Universitat Autònoma de Barcelona

2022/2023

Urbanisation Process: Urban Systems and Morphology

Code: 104532
ECTS Credits: 6

Degree	Type	Year	Semester
2503743 Management of Smart and Sustainable Cities	OB	2	1

Contact

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Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Teachers

Angels Perez Mateos
Esteve Dot Jutglà

Prerequisites

None

Objectives and Contextualisation

This course represents a step further in the training of the students in subjects of geography and urban dynamics. It aims at deepening in some of the contents introduced in the subjects realised in the first year 'Introduction to the contemporary city' and 'Demography, society and economy', as well as dealing with new ones, articulated mainly on the idea of network.

The course will provide students with elements for the understanding and analysing the dynamics of transformation of the territory through the urbanisation process. This topic will be addressed from two points of view, corresponding to various levels of scale: urban system and urban morphology, interconnected through the concept of network.

These are the main axis on which the subject is structured:

- Definition and delimitation of the city through the various available methods: institutional, morphological, functional, economic structure, service hierarchy, lifestyles, etc.

- Urban morphology: urban patterns and their constituent elements.

- The rent of the urban land, as an essential element for the configuration of urban spaces and as a condition of the economy and urban society, including the distribution of social groups on the territory.

- Relationship between the evolution of technological and service networks (water, transport, electricity, sanitation, gas, telecommunications) with urban development.

- Urban systems. Integration, interrelation and interdependence at the various levels of scale: metropolitan, regional, continental and planetary.

Competences

- Analyse and model urban and regional dynamics using methodological instruments for qualitative and quantitative analysis.
- Demonstrate creativity, initiative and sensitivity in the different social and environmental topic areas.
- Identify and analyse government and management policies for cities in the different fields of urban development, particularly methods of public participation.
- Identify and interpret social, economic, technological and sustainability challenges in different areas such as: town planning, infrastructures, mobility, urban economies, services and equipment, cultural diversity and social inequality, energy and natural resources, waste, etc.
- Identify and use different sources, models and data bases of information generated by urban activity, as well as their principles of operation, access policies and standards.
- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
- Work cooperatively in complex and uncertain environments and with limited resources in a multidisciplinary context, assuming and respecting the role of the different members of the group.

Learning Outcomes

1. Analyse and understand social and territorial processes.
2. Demonstrate creativity, initiative and sensitivity in the different social and environmental topic areas.
3. Describe urban and territorial dynamics at various scales.
4. Differentiate the institutional and normative mechanisms for the governing cities, technological networks and services.
5. Integrate theoretical concepts from diverse scientific fields into the description, analysis and modeling of urban dynamics.
6. Model urban phenomena and dynamics.
7. Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
8. Understand the institutional instruments of government and regulation.
9. Understand the relationship between urban dynamics at various scales (municipal, metropolitan, regional, state, continental, planetary).
10. Use statistical, bibliographic, regulatory and cartographic sources and georeferenced information, as well as methods and techniques, for analysing and modelling the relationship between urban dynamics in developing technological networks and urban services.
11. Work cooperatively in complex and uncertain environments and with limited resources in a multidisciplinary context, assuming and respecting the role of the different members of the group.

Content

This course will follow this general program:

1. Definition and delimitation of the city.

2. Urban morphology: urban plots and their constituent elements.

3. The rent of the land, segregation and gentrification.

4. Services and technology networks and urban development.

5. Urban systems and governance: integration, interrelation and interdependence in a multi-scale system.

At the beginning of the course a detailed guideline of sessions will be provided.

Methodology

The course will last around 13 weeks, at 4 hours per week (plus 2-3 field trips to be done preferably on Saturdays), which completes 52 hours of joint work.

The following types of teaching activities are summarized below:

- Theoretical sessions: 13 sessions (11 theoretical sessions and 2 partial exams). They obey the classical articulation in which the professor presents the theoretical content through a power point. Reading sessions and audiovidual content will be proposed for each session and participation in class will be encouraged.

- Practical sessions: 6 sessions grouped into two main types of activity:

- Practical sessions related to theoretical content. There will be 3 sessions of practical exercises (analysis of official statistics data, cartography ...) that will have a close relation with the theoretical content. These practical exercises must be submitted throughout the course.

