Summer Boost - Business Models and Technologies for Autonomous Ships

Learning outcomes: Learn to apply one's own expertise to marine application in format of intelligent fleet, ship or ship sub-system Example backgrounds: economics and logistics; mechatronics, automatisation and sensor technology; navigation; (CT, AJ, decisies); energy technology and management; user-centered design Prerequicities; 20-25 ECTS studies on field of own expertice (e.g., Mechanics, electronics, conoutries; industrial design)

Application: Motivation letter, transcript of studies

Output: concept definition for autonomous/intelligent ships on the level of fleet, ship or sub-system (e.g. Powerplant, communications, decision making)

Legend: General Advanced

	Week	Date	General Ship Design				Student Work Load Distribution in hours					FITech Teachers (outside Aalto)		
Form of			_				Learning with	h Other	California da	A	Frank .	_ .		a
teaching	Week 1	May 4th 2018, 09:00-	Ineme, assignment Generating ideas for ship mission and customer requirements, first ideas of the	1 Ship Mission and husiness	2 Ship Classification based on	2 Design aspects for machineny	teacners	ateriais	2 Self study	Assignment	1 Exam	Rusiness	Kim Wikström ÅA	To be confirmed
Lectures	WCCKI	13:00 (Friday)	operational profile and environment	models for shipping	mission and technical solutions	and users (inc. SrtP. Autonomy)		5	5	4,5	1	models for	KIIII WIKSLIOIII AA	to be commed
	Week 2	May 9th 2018, 09:00-	Defintion of capasities for space, systems, energy, fuel, clean water etc	4. Main dimensions, their	5. Energy sources, powerplants,	6. Energy efficiency and exhaust		3	3	4.5	1	Energy source	s N.N. University of	To be confirmed
		13:00 (Wednesday)	· · · · · · · · · · · · · · · · · · ·	selection and ship performance	environment and fuel types	treatment systems						and Productio	n Wasa	
	Week 3	May 18th 2018, 09:00	- Shape and arrangements for auxiliary systems and sub-systems, areas and volumes	7. General Arrangement, ship,	8. Auxiliary systems and piping	9. HVAC and heat		8	3	4,5	1			To be confirmed
		13:00 (Friday)	including main structural elements - benchmarking student projects (Gala, Forum	structure, machinery, equipment										
	Week 4	May 25th 2018, 09:00	- Shape and arrangements for ICT and communication systems and sub-systems, areas	10. Decision Making using Articial	11. Electric Systems, Automation	12. Communications and IT		3	3	4,5	1	Al; Automatio	n Al: Johan Lilius ÅA;	To be confirmed
		13:00 (Friday)	and volumes	Intelligence	and control systems, intelligence							systems	Cyber security Ville	
	Week 5	June 1st 2018, 09:00-	Life cycle assessment, operations issues including possible business ideas	13. Building method and	14. Weight and Cost estimates	15. Diagrams and building		3	3	4,5	1			To be confirmed
		13:00 (Friday)		maintenance		methods								
Assignment + Feedback	Week 6	June 8th 2018	Round 2+Milestone: Listing of main and sub-questions to be answered during summer -		Revisit lectures 1-15 in general			3	3	8	8			
	Week 7	lupo 15th 2019	review session by email Round 2: Milestene: Definition of chin mission, examples of the operational profile and					2	2	0	4			
		Julie 13(112016	customer requirements - review session in Turku		Revisit lectures 1-3 in detail			5	3	0	4			
	Week 8	June 22nd 2018	customer requirements - review session in runku						3	8	4			
	Weeko	June 22nd 2010							5	0	-			
	Week 9	June 29th 2018	Round 2+Milestone: Definition of capasities for space, systems, energy, clean water etc					3	3	8	4			
			review session by email		Revisit lectures 4-6 in detail									
	Week 10	July 6th 2018	Round 2+Milestone: Shape and arrangements for auxiliary, HVAC etc systems and sub-		Deviait la structure 7.0 in datail			3	3	8	4			
			systems, areas and volumes including main structural elements - review session in		Revisit lectures 7-9 in detail									
	Week 11	July 13th 2018							3	8	4			
	Week 12	July 20th 2018	Round 2+Milestone: for ICT and communication systems and sub-systems, areas and		Revisit lectures 10-12 in general			3	3	8	4			
			volumes - review session by email					_						
	Week 13	July 27th 2018	Round 2+Milestone: Life cycle assessment, operations issues including possible business		Revisit lectures 13-15 in general			3	3	8	4			
	Wook 14	August 2rd 2019	Ideas - review session by email					2	2	0	4			
	WEEK 14	August 510 2016	reedback on entire concept - review session in runku		Revisit lectures 1-15 in detail			5	3	0	4			
	Week 15	August 10th 2018	Evam								2			
	WEEK 15	August 10(112010	LX811		Revisit lectures 1-15 in detail					0	-			
	Week 16	August 17th 2018	Training for Gala - session in Turku						3	8	4			
								3						
	Week 17	August 24th 2018	Gala - review session in Turku						3	8	4			
		-			Revisit lectures 1-15 in detail									
						Sub-total		44	48 1	18,5	53 3			
						Total	26	6,5						
						Credit points	: 9	,87						