UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II
SCUOLA POLITECNICA E DELLE SCIENZE DI BASE

DIPARTIMENTO DI ARCHITETTURA

A SHORT GUIDE FOR INCOMING STUDENTS

BACHELOR DEGREE
SVILUPPO SOSTENIBILE E RETI TERRITORIALI
(SUSTAINABLE DEVELOPMENT AND TERRITORIAL NETWORKS)

Classe L-21 - Lauree in scienze della pianificazione territoriale, urbanistica, paesaggistica e ambientale

*If you need help, please remember that your first Spokesperson is your Erasmus Exchange representative.

year / semester	typology	name	discipline code	module credits	total credits	exams
1/ I	monodisciplinary	Mathematics and statistics	SECS-S 06		10	1
1/ I	monodisciplinary	Information technologies	INF/01		6	1
1/ I	monodisciplinary	Representing the territory	ICAR/17		6	1
1/ I		English (level B1)	altre att.c		4	*
1 /II	monodisciplinary	Introduction to urbanism	ICAR/21		6	1
1/ II	lab 1.1	Territorial surveys	ICAR/20	6	12	1
	Interpreting the territory	Communication and media	ICAR/13	6		
1/ II	Integrated studio	Ecology	BIO/07	6	11	1
	The ecological structure of settlements	Sustainability of environmental systems	ICAR/12	5		
1		Free choice activities	altre att.a		5	*
					60	**6**
2/ I	lab 2.1	Introduction to New Economies	ICAR/22	6	12	1
	Enterprises networks	Enterprises and territorial development	ING-IND/35	6		
2/ I	monodisciplinary	Urbanization theories	ICAR/21		6	1
2/ I	monodisciplinary	Architecture and urban processes	ICAR/14		8	1
2/ I	monodisciplinary	Information technologies instruments to support decision making	altre att d		8	1
2/ II	lab 2.2	Tools for territorial transformation	ICAR/21	6	12	1
	Integrated intervention in the contemporary territory	Evaluation methods and decision making processes	ICAR/22	6		
2/ II	monodisciplinary	Environmental Law	IUS/10		6	1
2/II	monodisciplinary	History of urban forms	ICAR/18		8	1
					60	**7**
3/ I	lab 3.1	Environmental design	ICAR/12	6	12	1
	Sustainable design	Analysis of rural territory	AGR/10	6		
3/ I	monodisciplinary	Digital society and territorial processes	SPS/08		6	1
3/ I	monodisciplinary	Big Data treatment	ING-INF/05		6	1
3/ II	lab 3.1	Urbanism and circular economy	ICAR/21	6	12	1
	Governing the urban metabolism	Technological design of life cycles	ICAR/12	6		
3/ II	monodisciplinary	Urban and territorial policies	ICAR/20		6	1
3		Free choice activities	altre att.a		7	*
3	External internship	External internship	altre att. e		6	*
3		Final exam. Thesis	altre att. c		5	*
					60	**5**
					180	**18**

Courses and studios

First Year

Course Title	**Mathematic and statistics**
Credits	10
Hours of lectures	80
Year	1st
Semester	I
Description	The aim of the course is to provide the student with the mathematical and statistical contents essential for learning the technical-scientific disciplines and for a correct analysis and processing of data provided by different sources.
Exam	There will be a written test and an oral interview

Course Title	**Information technologies**
Credits	6
Hours of lectures	48
Year	1st
Semester	I
Description	The course aims to provide the basic knowledge of computer science, spreadsheet, relational database and the ability to develop territorial analyzes with GIS (Geographic Information Systems) tools, providing the basis for other teachings and also stimulating students to a possible subsequent self-training.
Exam	Practical test and oral interview

Course Title	**Representing the territory**
Module	
Credits	6
Hours of lectures	48
Year	1st
Semester	I
Description	The course must provide students with the theoretical principles underlying the different representations of the territory; the knowledge and critical reading tools of the forms of representation, historically used in the drafting of territorial plans and projects; the basic principles of traditional and IT techniques in use for the representation of the complex relationships present in the territory.
Exam	Practical test and oral interview

Course Title	**English**
Credits	4
Hours of lectures	32
Year	1st
Semester	I
Description	Provide students with the necessary support to acquire an internationally recognized certification relating to the knowledge of the language (required level B2).
Exam	The student will be subjected to a placement test on the basis of which; if not in possession of the required level he repeats the exam. The student who has a certification of the required level can present the certificate and request its recognition.

