

Informatique

Algorithms, programming and modeling in UML

IDENTIFICATION

CODE : GI-3-S1-EC-APM
ECTS : 4.0

HOURS

Lectures : 2.0 h
Seminars : 30.0 h
Laboratory : 32.0 h
Project : 0.0 h
Teacher-student
contact : 64.0 h
Personal work : 10.0 h
Total : 74.0 h

ASSESSMENT METHOD

1 x 1h50 = written exam

TEACHING AIDS

Course material

TEACHING LANGUAGE

French

CONTACT

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AIMS

This course belongs to teaching unit Informatique et mathématiques décisionnelles (GI-3-S1-UE-IMAD) and contributes to the following skills :

- A1 Analyze a system (real or virtual) or a problem [Level 2]
- A2 Operate a model of a real or virtual system [Level 2]
- A4 Design a system that meets a set of specifications [Level 2]
- C2 Modeling and designing an information, decision and production system, of goods and services [Level 2]
- C3 Evaluating, prototyping and simulating a system [Level 2]

- * Develop an experimental approach [Level 2]
- * Identify, formulate and solve a problem of complex engineering [Level 2]
- the following School skills : specific GI
- * evaluate, prototype and simulate a system [Level 2]
- *size the hardware and / or software of a system [Level 2]
- the following transversal School skills
- * Work, learn, evolve in an autonomous way [Level 2]
- * Interact with others, work in team [Level 3]
- [Level 3]

which decline the following professional skills :

- * Design and size systems required for a given activity of production, service, distribution ... [Level 2]
- * Identify and correct discrepancies in a continuous improvement process (material, human and information systems) by the implementation of analytical and simulation tools [Level 2]
- * Ensure quality reporting through the establishment of appropriate indicators, based on a systemic view of organizations (matrix, silo, project) for any scope and any type of activity [Level 2]"

BIBLIOGRAPHY

- V. FELEA, Introduction à l'informatique, Apprendre à concevoir des algorithmes, Ed. Vuibert, 2013
- L. DEBRAUWER, Algorithmique, Ed. ENI, 2008
- T.CORMEN, C. LEISERSON, R.RIVEST, C. STEIN, Introduction à l'algorithmie, Ed Dunod, 2002
- DELANNOY C., Programmer en Java, Ed Eyrolles, 2001
- OUSSALAH C., Ingénierie objet, Interéditions, 1997