

IDENTIFICATION

Course code : SR504
ECTS : 1

DURATION

Lectures : 8
Tutorial classes : 16
Labs : 0
Total : 24

Project :
Personnal work :

ASSESSMENT

Continuous assessment : two written evaluations.

TEACHING MATERIALS

Slides and guided exercise handouts.

LANGUAGE

English

CONTACT

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UE : UE5-SYSRES

COURSE : Fundamentals : Probability, Random Variables

SCOPE OF THE COURSE

OBJECTIVES

Consolidate essential probability knowledge required to solve problems modeled by random experiments, frequently encountered in computer science.

COMPETENCE AND SKILLS

- Select cryptographic tools suited to a project specification
- Design, from conception to production deployment, a company's IT network while addressing QoS and security issues
- Perform exploratory data analysis

PROGRAM

- Probability space : sample space, sigma-algebra, probability measure
- Conditional probability
- Discrete and continuous random variables : common distributions, expectation, variance
- Convergence of sequences of random vectors : law of large numbers, central limit theorem
- Estimation (point estimation, confidence intervals), hypothesis testing

BIBLIOGRAPHY

J.P. Ramis and A. Warusfel (edited by) - *Mathématiques : tout-en-un pour la Licence, Niveau L2* - Éditions Dunod

REQUIREMENTS

Probability learned in high school followed by CPGE/L1-L3/IUT/BTS