Course Title	**Introduction to urbanism**
Credits	6
Hours of lectures	48
Year	1st
Semester	II
Description	The student is called to learn urban planning as a complex discipline that is formed at the intersection of multiple knowledge, dimensions and profiles of competences. The course places the student in the presence of different sources, documentation and materials which, on the one hand, provide the background of historical-critical knowledge useful for placing the discipline in the European context; on the other hand, they stimulate analytical and interpretative skills regarding the main elaborations and tools that Italian urban planning has made use of, since its origin and up to the 1960s.
Exam	Oral exam preceded by tests during the semester

Course Title	**LAB 1 – Interpreting the territory**
Module	**Territorial surveys**
Credits	6
Hours of lectures	48
Year	1st
Semester	II
Description	The course aims to put students in contact with the complexity of places and urban problems and let them experiment with ways of assembling and disassembling this complexity. The overall objective of the activity is to compile an urban planning survey on the chosen place / problem.
Exam	Credits are attributed on the basis of the evaluation of an individual final paper that returns the summary of the work performed (inspections, classroom exercises, development of a thematic survey, group work), possibly completed by tests on learning of the theories and practices investigated. Attendance is compulsory for at least 70% of the laboratory hours.

Course Title	**LAB 1 – Interpreting the territory**
Module	**Communication and media**
Credits	6
Hours of lectures	60
Year	1st
Semester	II
Description	The workshop aims to put students in contact with the complexity of places and urban problems and let them experiment with ways of assembling and disassembling this complexity. The overall objective of the activity is to compile an urban planning investigation on the chosen place / problem.
Exam	Credits are attributed on the basis of the evaluation of an individual final paper that returns the summary of the work performed (inspections, classroom exercises, development of a thematic survey, group work), possibly completed by tests on learning of the theories and practices investigated. Attendance is compulsory for at least 70% of the laboratory hours.

Course Title	**The ecological structure of settlements**
Module	**Ecology**
Credits	6
Hours of lectures	48
Year	1st
Semester	II
Description	The course introduces the student to the basic concepts of ecology with a view to providing the knowledge and methodological tools necessary to analyze the relationships between organisms and the environment and the quantitative analysis of ecological systems.
Exam	Final discussion of the work

Course Title	**The ecological structure of settlements**
Module	**Sustainability of environmental settlements**
Credits	5
Hours of lectures	50
Year	1st
Semester	II
Description	The course aims to provide, within the disciplinary field of Environmental Design, the cultural framework and the definition of appropriate methodologies for reading and interpreting environmental systems, understood as the result of the interaction between man-made and natural environments and eco-systemic conditions.
Exam	Final discussion of the work

Second Year

Course Title	**LAB 2.1 – Enterprises networks**
Module	**Introduction to New Economies**
Credits	6
Hours of lectures	48
Year	2nd
Semester	I
Description	The objectives of the course are aimed at introducing theoretical notions relating to the development of new businesses, new economic models and the opportunities that they can determine in urban and territorial transformation processes.
Exam	Final discussion of the work.

Course Title	**LAB 2.1 – Enterprises networks**
Module	**Enterprises and territorial development**
Credits	6
Hours of lectures	48
Year	2nd
Semester	I
Description	The objectives of the course are aimed at introducing theoretical notions relating to the development of new businesses, new economic models and the opportunities that they can determine in urban and territorial transformation processes.
Exam	Final discussion of the work

Course Title	**Urbanization theories**
Credits	6
Hours of lectures	48
Year	2nd
Semester	I
Description	The main objective of the course is the acquisition of basic theoretical skills useful for understanding urbanization processes from both a geographical-morphological and an economic-political point of view.
Exam	Oral interview

Course Title	**Architecture and urban processes**
Credits	8
Hours of lectures	64
Year	2nd
Semester	I
Description	The aim of the teaching is to introduce students to understanding the trans-scalar, multidisciplinary and multidimensional dimension of architectural and urban design. Students will be guided to understand the processual and adaptive value of the sustainable transformation project of urban space in contemporary territories. As part of the reflections on the themes of urban regeneration, we will question the role that the space modification project can assume for the activation of transformations whichare able to trigger processes of economic and social innovation and environmentally sustainable, in relation to broader issues of global interest.
Exam	Final discussion of the work

Course Title	**IT instruments to support decision making**
Credits	8
Hours of lectures	64
Year	2nd
Semester	I
Description	The course aims to transmit to the student the knowledge on the potential and use of IT tools in decision-making processes in the context of urban planning and territorial management as well as guaranteeing the necessary skills for structured research of spatial information, design in a GIS environment, creation of GIS participatory processes and building modeling with BIM techniques.
Exam	Final discussion of the work and oral interview

Course Title	**LAB 2.2 – Integrated intervention in the contemporary territory**
Module	**Tools for territorial transformation**
Credits	6
Hours of lectures	48
Year	2nd
Semester	II
Description	The objectives of the course are aimed at introducing theoretical notions, methodological approaches and operational tools for the structuring of complex decision-making problems in the context of Climate Change (CC). The expected results focus on the training of students able to acquire the ability to organize, spatial representation of qualitative and quantitative data relating to the theme of the CC, and to evaluate the impacts of possible mitigation and transformation actions, according to the planner's perspective.
Exam	Final discussion of the work in written and oral form

