

# University of Oum El Bouaghi

Faculty of Exact Sciences, Natural and Life Sciences

Department of Mathematics and Computer Science

**Program name:** Bachelor's degree in Information Systems and Software Engineering (ISSE)

- **Level:** Bachelor
- **Domain:** Mathematics and Computer Science
- **Field:** Computer Science
- **Specialty:** Information Systems and Software Engineering

## 1. Program Description:

The Bachelor in Information Systems and Software Engineering is a 3-year program which provides students solid academic training and essential knowledge and skills to analyze, evaluate and develop solutions related to information systems and software engineering. This degree program addresses the workplace need for professionals with information systems management and advanced software development expertise.

## 2. Entry Requirements

- Secondary (high) school diploma or equivalent certificate.

### 3. Program Units and modules

#### ● Semester 1

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
<b>Fundamental Teaching Unit1</b>	<b>7</b>	<b>11</b>		
Analysis 1	4	6	40%	60%
Algebra 1	3	5	40%	60%
<b>Fundamental Teaching Unit2</b>	<b>7</b>	<b>11</b>		
Algorithms & data structures 1	4	6	40%	60%
Machine structure	3	5	40%	60%
<b>Methodology Teaching Unit</b>	<b>2</b>	<b>4</b>		
Scientific terminology and written expression	1	2	-	100%
Foreign language 1	1	2	-	100%
<b>Discovery Teaching Unit</b>	<b>2</b>	<b>4</b>		
Physics 1 (point mechanics)	2	4	40%	60%

#### ● Semester 2

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
<b>Fundamental Teaching Unit1</b>	<b>6</b>	<b>10</b>		
Analysis 2	4	6	40%	60%
Algebra 2	2	4	40%	60%
<b>Fundamental Teaching Unit2</b>	<b>6</b>	<b>10</b>		
Algorithms & data structures 2	4	6	40%	60%
Machine structure 2	2	4	40%	60%
<b>Methodology Teaching Unit</b>	<b>4</b>	<b>7</b>		
Introduction to probability and descriptive statistics	2	3	40%	60%
Information and communications technology	1	2	-	100%
programming tools for mathematics	1	2	40%	60%
<b>Transversal Teaching Unit</b>	<b>2</b>	<b>3</b>		
Physics 2 (general Electricity)	2	3	40%	60%

● Semester 3

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
<b>Fundamental Teaching Unit1</b>	<b>6</b>	<b>11</b>		
Computers architectures	3	5	40%	60%
Algorithms & data structures 3	3	6	40%	60%
<b>Fundamental Teaching Unit2</b>	<b>5</b>	<b>9</b>		
Information systems	3	5	40%	60%
Graph theory	2	4	40%	60%
<b>Methodology Teaching Unit</b>	<b>4</b>	<b>8</b>		
Numerical methods	2	4	40%	60%
Mathematical logic	2	4	40%	60%
<b>Transversal Teaching Unit</b>	<b>1</b>	<b>2</b>		
Foreign language 2	1	2	-	100%

● Semester 4

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
<b>Fundamental Teaching Unit1</b>	<b>5</b>	<b>10</b>		
Language theory	2	5	40%	60%
Operating system 1	3	5	40%	60%
<b>Fundamental Teaching Unit2</b>	<b>6</b>	<b>10</b>		
Databases	3	5	40%	60%
Networks	3	5	40%	60%
<b>Methodology Teaching Unit</b>	<b>4</b>	<b>8</b>		
Object-oriented programming	2	4	40%	60%
Web application development	2	4	40%	60%
<b>Transversal Teaching Unit</b>	<b>1</b>	<b>2</b>		
Foreign language3	1	2	-	100%

● Semester 5

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
<b>Fundamental Teaching Unit1</b>	<b>6</b>	<b>10</b>		
Distributed information systems	4	6	40%	60%
Decision support system	2	4	40%	60%
<b>Fundamental Teaching Unit2</b>	<b>6</b>	<b>10</b>		
Software engineering	4	6	40%	60%
Human machine interface	2	4	40%	60%
<b>Methodology Teaching Unit</b>	<b>4</b>	<b>8</b>		
Information systems administration	2	4	40%	60%
Advanced programming for the web	2	4	40%	60%
<b>Transversal Teaching Unit</b>	<b>1</b>	<b>2</b>		
Digital economy and strategic foresight	1	2	100%	-

● Semester 6

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
<b>Fundamental Teaching Unit1</b>	<b>6</b>	<b>10</b>		
Seeking information	3	5	40%	60%
IT security	3	5	40%	60%
<b>Fundamental Teaching Unit2</b>	<b>6</b>	<b>10</b>		
Semi-structured data	3	5	40%	60%
Operating system 2	3	5	40%	60%
<b>Methodology Teaching Unit</b>	<b>4</b>	<b>8</b>		
Project	3	6	-	100%
Business Intelligence	1	2	100%	-
<b>Transversal Teaching Unit</b>	<b>1</b>	<b>2</b>		
Scientific Writing	1	2	100%	-