



Students in this bachelor's degree program learn to effectively integrate information technology into business processes while relying on their proven ability to interact with professionals from other study fields. The program brings together theory and practice, and offers concentrations in software engineering, e-commerce and business intelligence.

Project-based learning is given a predominant place as an integration tool in the training of these future professionals. With a particular focus on teamwork, this approach exposes students to specific issues as a result of the implementation of major software development projects in a production environment. Students face up to real-life situations dealing with technology and personnel issues in the course of a rigorous application of software engineering processes.

### WHAT OUR STUDENTS CAN DO FOR YOU

#### Analysis

- Analysis of clients' needs
- Thorough analysis of problems and solutions
- Analysis and definition of organizational information technology requirements

#### Management

- Planning and management of a data automation project on an Oracle server
- Preparation of project plans
- Facilitation of computer infrastructure management
- Management of an SQL database

#### Development and maintenance

- C++ and COM-object interfaces
- Optimization of business applications and modules
- Database modification and improvement
- Intranet tool development and debugging
- Computer-based support
- JAVA applications
- Programming (Oracle tools)
- Generic programming
- Programming for mobile systems
- ERP integration

#### Design

- Web-accessible enquiry systems (ASP, HTML, Javascript, Access, SQL, Java)
- .NET applications
- Database patterns
- Development of B2B projects
- E-commerce
- Drafting of technical design documents



## KNOWLEDGE AND SKILLS

Term	Description
S-1	Technical and specialized writing; analysis and programming; discrete logic and mathematics; elements of databases and applied statistics.
S-2	Systems programming; operation of relational and object-oriented DBs; interfaces and multimedia; data structures and administrative principles.
S-3	Object-oriented design methods; structure of functional systems; algorithmics and data structures; operating systems and telematics.
S-4	Database modeling; requirement specification and verification; security and cryptography; information systems in business and operations management.
S-5	Personal and industrial relations management; two courses in the concentration or electives and integration projects. Concentration options : software engineering, decision support systems, without concentration
S-6	Three courses in the concentration or electives and integration projects. Concentration options : software engineering, decision support systems, without concentration

## ORGANIZATION OF STUDY (S) AND WORK TERM (W)

Group	1 <sup>st</sup> year			2 <sup>nd</sup> year			3 <sup>rd</sup> year			4 <sup>th</sup> year	
	FALL	WIN	SUM	FALL	WIN	SUM	FALL	WIN	SUM	FALL	WIN
F	S-1	S-2	W-1	S-3	W-2	S-4	W-3	S-5	W-4	S-6	-
I-F	S-2	W-2	S-3	W-3	S-4	W-4	S-5	S-6	-	-	-
I-W	-	S-2	W-1	S-3	W-2	S-4	W-3	S-5	W-4	S-6	-
W	-	S-1	-	S-2	W-1	S-3	W-2	S-4	W-3	S-5	S-6

F : regular fall cohort; I-F : integrated DEC-BAC fall cohort  
I-W : integrated DEC-BAC winter cohort; W : regular winter cohort