Schematic Study Plan for Computer Science and Software Engineering

BSc Degree in Computer Science and Software Engineering at Jacobs University (180 CP)

Year 3

Bachelor Thesis (m, 10 CP)	**CSSE Specialization** (me, 5 CP)	**Elective[3]** (me, 5 CP)	**Management** (me, 10 CP)
CSSE Specialization (me, 2 x 5 CP)		**Collaborative Software Project** (m, 5 CP)	

Internship (Summer) (15 CP)

Year 2

Software Engineering (m, 7.5 CP)	**Artificial Intelligence (CSSE)** (m, 7.5 CP)	**Machine Learning + Machine Learning Tools** (m, 7.5 CP)	**Elective[2]** (me, 5 CP)	**Elective[1]** (me, 5 CP)
Databases and Web Services (m, 7.5 CP)	**Operating Systems** (m, 7.5 CP)	**Data Analytics and Modeling** (m, 7.5 CP)	**Probability and Random Processes** (m, 5 CP)	

Year 1

Algorithms and Data Structures (m, 7.5 CP)	**Introduction to Cyber Physical Systems** (m, 7.5 CP)	**Software Design and Prototyping** (m, 7.5 CP)	**Calculus and Elements of Linear Algebra II** (m, 5 CP)	**Distributed Development** (m, 5 CP)
Introduction to Computer Science (m, 7.5 CP)	**Programming in C/C++** (m, 7.5 CP)	**Introduction to Data Science** (m, 7.5 CP)	**Calculus and Elements of Linear Algebra I** (m, 5 CP)	

m = mandatory
me = mandatory elective
1 = Options, e.g. (a) German; (b) Academic Skills in CS & Legal and Ethical Aspects of Computer Science
2,3 = Options, e.g. (a) Numerical Methods; (b) Ethics and Science in Technology; (c) Global Existential Risks