

# SYLLABUS<sup>1</sup>

## Identification of the Teaching Subject

Title: **Cartography Science**

Teaching Unit: **Fundamental UE 1**

Number of Credits: **6**                      Coefficient: **3**

Total Weekly Teaching Hours: **4 hours and 30 minutes**

- Lectures (hours per week): **3 hours**
- Directed Assignments (hours per week): **1 hour and 30 minutes**

## Course Instructor/Coordinator

Name, First Name, and Academic Rank of the Course Instructor:

**Dr. Boulemia Ismahane** (Assistant Professor B)

Email : [ismahane.boulemia@univ-constantine3.dz](mailto:ismahane.boulemia@univ-constantine3.dz)

Name, and Academic Rank of the Teaching Assistant(s) (Directed Assignments) :

Gr 1 **Boulemia Ismahane (MAB)** Email : [ismahane.boulemia@univ-constantine3.dz](mailto:ismahane.boulemia@univ-constantine3.dz)

Gr 2 **Salah Eddine Messali (MAA)** Email : [salaheddine.messali@univ-constantine3.dz](mailto:salaheddine.messali@univ-constantine3.dz)

Gr 3 **Salah Eddine Messali (MAA)** Email : [salaheddine.messali@univ-constantine3.dz](mailto:salaheddine.messali@univ-constantine3.dz)

## Description of the Teaching Subject

Prerequisites :...../.....

General Objective of the Teaching Subject :

**This course aims to :**

- Familiarize urban planning students with the fundamental concepts, tools, and techniques of cartography to assist them in analyzing, visualizing, and communicating spatial data relevant to urban planning.
- Master the language of cartography and the principles of graphic semiotics.
- Learn how to represent absolute and relative quantitative variables.

Learning Objectives to Be Assessed :

**Master the rules of graphic and cartographic representation of quantitative and qualitative data.**

<sup>1</sup> This syllabus is a pedagogical contract to which a teacher commits regarding the subject they teach, and which the students become aware of.

**Course Titles and Schedule of Execution**

<b>Course Titles</b>	<b>Scheduled Date</b>
Course 1: <b>Introduction to Cartography</b>	26/09/2023
Course 2 : <b>Major Categories of Graphic and Cartographic Images</b> 1. Diagrams (or Networks) 2. Graphics, Charts, or Diagrams 3. Maps and Plans	03/10/2023
Course 3 : <b>Cartographic Projections</b> 1. Basic Concepts of a Projection 2. Classification of Orthogonal Projections 3. Selecting the Appropriate Projection System	10/10/2023
Course 4 : <b>Cartographic Language</b>	17/10/2023
Course 5 : <b>Graphic Semiotics (Visual Variables)</b>	24/10/2023
Course 6 : <b>Graphic Semiotics (Visual Variables) (Continued)</b>	07/11/2023
Course 7 : <b>Cartographic Styling, Color, and Aesthetics</b>	14/11/2023
Course 8 : <b>Language of Topographic Maps</b> 1. Conventional Symbols 2. Standardization	21/11/2023
Course 9 : <b>Thematic Maps</b> 1. Representation of Qualitative Components 2. Representation of Ordered Components	28/11/2023
Course 10 : <b>Thematic Maps (Continued)</b> 3. Representation of Quantitative Components 4. Dynamic Maps	05/12/2023
Course 11 : <b>Graphic Reports, Master Plans, and Urban Planning Instruments</b>	12/12/2023
Course 12 : <b>Cartography and Information Technology</b> 1. Geographic Information Systems (GIS) 2. Google Earth Engine	19/12/2023
Course 13 : <b>Study and Design of a Map</b> 1. Modeling 2. Data Acquisition 3. Specification Development	09/01/2024
<b>End-of-Semester Examination</b>	/
<b>Make-up Examination</b>	/

## Titles of Directed Assignments

Here are the requested TD (Directed Assignments) titles and their respective objectives :

### **TD n°01 : Development of a Glossary**

- Objective : A cartography glossary is an essential tool for learning, communicating, and mastering cartographic concepts, which is particularly relevant for urban planning students.

