Remote sensing approaches for quantifying floodplain inundation dynamics, river width, bathymetry, river flow, water quality (e.g. algal blooms) and estuarine geomorphology.	
Data-driven modelling and analysis techniques for integrated river and estuary management.	
Tides	KS
Tidal inlet and stability	
Estuarine classification and processes	
Flexibility week for all courses (non-	
teaching)	
Introduction to Estuarine Hydrodynamics and Hydraulic Modelling	WG
	River engineering structures River management Natural channel design  ** Week 9 content will be presented here to allow for a field trip in week 9. Remote sensing approaches for quantifying floodplain inundation dynamics, river width, bathymetry, river flow, water quality (e.g. algal blooms) and estuarine geomorphology. Data-driven modelling and analysis techniques for integrated river and estuary management.  Tides Tidal inlet and stability Estuarine classification and processes  Flexibility week for all courses (nonteaching)  Introduction to Estuarine Hydrodynamics and

## Appendix A: Engineers Australia (EA) Competencies

Stage 1 Competencies for Professional Engineers

	Program Intended Learning Outcomes
	PE1.1 Comprehensive, theory-based understanding of underpinning fundamentals
o o	PE1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing
Knowledge Skill Base	PE1.3 In-depth understanding of specialist bodies of knowledge
PE1: Knov and Skill	PE1.4 Discernment of knowledge development and research directions
<u> </u>	PE1.5 Knowledge of engineering design practice

PE1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice