Study and Examination Plan

Electrical and Computer Engineering (ECE) BSc

Matriculation Fall 2022

	Program-Specific Modules	Type	Assessment	Period	Status[1]	Sem.	CP
Year 1 - CHOICE							**45**
Take the mandatory CHOICE modules listed below, this is a requirement for the ECE program.							
	Unit: General Electrical Engineering (default minor)						**15**
CH-210	**Module: General Electrical Engineering I**				**m**	**1**	**7.5**
CH-210-A	General Electrical Engineering I Lecture	Lecture	Written exam	Examination period			5
CH-210-B	General Electrical Engineering Lab I	Lab	Lab report	During the semester			2.5
CH-211	**Module: General Electrical Engineering II** (pre-requisites GenEE I)				**m**	**2**	**7.5**
CH-211-A	General Electrical Engineering II Lecture	Lecture	Written exam	Examination period			5
CH-211-B	General Electrical Engineering Lab II	Lab	Lab report	During the semester			2.5
							30
CH-230	**Module: Programming in C and C++**				**m**	**1**	**7.5**
CH-230-A	Programming in C and C++	Lecture	Written examination	Examination period			2.5
CH-230-A	Programming in C and C++ Tutorial	Turorial	Practical Assessment	During the semester			5
CH-140	**Module: Classical Physics**				**m**	**1**	**7.5**
CH-140-A	Classical Physics	Lecture	Written exam	Examination period			5
CH-140-B	Classical Physics Lab	Lab	Lab report	During the semester			2.5
CH-232	**Module: Introduction to Computer Science**				**m**	**2**	**7.5**
CH-232-A	Introduction to Computer Science	Lecture	Written examination	Examination period			
Take one of the two listed mandatory elective CHOICE modules:							
CH-220	**Module: Introduction to Robotics and Intelligent Systems**				**me**	**2**	**7.5**
CH-220-A	Introduction to Robotics and Intelligent Systems	Lecture	Written exam	Examination period			5
CH-220-B	Introduction to Robotics and Intelligent Systems Lab	Lab	Lab report				2.5
CH-202	**Module: Applied Mathematics**				**me**	**2**	**7.5**
CH-202-A	Advanced Calculus	Lecture	Written exam	Examination period			5
CH-202-B	Numerical Software Lab	Lab	Lab report				2.5
Year 2 - CORE							**45**
Take all CORE modules listed below							
	Unit: Signal Processing (default minor)						**15**
CO-520	**Module: Signals and Systems**				**m**	**3**	**7.5**
CO-520-A	Signals and Systems Lecture	Lecture	Written exam	Examination period			5
CO-520-B	Signals and Systems Lab	Lab	Lab report	During the semester			2.5
CO-521	**Module: Digital Signal Processing**				**m**	**4**	**7.5**
CO-521-A	Digital Signal Processing Lecture	Lecture	Written exam	Examination period			5
CO-521-B	Digital Signal Processing Lab	Lab	Lab report	During the semester			2.5
	Unit: Communications						**10**
CO-522	**Module: Communications Basics**				**m**	**3**	**5**
CO-522-A	Communications Basics Lecture	Lecture	Written exam	Examination period			2.5
CO-522-B	Communications Basics Lab	Lab	Lab report	During the semester			2.5
CO-523	**Module: Wireless Communication**				**m**	**4**	**5**
CO-523-A	Wireless Communication I	Lecture	Written exam	Examination period			5
	Unit: Electromagnetics and Information Theory						**10**
CO-524	**Module: Electromagnetics**				**m**	**3**	**5**
CO-524-A	Electromagnetics	Lecture	Written exam	Examination period			5
CO-525	**Module: Information Theory**				**m**	**4**	**5**
CO-525-A	Information Theory	Lecture	Written exam	Examination period			5
	Unit: Hardware						**10**
CO-526	**Module: Electronics**				**m**	**3**	**5**
CO-526-A	Electronics Lecture	Lecture	Written exam	Examination period			2.5
CO-526-B	Electronics Lab	Lab	Lab report	During the semester			2.5
CO-527	**Module: PCB design and measurement automation**				**m**	**4**	**5**
CO-527-A	PCB design and measurement automation	Lab	Written exam Lab report	Examination period During the semester			5
Year 3 - CAREER							**45**
CA-INT-900	**Module: Internship / Startup and Career Skills**				**m**	**4/5**	**15**
CA-INT-900-0	Internship / Startup and Career Skills	Internship	Report or Businessplan	During the 5th semester			15
CA-ECE-800	**Module: Thesis / Seminar ECE**				**m**	**6**	**15**
CA-ECE-800-T	Thesis ECE	Thesis	Thesis	15th of May			12
CA-ECE-800-S	Seminar ECE	Seminar	Presentation	During the semester			3
	Unit: Specialization ECE				**m**	**5/6**	**15**
Take a total of 15 CP of specializatopn modules							
CA-S-ECE-801	Wireless Communication II	Lecture	Written exam	Examination period	me	5	5
CA-S-ECE-802	Coding Theory	Lecture	Written exam	Examination period	me	5	5
CA-S-ECE-803	Digital Design	Lecture/Lab	Written exam	Examination period	me	5	5
CA-S-ECE-804	Radio-Frequency (RF) Design	Lecture	Written exam	Examination period	me	6	5
Total CP							**180**

