



ΠΑΝΕΠΙΣΤΗΜΙΟ
ΠΑΤΡΩΝ
UNIVERSITY OF PATRAS

SCHOOL OF ENGINEERING
DEPARTMENT OF CIVIL ENGINEERING

civil.upatras.gr



UNDERGRADUATE STUDIES

ACADEMIC YEAR 2025 – 2026

PATRAS 2025

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1. DEPARTMENT OF CIVIL ENGINEERING

The Department of Civil Engineering was established by the Royal-Decree-Law 399 of 28 June 1972 and started operating within the framework of the Engineering School of the University of Patras from the academic year 1972-1973. Within the framework of Law 1268/82, the Department of Civil Engineering has been operating as an independent unit since 1983. Since its inception to date, about 5600 students have graduated from the Department of Civil Engineering, while the number of students enrolled in the Undergraduate Studies Program has grown over the last few years to about 1800.

The Department of Civil Engineering is located in a building with a total surface area of more than 16000 m² including classrooms, an auditorium, a design room, seminar rooms, a library room, a computer facility, staff offices, administrative areas, and laboratories of a total surface area of about 5000 m². The staff of the Department comprises 27 faculty members, 16 Professors Emeriti, 2 teaching associates, 4 technical associates, and 5 administrative members. In addition, the Department employs teaching associates on a contract basis.

The Department consists of three Divisions, nine Laboratories, a Seismic Simulator facility, and one Computer Center. The staff and the various functions of the Department, with the exception of the Computer Center and the Seismic Simulator, are integrated under the three Divisions.

Since September 1994, a Postgraduate Program and a Doctoral Studies Program have been operating in the Department of Civil Engineering. Following a modification in 2018, the Department awards the following Postgraduate degrees:

- *Postgraduate Diploma in "Design of Resilient, Sustainable and Smart Infrastructures" with specialization in:*
 - Specialization A: Resilient Materials, Structures and Geotechnical Infrastructures*
 - Specialization B: Hydraulic and Environmental Engineering for Sustainable Infrastructures*
 - Specialization C: Intelligent Systems in Transportation and Construction Project Management*
- *Doctorate Degree (PhD) in Civil Engineering.*

Since the beginning of the Department postgraduate and doctorate programs, about 600 postgraduate diplomas and 150 PhD degrees have been awarded.

HEAD OF DEPARTMENT	Professor	Athanassios Dimas tel: 2610996518 email: adimas@upatras.gr
DEPUTY HEAD	Professor	Andreas Langousis Tel: 2610996564 email: andlang@upatras.gr

SECRETARIAT		tel.	email
Head of Secretariat:	Efrosini Varotsou	2610996504	evarotsou@upatras.gr
Personnel:	Eleni Kateli	2610996502	elkateli@upatras.gr
	Martha Panagiotopoulou	2610996565	marthapan@upatras.gr
	Theano Sampanioti	2610996500	theano@upatras.gr
	Efi Spyropoulou	2610996501	efispir@upatras.gr

COMPUTER CENTER	tel.	email
Dimitris Maleas	2610996560	dmaleas@upatras.gr

LABORATORIES

- Structures (*Head: Stathis Bousias*)
www.strulab.civil.upatras.gr
- Mechanics and Technology of Materials (*Head: Thanasis Triantafillou*)
www.sml.civil.upatras.gr
- Building Physics and Construction Technology Laboratory (*Head: Stella Tsoka*)
- Geodesy and Geodetic Applications (*Head: Eugenia Petropoulou*)
www.geodesylab.civil.upatras.gr
- Geotechnical Engineering (*Head: Stavroula Kontoe*)
- Hydraulic Engineering (*Head: Athanassios Dimas*)
www.hydraulics.civil.upatras.gr
- Construction, Infrastructure and City Management (*Head: Athanasios Chasiakos*)
www.transp-upatras.weebly.com
- Transportation and Ambient Mobility Systems (*Head: Zoi Christoforou*)
www.civil.upatras.gr/el/Ereyna/Ergasthria/TransportationSystems/
- Environmental Engineering (*Head: Ioannis Manariotis*)
www.eel.civil.upatras.gr