- Practical sessions realted to the research poster. This type of session is aimed at developing the research poster that students must prepare throughout the course. 3 sessions will be destined to work directly on the poster and get suport and feedbak on the work students must do on their own (solve doubts and learn techniques for the preparation of scientific posters). The last session will be to present and defend publicly the result of the poster.

- Field trips. If the public health context allows it, there will be 2-3 field trips in the interior of Metropolitan Region of Barcelona with the aim of observing and analyzing on the ground the theoretical concepts covered in the subject. If not, an alternative telematic activity will be proposed.

Moodle Virtual Campus will be used as a means of communication between lecturers and students. Moodle Virtual Campus will include the materials of the subject: syllabus, theoretical sessions (ppt), instructions for practical sessions, guides for the preparation of the research poster and other useful materials.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Field work	12	0.48	1, 8, 9, 2, 3, 4, 5, 6, 7, 11, 10
Guided practical sessions	12	0.48	1, 8, 9, 2, 3, 4, 5, 6, 7, 11, 10
Guided theoretical sessions	26	1.04	1, 8, 9, 3, 4, 5, 6, 7, 10
Type: Supervised			
Individual tutoring or in small groups	5	0.2	1, 3, 10
Type: Autonomous			
Completion of the practical exercises reports	20	0.8	1, 9, 2, 3, 5, 6, 11, 10
Reading and preparing written tests	37.5	1.5	1, 8, 9, 3, 4, 5, 6, 10
Realización del póster de investigación	37.5	1.5	1, 2, 3, 5, 11, 10

Assessment

The assessment consists of 4 main items:

- Written exam (40%): Each of the partial exams: 20%

- Research poster: 30%

- Practical exercises and field work: 20%

- Participation: 10%

- Written exam:

The objective of this exercise is to verify whether the student has acquired the theoretical knowledge that has been taught in class. The result of the test will represent 40% of the final mark. Throughout the course two partial tests of the same type (20%) will be carried out. Passing both tests (more than 5) will allow the student to pass the subject and not have to submit to the final exam at the end of the course (date pre-fixed for grade coordination). The theoretical content must exceeded more than 5 marks to average it with the rest of the items.

- Research poster. Students, grouped in pairs, will have to analyse in depth some of the proposed subjects. Students will have to choose the most significant information to translate it into the poster, which they will have to present and defend publicly. The result of the research poster will represent 30% of the grade of the course, and will be presented before the Christmas holidays. The completion of the research poster is mandatory (no minimum of 5 needed).

- Practical exercises and fieldwork. Throughout the course there will be 2 reviews or practical exercises. The result of these exercises will represent 10% of the final mark. Moreover, it will be necessary to present a report of the field trips, which will also represent 10% of the grade. The summission of the memory is mandatory (no minimum of 5 needed).

- Participation in the classroom and field trips. Attendance and participation in class discussions will be valued at 10% of the final grade.

Marking:

Fail: Those people who do not obtain a mark of 5 on the written test (average of the two partial ones) or that the sum of the three items (with the corresponding proportions) does not meet the minimum mark of 5 will fail the course.

Not evaluable: In the event nothing is summitted, the corresponding grade will be "not evaluable". In any other case, the corresponding note will be included.

Re-evaluation: All the items of the evaluation, with the exception of participation and poster presentation, can be re-evaluated. Students who fail one of the two partial exams must realise the final exam (on the pre-fixed date by the degree coordination). Regarding the poster as for the practice report, they can be re-evaluated once in case of failure.

Copy or plagiarism: If students perform any irregularity in the evaluation activities - copy, plagiarism or others - a mark of 0 will be obtained for the aforementioned activity, without prejudice to other actions that may be undertaken in this regard.

In the case of people who attend the subject for a second year (repeaters), the marks for the practical activities (research poster or practical exercices) can be kept as long as they have obtained a 5 mark.

High honor mark: Distinction will be granted to a 5% of students obtaining a final mark superior to 9.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Creation and presentations of a research poster	30%	0	0	1, 9, 2, 3, 4, 5, 6, 7, 11, 10
Participation in the classroom and field trips	10%	0	0	1, 8, 9, 2, 3, 4, 5, 6, 7, 11, 10
Practical exercises	20%	0	0	1, 8, 9, 2, 3, 4, 5, 6, 7, 11, 10
Written exam	40%	0	0	1, 8, 9, 3, 4, 5, 6, 7, 10

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Software

Microsoft WORD, Microsoft EXCEL, ArcGIS, Qgis.