

DEGREE REQUIREMENTS AND CURRICULUM FOR ACADEMIC YEAR

DEGREE PROGRAMME IN INFORMATION TECHNOLOGY

Unit of Technology/Lappeenranta, valid for the students enrolled in 2008

STUDY MODULE		Academic year/Scope, cr.				*) FI/EN
		1.	2.	3.	4.	
BASIC STUDIES						58 cr
000078	CORE STUDIES OF POLYTECHNIC					11 cr
	KSU0036 Finnish Communication at Work	3	-	-	-	FI
	KRU0042 Swedish Communication at Work	-	-	3	-	FI
	KEN0076 English Communication at Work	3	-	-	-	FI
	KPE0042 Orientation Studies	2	-	-	-	FI
000001	FINNISH COMMUNICATION SKILLS					4 cr
	KSU0041 Finnish Communication for Technology	-	4	-	-	FI
000005	ENGLISH COMMUNICATION SKILLS					6 cr
	KEN0079 English for Technology	-	3	-	-	FI
	KEN0084 English for IT	-	-	3	-	FI
000010	MATHEMATICS					15 cr
	KMA0071 Mathematics I	3	-	-	-	FI
	KMA0089 Matrix and Vector Calculus	-	3	-	-	FI
	KMA0057 Mathematics III	-	-	3	-	FI
	KMA0018 Mathematics V	-	3	-	-	FI
	KMA0027 Statistics and Mathematics	-	-	3	-	FI
000012	PHYSICS					10 cr
	KFK0047 Physics I	-	4	-	-	FI
	KFK0029 Physics III	-	-	3	-	FI
	KFK0001 Physics, Lab Course	-	-	3	-	FI
217117	ALTERNATIVE STUDIES					6 cr
	KTE0012 Electronics, Basics 1)	3	-	-	-	FI
	KMA0069 Introduction to Mathematics 2)	3	-	-	-	FI
	KTE0237 Technical Drawing and CAD 1)	3	-	-	-	FI
	KSU0033 Professional Finnish 2)	-	3	-	-	FI
	<i>1) with matriculation exam 2) with vocational diploma</i>					
217106	STUDIES IN BUSINESS ECONOMICS					6 cr
	KLI0975 Industrial Economics I	3	-	-	-	FI
	KLI0976 Industrial Economics II	-	3	-	-	FI

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PROFESSIONAL STUDIES						122 cr
000014	INFORMATION TECHNOLOGY					17 cr
	KTI0064 Introduction to Information Technology	4	-	-	-	FI
	KTE1315 Digital Technology	-	3	-	-	FI
	KTE0063 Digital Media	3	-	-	-	FI
	KTE1070 Linux	3	-	-	-	FI
	KTI0066 Operating Systems T	-	4	-	-	FI
217101	PROGRAMMING					16 cr
	KTI0063 Programming Basics	4	-	-	-	FI
	KTE1386 Advanced Programming	4	-	-	-	FI
	KTI0071 Object-Oriented Programming Basics	-	4	-	-	FI
	KTI0072 Advanced Object-Oriented Programming	-	4	-	-	FI
217118	DATA STRUCTURES AND DATABASE MANAGEMENT					17 cr
	KTI0074 Data Structures	-	3	-	-	FI
	KTI0073 Use of Algorithms	-	3	-	-	FI
	KTI0075 Relational Databases	4	-	-	-	FI
	KTE1446 Database Programming	-	-	4	-	FI
	KTE0591 Database Design	-	3	-	-	FI
217119	SOFTWARE ENGINEERING					15 cr
	KTI0076 Software Engineering Basics	3	-	-	-	FI
	KTI0077 Software Analysis and Design	-	3	-	-	FI
	KTE0250 Project Management	3	-	-	-	FI
	KTI0078 Object-Oriented Design Basics	-	-	3	-	FI
	KTI0079 Testing and Quality Control	-	-	3	-	FI
217104	DATA TRANSFER TECHNOLOGY					13 cr
	KTE0234 Introduction to Data Transfer	3	-	-	-	FI
	KTE0235 Local Area Networks	-	3	-	-	FI
	KTE1321 Data Transmission Systems	-	-	4	-	FI
	KTE0523 Information Security	-	-	-	3	FI

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		1.	2.	3.	4.	
217113	SPECIALISATION IN SOFTWARE ENGINEERING	44 cr				
KTI0080	Advanced Database Management	-	-	3	-	FI
KTI0081	Advanced Object-Oriented Design	-	-	4	-	FI
KTI0082	Software Architecture and Design Patterns	-	-	4	-	FI
KTI0083	Usability and User Interface Design	-	-	4	-	FI
KTI0084	Human Factors in Interactive Technology	-	-	3	-	FI
	Specialization in some of the following:	-	-	-	16	FI
	<i>Collaborative Systems</i>					
	<i>Open Source Systems</i>					
	<i>Multimedia Systems</i>					
	<i>Mobile systems</i>					
	<i>Systems Development</i>					
	<i>Project Management</i>					
	Project Work	-	-	-	10	FI
217122	SPECIALISATION IN MEDIA TECHNOLOGY AND BUSINESS INFORMATION SYSTEMS	44 cr				
KTI0085	Organizational Learning	-	-	3	-	FI
KTI0086	Information Systems and IT Administration	-	-	4	-	FI
KTI0087	Information Systems Implementation	-	-	4	-	FI
KTI0088	Enterprise Application Integration	-	-	4	-	FI
KTI0089	IT Services and Processes	-	-	3	-	FI
	Specialization in some of the following:	-	-	-	16	FI
	<i>Health Care Information Systems</i>					
	<i>Enterprise Resource Planning Systems</i>					
	<i>Tourism Industry Information Systems</i>					
	<i>Forest Industry Information Systems</i>					
	Project Work	-	-	-	10	FI
Both specializations can also be studied by orientation in production						
ELECTIVE STUDIES		15 cr				
PRACTICAL TRAINING		30 cr				
BACHELOR'S THESIS		15 cr				
TOTAL		240 cr				

*) FI = in Finnish, EN = in English