### **TD n°02 : Use of Cartography**

Provide examples of the use of cartography in various fields, especially in the field of urban planning.

- Objective : Highlight the importance and role of cartography in various scientific fields and in everyday life.

### **TD n°03 : Types of Information**

- Objective: Identify elements of space and discover the qualitative relationships that exist among them.

### **TD n°04 : Graphic Representation**

Classify elements based on their representation form: point, linear, and zonal.

- Objective : Familiarize students with the cartographic drawing guide in urban planning. Learn to identify various spatial elements based on their nature and representation form, as well as select appropriate symbols for each element based on each student's intuition.

### **TD n°05 : Visual Variables**

- Objective : Represent spatial elements using the four visual variables: size, color, orientation, and shape.

### **TD n°06 : Diagrams**

- Objective : Replace a map or plan with an appropriate diagram.

### **TD n°07 : Networks**

- Objective : Replace numerical data with diagrams in the form of networks.

### **TD n°08 : Les graphs**

- Objective : Replace numerical data with graphs.

### **TD n°09 : Topographic Map (Base Map)**

Extract the maximum amount of information from the topographic map

- Objective : Master the reading of maps and the use of typical vocabulary.

### **TD n°10 : Topographic Cross-Section**

Creation of a Topographic Cross-Section

- Objective : Describe the landscape, terrain, hydrographic network, and land use. Select the location of the topographic cross-section carefully. Create a cross-section and calculate the slope.

### Evaluation Methods

Nature of Assessment	Weighting at % <sup>2</sup>
1. Exam	33
2. Progression :	.....
1.1. Quiz	12
1.2. Directed Assignments	50
1.3. Practical Work	.....
1.4. Field Trips	.....
1.5. Attendance (Presence/Absence)	05
1.6. Others (to be specified)	.....
<b>Total</b>	<b>100%</b>

### Primary References & Bibliography

- **BERTIN J.** (1967), "Graphical Semiotics: Diagrams, Networks, and Maps," MOUTON Editions, Paris-The Hague, 407 pages.
- **BERTIN J.** (1977), "Graphics and Graphic Processing of Information," FLAMMARION Editions, Paris, 278 pages.
- **BONIN S.** (1983), "Introduction to Graphics," l'EPI Editions, Paris, 174 pages.
- **JOLY F.** (1976), "Cartography," PUF Editions, Paris, 271 pages.
- **RIMBERT S.** (1990), "Carto-Graphies," HERMES Editions, Paris, 172 pages.
- **STEINBERG J.** (1996), "Cartography: Practice for Geography and Planning," SEDES Editions, 130 pages.
- **ZANIN C. & TREMELO M.-L.** (2003), "Creating a Map: Assistance in the Design and Production of Univariate Thematic Maps," Imp. CHIRAT (France), 199 pages.
- **Roland BARTHES;** "The Rhetoric of the Image," Communication, (Journal of the Center for Transdisciplinary Studies, School for Advanced Studies in the Social Sciences), 1964, No. 4, pp. 40-51.
- **Jacques BERTIN,** "Graphical Semiotics," Gauthier-Villars and Mouton Ed., 1967, 1st ed., 2nd ed. 1973.
- **Serge BONIN,** "Introduction to Graphics," l'épi Editions (distributed by Desclée de Brouwer), 2nd ed., 1983, 172 pages.
- **Didier Poidevin,** "Manual of Cartography"; excerpt from his work "The Map: a Means of Action," Ellipses Editions, 96 pages.

**Instructor's Signature**

**Dr. Boulemia Ismahane**



<sup>2</sup> "The weightings for exams and progression (mentioned in the syllabus) should be formulated in accordance with the course brochure. The instructor should specify the partial weightings for progression."

"We, first-year students in the Urban Planning program, hereby certify that we have consulted the syllabus for the subject 'Cartography Science' and have been informed about its content and assessment methods."

N°	Full Name, Signature	N°	Full Name, Signature
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Date :.....