PROFESSORS EMERITI

- Anagnostopoulos Stavros
- Antonopoulos Ioannis
- Athanasopoulos George
- Atmatzidis Dimitrios
- Beskos Dimitrios
- Demetracopoulos Alexandros
- Dritsos Stefanos
- Fardis Michael
- Giannopoulos Panayiotis
- Kaleris Vasileios
- Karabalis Dimitrios
- Koutrouvelis Ioannis
- Papadakis Konstantinos
- Stefanides George
- Stiros Stathis
- Theodorakopoulos Dimitrios

DIVISION A: STRUCTURAL ENGINEERING

Head: Triantafyllou Thanasis, Professor

Bousias Stathis	Professor
Favvata Maria	Assistant Professor
Genikomsou Katerina	Associate Professor
Karavasilis Theodoros	Professor
Kotsovinos Panagiotis	Assistant Professor
Marathias Petros	Lecturer
Papadakis Vaggelis	Professor
Papanicolaou Catherine	Professor
Perdiou Aggeliki	Assistant Professor
Stavridis Andreas	Professor
Triantafyllou Thanasis	Professor
Tsoka Stella	Assistant Professor

Technical Associate: Dimitriadi Maria

DIVISION B: GEOTECHNICAL AND HYDRAULIC ENGINEERING

Head: Kontoe Stavroula, Associate Professor

Dimakopoulos Aggelos	Assistant Professor
Dimas Athanassios	Professor
Kontoe Stavroula	Associate Professor
Langousis Andreas	Professor
Pelekis Panagiotis	Assistant Professor
Pappas Christoforos	Assistant Professor
Petropoulou Eugenia	Associate Professor
Theocharis Alexandros	Assistant Professor

Teaching Associates: Triantafyllidis Panagiotis, Christopoulos Vasileios

Technical Associate: Dimou Ioannis

DIVISION C: ENVIRONMENTAL ENGINEERING AND TRANSPORTATION

Head: Economou Polychronis, Associate Professor

Economou Polychronis	Associate Professor
Chasiakos Athanasios	Professor
Christoforou Zoi	Associate Professor
Iliopoulou Christina	Assistant Professor
Manariotis Ioannis	Professor
Ntaikou Ioanna	Assistant Professor
Zacharias Ierotheos	Professor

Technical Associate: Koraki Konstantina

2. UNDERGRADUATE STUDIES PROGRAM

The undergraduate studies program includes the titles of the courses (required and electives), the syllabi, the teaching hours per week, including the type of accomplished teaching work, and the sequence or interdependence of the courses. The content of all courses is available in the Department's website: civil.upatras.gr

The undergraduate program has been adapted to a minimum number of semesters required to obtain the degree (Diploma in Civil Engineering). This number is 10 semesters.

Each semester course corresponds to a number of "teaching units" and a number of ECTS credits (European Credit Transfer and Accumulation System). One teaching unit corresponds to one lecture hour per week or one to three hours per week of additional educational work (eg. laboratory or field work). ECTS credits are based on the workload of students per week in order to achieve the expected learning outcomes. The undergraduate studies program corresponds to a total of 300 ECTS credits.

Each semester includes 13 full weeks for teaching and the corresponding number for exams. The examination periods are three: January-February, June-July and September. The duration of the exams is three weeks for the January-February and June-July periods, and four weeks for the September period. The first semester begins in the end of September (or early October) and the second semester ends in the first half of June. The exact dates are determined by the Senate of the University.

In the undergraduate studies program, there are four Tracks: (1) Structural Engineering, (2) Geotechnical Engineering - Infrastructure Works, (3) Hydraulic Engineering - Environmental Engineering, and (4) Sustainable Transport and Project Management Systems. In the 8th semester of study, each student selects a Track, which she/he follows in the 9th and 10th semesters as well. The student enrolls for 2, 4 and 2 Track courses in the 8th, 9th and 10th semester, respectively. When enrolling in the 9th and 10th semesters, the student has the option to choose up to two elective courses from the other Tracks or External Elective courses.

In the case of failure in a required course, the student is obliged to repeat it in the following year. In the case of failure in an elective course, the student has the option either to change the elective course or to repeat the attendance and the examination of the course in the following year. In case the student fails in the examination of an elective course that will not be offered in the following year, her/his failure is not finalized before she/he is given the opportunity to repeat the examination in the September period.

Students work on their Diploma Thesis – analysis, design or case study – in their 9th and 10th semesters of study, in order to complete their education in their Track..

The student completes her/his studies and she/he is awarded the Diploma when she/he successfully completes all the required courses and congregates the required number of 300 ECTS credits, including the Diploma Thesis, according to all applicable terms.

