MASTER DEGREE

SOFTWARE & SYSTEM ENGINEERING
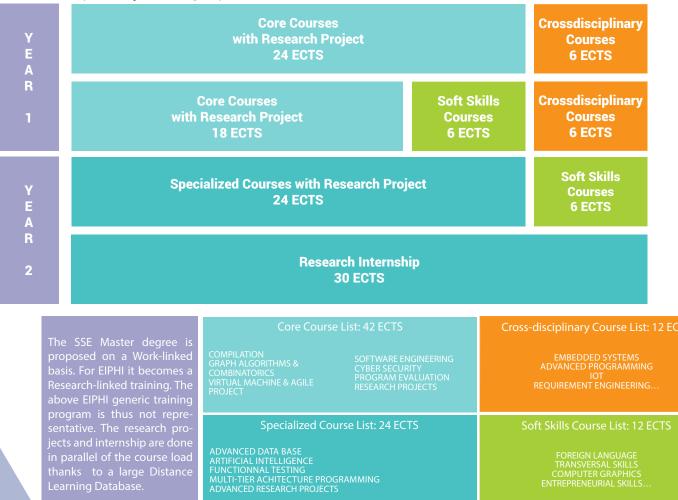
SSE Master Degree Presentation

The Master SSE (Software and Systems Engineering) targets advanced software development techniques around the following four themes which are the subject of a choice of specialty in the second year of the Master:

- the development of complex distributed and networked software systems (DAD specialty),
- application security of computer systems (DLS specialty),
- software quality, agile methods, testing and verification (DL specialty),
- management of networked infrastructures and applications (GIAR specialty).

The backbone of the training focuses on in-depth software development techniques, in line with the key themes of the DISC/

FEMTO-ST research department and the industrial ecosystem of our training.

PROGRAM (Besançon Campus)

YEAR 1	Core Courses with Research Project 24 ECTS		Crossdisciplinary Courses 6 ECTS
	Core Courses with Research Project 18 ECTS	Soft Skills Courses 6 ECTS	Crossdisciplinary Courses 6 ECTS
YEAR 2	Specialized Courses with Research Project 24 ECTS		Soft Skills Courses 6 ECTS
	Research Internship 30 ECTS		

The SSE Master degree is proposed on a Work-linked basis. For EIPHI it becomes a Research-linked training. The above EIPHI generic training program is thus not representative. The research projects and internship are done in parallel of the course load thanks to a large Distance Learning Database.

Core Course List: 42 ECTS

COMPILATION
GRAPH ALGORITHMS &
COMBINATORICS
VIRTUAL MACHINE & AGILE
PROJECT

SOFTWARE ENGINEERING
CYBER SECURITY
PROGRAM EVALUATION
RESEARCH PROJECTS

Cross-disciplinary Course List: 12 ECTS

EMBEDDED SYSTEMS
ADVANCED PROGRAMMING
IOT
REQUIREMENT ENGINEERING…

Specialized Course List: 24 ECTS

ADVANCED DATA BASE
ARTIFICIAL INTELLIGENCE
FUNCTIONNAL TESTING
MULTI-TIER ACHITECTURE PROGRAMMING
ADVANCED RESEARCH PROJECTS

Soft Skills Course List: 12 ECTS

FOREIGN LANGUAGE
TRANSVERSAL SKILLS
COMPUTER GRAPHICS
ENTREPRENEURIAL SKILLS…

EIPHI-BFC
GRADUATE SCHOOL
CROSS DISCIPLINARY SCIENCE
AND TECHNOLOGY

INVESTIR L'AVENIR

UBFC
UNIVERSITÉ
BOURGOGNE FRANCHE-COMTÉ

UNIVERSITÉ DE FRANCHE-COMTÉ

COMPUTER SCIENCE DEPARTMENT (DISC)
MOBILE NETWORKS, DISTRIBUTED SYSTEMS, VERIFICATION AND VALIDATION OF SOFTWARE AND EMBEDDED DEVICES

1 RESEARCH LABORATORIES

FEMTO-ST
SCIENCES & TECHNOLOGIES

4 RESEARCH TEAMS

AND
Distributed Digital Algorithms

Digital simulation and grid computing
Sensor networks, chaos and discrete dynamic systems
Biocomputing

DEODIS
Design, Optimization and evaluation of shared systems

Wireless sensor networks and limited-resource systems Distributed algorithmics for synchronous collaborative applications Scheduling and optimization

OMNI

Optimization,
Mobility,
NetworkIng
Multiscale mobile networks

VESONTIO
Verification and validation of embedded systems software

Model-based tests; applications for safety and embedded systems
Algorithmics for finite models; applications for verification

Cross-Disciplinary

Research Activities

Smart distributed micro and nano systems

DISC

Reliability security & safety in complex systems

E-Health and biocomputing

EIPHI-BFC
GRADUATE SCHOOL
CROSS DISCIPLINARY SCIENCE AND TECHNOLOGY