

## Information Technology course list 2023/24 for double degree students

Double degree students should select courses from the 2<sup>nd</sup> and 3<sup>rd</sup> year IT study group, according to the personal study plan made in the beginning of studies. The general requirement for the double degree at Xamk is a minimum of 45 credits of courses, 30 credits of practical training and 15 credits for bachelor's thesis.

	Autumn 2023	ECTS	Spring 2024	ECTS
IT 3 <sup>rd</sup> year group	Enterprise service management ( <b>online</b> )	5	Service deployment project	5
	Design patterns and object-oriented techniques	5	Software testing and quality assurance	5
	ICT business management	5	Probability and information theory	5
	Research and development skills	5	Full stack programming	5
	Information and network security	5	Databases	5
IT 2 <sup>nd</sup> year group	Python programming and data processing	5	Discrete mathematics 2	5
	IoT electronics and measurements	5	Scaling networks	5
	Introduction to networks	5	Advanced networking	5
	Routing and switching essentials	5	IoT technologies	5
	Data center environments	5	Applying IoT	5
	Finnish 1 ( <b>compulsory for double degree</b> )	5	Finnish 2 (optional)	5
	<b>Bachelor's thesis</b>	5		10

More information and the course descriptions can be found in the Xamk study guide:

<https://opinto-opas.xamk.fi/28/en/42/123044>

Xamk reserves the right to make changes in the detail of the curriculum. The changes might deal with the teachers, titles, contents, duration, depth, and timing of the courses. The purpose of the changes would be to guarantee the most suitable and flexible study schedule for the students.