The following tables include the titles, codes, teaching hours per week (lecture/laboratory), as well as the Teaching units and the ECTS credits of all courses of the undergraduate studies program.

1st SEMESTER

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Applied Mathematics I	CIV_1105	4	1	6	Division A
Physics	CIV_1131	4	0	5	Department of Materials Science
Computer Programming and Applications	CIV_2221	3	1	5	Division C
Engineering Mechanics - Statics	CIV_1215	4	0	6	Division A
Technical and Electronic Drawing	CIV_1709	3	3	5	Division A
English Language	CIV_1155	3	0	3	Foreign Language Unit
TOTAL		21	5	30	
(Weight factor = 9.5)					

2nd SEMESTER

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Applied Mathematics II	CIV_2110A	3	1	6	Division A
Probability - Statistics	CIV_2120A	4	0	6	Division C
Introduction to Mechanics of Materials	CIV_3217	4	2	6	Division A
Geology for Civil Engineers	CIV_2138A	2	2	6	Department of Geology
Building Technology	CIV_3710A	4	2	6	Division A
TOTAL		17	7	30	
(Weight factor = 8.5)					

3rd SEMESTER

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Applied Mathematics III	CIV_3115A	4	0	4	Division B
Numerical Methods	CIV_3127A	3	2	4	Division A
Mechanics of Materials	CIV_4218	4	2	6	Division A
Structural Materials	CIV_4219	4	2	6	Division A
Introduction to Geodesy	CIV_3803	2	4+1*	6	Division B
Building Physics	CIV_4711A	3	0	4	Division A
TOTAL		20	10+1	30	
(Weight factor = 10.5)					

* Field work (in addition to Lab)

4th SEMESTER

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Analysis of Framed Structures	CIV_5220A	4	0	6	Division A
Dynamics - Vibrations	CIV_2216	3	1	6	Division A
Fluid Mechanics	CIV_4410A	4	0	6	Division B
Traffic Engineering	CIV_5605A	4	1+1	6	Division C
Environmental Chemistry	CIV_4414	4	0	6	Division C
TOTAL		19	2+1	30	
(Weight factor = 8.0)					

5th SEMESTER

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Matrix Analysis of Framed Structures	CIV_6221A	4	1	6	Division A
Design of Steel Structural Components	CIV_6235A	4	1	6	Division A
Soil Mechanics I	CIV_5310A	4	2	6	Division B
Hydraulics	CIV_5415A	4	2	6	Division B
Water Treatment	CIV_5505A	4	2+1	6	Division C
TOTAL		20	8+1	30	
(Weight factor = 10.0)					

6th SEMESTER

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Design of Reinforced Concrete Linear Elements	CIV_6230A	4	2	6	Division A
Design of Steel Structures	CIV_7236	4	0	5	Division A
Soil Mechanics II	CIV_6315	4	0	5	Division B
Engineering Hydrology	CIV_6420	4	0	5	Division B
Wastewater Treatment	CIV_6510A	4	2+1	6	Division C
Technical Terminology in the English Language	CIV_6610	3	0	3	Foreign Language Unit
TOTAL		23	4+1	30	
(Weight factor = 10.0)					

7th SEMESTER

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Structural Dynamics	CIV_8223A	4	0	6	Division A
Design of Planar Reinforced Concrete Elements	CIV_7231A	4	0	6	Division A
Foundation Engineering	CIV_7320A	4	0	6	Division B
Harbour Works Analysis and Design	CIV_0480A	4	0	6	Division B
Road Design and Construction	CIV_7610A	4	0	6	Division C
TOTAL (Weight factor = 7.5)		20	0	30	

8th SEMESTER

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Structural Analysis with the Finite Element Method	CIV_7222A	4	2	7	Division A
Water Distribution, Sewage and Rainwater Drainage Networks	CIV_8435A	4	0	6	Division B
Construction Project Management	CIV_5716A	4	2	7	Division C
Track Core Course				5	
Track Elective Course				5	
TOTAL (Weight factor = 8.5)				30	

8th SEMESTER – TRACK CORE COURSES

The Core Course of each Track is selected from the following list according to the student's track.