	Jacobs Track Modules (General Education)	Type	Assessment	Period	Status[1]	Sem.	CP
Year 1 - CHOICE							**15**
	Unit: Methods / Skills						**10**
JTMS-MAT-09	**Module: Calculus and Elements of Linear Algebra I**				**m**	**1**	**5**
JTMS-09	Calculus and Elements of Linear Algebra I	Lecture	Written exam	Examination period			
JTMS-MAT-10	**Module: Calculus and Elements of Linear Algebra II**				**m**	**2**	**5**
JTMS-10	Calculus and Elements of Linear Algebra II	Lecture	Written exam	Examination period			
	Unit: Language				**m**		**5**
	German is the default language. Native German speakers take modules in another offered language.						
JTLA	**Module: Language 1**				**m**	**1**	**2.5**
JTLA-xxx	Language 1	Seminar	Various	Various	me		
JTLA-xxx	**Module: Language 2**				**m**	**2**	**2.5**
JTLA-xxx	Language 2	Seminar	Various	Various	me		
Year 2 - CORE							**15**
	Unit: Methods / Skills						**10**
JTMS-MAT-12	**Module: Probability and Random Processes**				**m**	**3**	**5**
JTMS-12	Probability and Random Processes	Lecture	Written exam	Examination period			
JTMS-MAT-13	**Module: Numerical Methods**				**m**	**4**	**5**
JTMS-13	Numerical Methods	Lecture	Written exam	Examination period			
	Unit: Language						**5**
	German is the default language. Native German speakers take modules in another offered language.						
JTLA	**Module: Language 3**				**m**	**3**	**2,5**
JTLA-xxx	Language 3	Seminar	Various	Various	me		
JTLA	**Module: Language 4**				**m**	**4**	**2,5**
JTLA-xxx	Langauge 4	Seminar	Various	Various	me		
Year 3 - CAREER							**15**
	Unit: Big Questions						**10**
JTBQ	**Module: Big Questions**				**m**	**5/6**	
Take a total of 10 CP of Big Questions modules with each 2.5 - 5 CP		Lecture	Various	Various	me		10
	Unit: Community Impact Project						**5**
JTCI-CI-950	**Module: Community Impact Project**				**m**	**5**	**5**
JTCI-950	Community Impact Project	Project	Project	Examination period			

[1] Status (m = mandatory, me = mandatory elective)

[2] For a full listing of all CHOICE / CORE / CAREER / Jacobs Track modules please consult the CampusNet online catalogue and /or the study program handbooks.