Universitatea Tehnica de Constructii Bucuresti
Departamentul de studii Doctorale
Domeniul Inginerie Civila si Instalatii
Forma de invatamant: invatamant de zi
Ciclul de invatamant: Master
Programul de studii universitare de masterat: **Interactions in the built environment**
Cod specializare: U02.10.ICV.IZ.M24

Plan de invatamant

(Cod PO-07_F-10)

Semestrul I

Nr. Crt.	**Denumire disciplina**	**Cod**	**C**	**S**	**L**	**P**	**SI**	**TO**	**CR**	**Forma de examinare**
1	Statistics, probability and data processing techniques	1.OB01.DA	2	2			4	8	6	E
2	Measurement, visualization and data acquisition principles	1.OB02.DA	2		2		6	10	8	E
3	Modeling in civil engineering science	1.OB03.DA	1	1			2	4	4	E
4	Reporting and communicating research results	1.OB04.DS	1	1			2	4	2	C
5	Research project i) Fluid motion ii) Ambient comfort iii) Environment – structures interactions	1.OP01.DS	3			3	3	9	6	C+Pr
6	i) Clean energy ii) Impact studies iii) History	1.OP02.DS	1		1		2	4	4	E
	Total		10	4	3	3	19	39	30	

Semestrul II

Nr. Crt.	Denumire disciplina	Cod	C	S	L	P	SI	TO	CR	Forma de examinare
7	Mechanics of continuous media	2.OB05.DA	2	1			4	7	6	E
8	Measurement techniques and instrumentation	2.OB06.DA	2		2		6	10	8	E
9	Advanced engineering simulation software	2.OB07.DS	2		1		4	7	6	E
11	Ethics and Research management	2.OB08.DS	1		1		2	4	4	E
11	Research project i) Fluid motion ii) Ambient comfort iii) Environment – structures interactions	2.OP03.DS	3			3	3	9	6	C+Pr
	Total		10	1	4	3	19	37	30	

Semestrul III

Nr. Crt.	Denumire disciplina	Cod	C	S	L	P	SI	TO	CR	Forma de examinare
12	Advanced engineering simulation software	3.OB09.DA	2		2		4	8	6	E
13	Meshing techniques	3.OB10.DA	1	1			5	7	6	E
14	Risk assessment in i) Buildings and structures ii) Building services iii) Hydraulic engineering	3.OP04.DS	2		1		4	7	6	E
15	i) Wind engineering ii)Noise and vibrations in buildings	3.OP05.DS	2		1		4	7	6	E

16	Research project in i) Fluid motion ii) Ambient comfort iii) Environment – structures interactions	3.OP06.DS	3			3	3	9	6	C+Pr
	Total		10	1	4	3	20	38	30	

Semestrul IV

Nr. Crt.	**Denumire disciplina**	**Cod**	**C**	**S**	**L**	**P**	**SI**	**TO**	**CR**	**Forma de examinare**
1	Elaborarea lucrarii de disertatie	4.PD01.DS	8 ore x 14 saptamani					112	30	E+Pr

Limba: English

Perioada: 2 years

Credite: 120 ECTS

	Volum ore	ECTS	Forme de verificare
Semestrul I	280	30	4E+2C+1Pr
Semestrul II	280	30	4E+2C+1Pr
Semestrul III	280	30	3E+1C+1Pr
TOTAL	840	90	11E+5C+3Pr
Lucrarea de disertatie	112	30	1E + 1Pr
TOTAL	952	120	12E+5C+4Pr

Research project:

The research themes are general so they can be used every year with slight differences. Every year research themes will be added or deleted based on the researchers activities. A maximum number of 3 students can be working on the same theme.

Sample themes for rescarch projects:

1. Velocity and turbulence distribution in a wind tunnel
2. Velocity and turbulence distribution in a free surface current.
3. Velocity and turbulence distribution around a wind turbine
4. Water networks modeling; (optimization models)
5. Sewer networks modeling; (pollution source detection)
6. Prediction of the indoor environment quality for different type of buildings
7. Prediction of the indoor pollutant concentration occupants exposure
8. Acoustic approach for building air permeability measurement
9. Measurements of indoor acoustic comfort: indoor noise level and reverberation time.
10. Prediction of Building Energy Consumption
11. Analysis of seismicity: activity rate and positions of foci

12. Analysis of strong ground motions: kinematic parameters, frequency content and damage potential
13. Ground motion prediction equations
14. Uniform hazard spectra
15. Seismic fragility of buildings and structures
16. Structural response control through passive energy dissipation and seismic isolation
17. Seismic damage assessment and control
18. Probabilistic seismic risk analysis
19. Wind induced response of buildings and structures
20. Aeroelastic phenomena for wind-sensitive structures

RESPONSABIL MASTER,

Prof.univ. dr. ing. Anton ANTON