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
1st Track: «Structural Engineering»					
Design of Reinforced Concrete Structures	CIV_8232A	4	0	5	Division A
2nd Track: «Geotechnical Engineering – Infrastructure Works»					
Geotechnical Earthquake Engineering	CIV_8355A	3	0+1	5	Division B
3rd Track: «Hydraulic Engineering – Environmental Engineering»					
Environmental Impact Assessment of Technical Works	CIV_9560A	3	0	5	Division C
4th Track: «Sustainable Transportation and Project Management Systems»					
Transportation Systems Analysis and Design I	CIV_8665A	3	0	5	Division C

8th SEMESTER – 1st TRACK ELECTIVE COURSES

Students of the 1st Track select one elective course from the following list.

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Composite Structures	CIV_9269A	3	0	5	Division A
Earthquake Engineering and Earthquake Resistant Structures	CIV_9255A	3	0	5	Division A
Design and Repair of Masonry Structures	CIV_8268A	3	0	5	Division A

8th SEMESTER – 2nd TRACK ELECTIVE COURSES

Students of the 2nd Track select one elective course from the following list.

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Geotechnical Site Exploration Methods	CIV_9371A	2	2+1	5	Division B
Special Topics in Foundation Engineering	CIV_8371A	3	0+1	5	Division B
Geodesy	CIV_8356A	2	2+1	5	Division B
Earthquake Engineering and Earthquake Resistant Structures	CIV_9255A	3	0	5	Division A

8th SEMESTER – 3rd TRACK ELECTIVE COURSES

Students of the 3rd Track select one elective course from the following list.

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Computational Hydraulics	CIV_8460A	3	0	5	Division B
Energy Hydraulic Systems	CIV_8461A	3	0+1	5	Division B
Solid Wastes Management	CIV_0560	3	0+1	5	Division B
Air Pollution	CIV_8555A	3	0	5	Division C

8th SEMESTER – 4th TRACK ELECTIVE COURSES

Students of the 4th Track select one elective course from the following list.

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Construction Project Organization and Management	CIV_0683A	3	0	5	Division C
Smart Cities, Infrastructure and Transportation	CIV_8658A	3	0	5	Division C
Optimization and Applications	CIV_8659A	3	0	5	Division C
Environmental Impact Assessment of Technical Works	CIV_9560A	3	0	5	Division C

9th SEMESTER

TITLE	COURSE CODE	Hours/Week		ECTS Credits
		Lect.	Lab	
Track Elective Course				5
Track Elective Course				5
Track Elective Course				5
Track Elective Course				5
Practical Training*	CIV_1000			(4)
Diploma Thesis I (3 courses of 5 teaching units each)	CIV_9811A			10
TOTAL (Weight factor = 6.0+6.0)				30

* Practical Training is optional.

10th SEMESTER

TITLE	COURSE CODE	Hours/Week		ECTS Credits
		Lect.	Lab	
Track Elective Course				5
Track Elective Course				5
Practical Training*	CIV_1000			(4)
Diploma Thesis II (6 courses of 5 teaching units each)	CIV_9812A			20
TOTAL (Weight factor = 3.0+12.0)				30

* Practical Training is optional.

Sum of weight factors of Courses + Diploma Thesis: 81.5 + 18 = 99.5

9th SEMESTER – 1st TRACK ELECTIVE COURSES

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Repair and Strengthening of Reinforced Concrete Structures	CIV_9263A	3	0	5	Division A
Prestressed Concrete	CIV_8362A	3	0	5	Division A
Fire Engineering and Fire Protection	CIV_9264A	3	0	5	Division A
Design of Energy Efficient Buildings	CIV_0276A	3	0	5	Division A
Timber Structures	CIV_0227A	3	0	5	Division A
Theory of Plates and Shells	CIV_0268A	3	0	5	Division A
External Elective Course Track_1_1	CIV_9111A	3	0	5	
External Elective Course Track_1_2	CIV_9112A	3	0	5	
External Elective Course Track_1_3	CIV_9113A	3	0	5	
External Elective Course Track_1_4	CIV_9114A	3	0	5	

9th SEMESTER – 2nd TRACK ELECTIVE COURSES

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Geology of Technical Works and Rock Mechanics	CIV_8357A	2	2	5	Department of Geology
Computational Geotechnical Engineering	CIV_9372A	3	0	5	Division B
Ground Improvement and Reinforcement	CIV_9373A	3	0+1	5	Division B
Geodetic Applications	CIV_9810A	3	0+1	5	Division B
Coastal Hydraulics	CIV_9485A	3	0	5	Division B
Groundwater	CIV_9470A	3	0	5	Division B
External Elective Course Track_2_1	CIV_9121A	3	0	5	
External Elective Course Track_2_2	CIV_9122A	3	0	5	
External Elective Course Track_2_3	CIV_9123A	3	0	5	
External Elective Course Track_2_4	CIV_9124A	3	0	5	