Course Title	**LAB 2.2 – Integrated intervention in the contemporary territory**
Module	**Evaluation methods and decision making processes**
Credits	6
Hours of lectures	48
Year	2nd
Semester	II
Description	The objectives of the course are aimed at introducing theoretical notions, methodological approaches and operational tools for the structuring of complex decision-making problems in the context of Climate Change (CC). The expected results focus on the training of students able to acquire the ability to organize, spatial representation of qualitative and quantitative data relating to the theme of the CC, and to evaluate the impacts of possible mitigation and transformation actions, according to the planner's perspective.
Exam	Final discussion of the work in written and oral form

Course Title	**Environmental law**
Credits	6
Hours of lectures	48
Year	2nd
Semester	II
Description	The course aims to provide students with knowledge of the principles of environmental law with regard to national, European and international legislation and to acquire an understanding of the main intervention tools.
Exam	Written and oral form

Course Title	**History of urban forms**
Credits	8
Hours of lectures	64
Year	2nd
Semester	II
Description	The course aims to provide students with the basic cognitive and methodological tools necessary for understanding urban phenomena and territorial transformations, in relation to the political, socio-economic, architecture and culture history in general.
Exam	Oral interview

Third Year

Course Title	**LAB 3.1 – Sustainable design**
Module	**Environmental design**
Credits	6
Hours of lectures	48
Year	3rd
Semester	I
Description	The aim of the course is to provide students with advanced methodological concepts and tools for environmental design in a sustainable key. Environmental design provides basic theoretical orientations and the most innovative intervention techniques useful for dealing with problems of livability in urban and rural communities referable to the climate crisis and the negative impacts of anthropogenic activities on living environments.
Exam	Final discussion of the work

Course Title	**LAB 3.1 – Sustainable design**
Module	**Analysis of the rural territory**
Credits	6
Hours of lectures	48
Year	3rd
Semester	I
Description	The aim of the course is to provide students with advanced methodological concepts and tools for environmental design in a sustainable key. Analysis of the rural territory provides the knowledge necessary to address the planning of rural environments and communities with physical and quantitative methods, in particular with the expert use of GIS for the analysis of complex systems
Exam	Final discussion of the work

Course Title	**Digital society and territorial processes**
Credits	6
Hours of lectures	48
Year	3rd
Semester	I
Description	The aim of the teaching is to provide students with the basic notions to understand social production processes in the digital environment and thus orient spatial planning and territorial development processes in line with social innovation and the potential provided by ICT.
Exam	Oral interview

Course Title	**Big Data treatment**
Credits	6
Hours of lectures	48
Year	3rd
Semester	I
Description	The aim of the course is to provide students with the notions to extract and process -on a statistical basis- data useful for action in the field of territorial development, provided by different sources and of a different nature: from census data, to images, to big data.
Exam	Final discussion of the work

Course Title	**LAB 3.2 – Governing the urban metabolism**
Module	**Urbanism and circular economy**
Credits	6
Hours of lectures	48
Year	3rd
Semester	II
Description	The course aims to provide students with the basic skills to manage spatial planning, in a perspective of circular economy, including decision-making processes, data flows and design techniques. Urbanism and circular economy aims to provide specific knowledge on urban planning, integrating the typical tools of the discipline (planning rules, urban planning techniques, etc.) with a holistic approach capable of interpreting urban and peri-urban contexts and promoting their sustainable regeneration, starting with the management of natural and spatial resources.
Exam	Final discussion of the work

Course Title	**LAB 3.2 – Governing the urban metabolism**
Module	**Technological design of life cycles**
Credits	6
Hours of lectures	48
Year	3rd
Semester	II
Description	The course aims to provide students with the basic skills to manage spatial planning, in a perspective of circular economy, including decision-making processes, data flows and design techniques. Technological design of life cycles aims to deepen the theoretical foundations and technologies of the systemic approach to the project of the territory. In particular, the module works on the concept of life cycle and its declination within eco-innovative solutions and strategies for material interventions and configuration of new living environments.
Exam	Final discussion of the work

Course Title	**Urban and territorial processes**
Credits	6
Hours of lectures	48
Year	3rd
Semester	II
Description	The course aims to present the debate and the main tools and methods of intervention on the city and the territory typical of the field of public policies, highlighting the influence that the debate in the political field has exercised on the theories of territorial planning and the growing importance of urban policies, or other public policies with territorial consequences on the actual dynamics of regulation / transformation of the city and the territory.
Exam	Oral interview

1st/ 3rd YEAR

	Free choice activities
Credits	5 + 7
Year	2nd – 3rd
Semester	
Description	The credits chosen by the student can be freely acquired through participation in courses, seminars, workshops, study trips and other relevant activities offered by the Department of Architecture or by other subjects of the University. Exams taken in other study courses (to be agreed in advance if external to the Department) and activities organized by subjects external to the University may also be assessed. Each year, the degree program organizes and / or suggests a certain number of activities, usually worth 2/3 credits, on the various areas of study envisaged (planning and urban planning, territorial public policies, themes relating to landscape and the environment, useful techniques for the profession).