9th SEMESTER – 3rd TRACK ELECTIVE COURSES

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Laboratory Topics in Hydraulic Engineering	CIV_9480A	2	2	5	Division B
Hydraulic and Flood Control Structures	CIV_7430A	3	0+1	5	Division B
Coastal Hydraulics	CIV_9485A	3	0	5	Division B
Groundwater	CIV_9470A	3	0	5	Division B
Natural Wastewater Treatment Systems	CIV_9576A	3	0	5	Division C
Pollution of Inland and Coastal Waters	CIV_8558A	2	2+1	5	Division C
Environmental Analysis	CIV_9562A	2	2	5	Division C
External Elective Course Track_3_1	CIV_9131A	3	0	5	
External Elective Course Track_3_2	CIV_9132A	3	0	5	
External Elective Course Track_3_3	CIV_9133A	3	0	5	
External Elective Course Track_3_4	CIV_9134A	3	0	5	

9th SEMESTER – 4th TRACK ELECTIVE COURSES

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Transportation Systems Analysis and Design	CIV_9668A	3	0	5	Division C
Intelligent Transportation Systems	CIV_9669A	3	0	5	Division C
Transportation Infrastructure Management	CIV_9670A	3	0	5	Division C
Environmental Analysis	CIV_9562A	2	2	5	Division C
Geodetic Applications	CIV_9810A	3	0+1	5	Division B
External Elective Course Track_4_1	CIV_9141A	3	0	5	
External Elective Course Track_4_2	CIV_9142A	3	0	5	
External Elective Course Track_4_3	CIV_9143A	3	0	5	
External Elective Course Track_4_4	CIV_9144A	3	0	5	

9th SEMESTER – EXTERNAL ELECTIVE COURSES

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Introduction to Financial Science	CIV_0711A	3	0	5	Department of Economics
Introduction to Business Administration for Engineers and Scientists	CIV_0712A	3	0	5	Department of Business Administration

10th SEMESTER – 1st TRACK ELECTIVE COURSES

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Design of Reinforced Concrete Structures*	CIV_8232A	4	0	5	Division A
Composite Structures	CIV_9269A	3	0	5	Division A
Earthquake Engineering and Earthquake Resistant Structures	CIV_9255A	3	0	5	Division A
Design and Repair of Masonry Structures	CIV_8268A	3	0	5	Division A
Principles of Sustainable Construction	CIV_0275A	3	0	5	Division A
Building Information Modeling	CIV_0274A	2	0	2	Division A
External Elective Course Track_1_5	CIV_9115A	3	0	5	
External Elective Course Track_1_6	CIV_9116A	3	0	5	

* Elective course only for the other Tracks.

10th SEMESTER – 2nd TRACK ELECTIVE COURSES

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Geotechnical Earthquake Engineering*	CIV_8355A	3	0+1	5	Division B
Geotechnical Site Exploration Methods	CIV_9371A	2	2+1	5	Division B
Special Topics in Foundation Engineering	CIV_8371A	3	0+1	5	Division B
Earthquake Engineering and Earthquake Resistant Structures	CIV_9255A	3	0	5	Division A
External Elective Course Track_2_5	CIV_9125A	3	0	5	
External Elective Course Track_2_6	CIV_9126A	3	0	5	

* Elective course only for the other Tracks.

10th SEMESTER – 3rd TRACK ELECTIVE COURSES

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
		Lect.	Lab		
Environmental Impact Assessment of Technical Works*	CIV_9560A	3	0	5	Division C
Computational Hydraulics	CIV_8460A	3	0	5	Division B
Hydraulics of Energy Infrastructure	CIV_8461A	3	0+1	5	Division B
Solid Wastes Management	CIV_0560	3	0+1	5	Division C
Air Pollution	CIV_8555A	3	0	5	Division C
External Elective Course Track_3_5	CIV_9135A	3	0	5	
External Elective Course Track_3_6	CIV_9136A	3	0	5	

* Elective course only for the other Tracks.

10th SEMESTER – 4th TRACK ELECTIVE COURSES

TITLE	COURSE CODE	Hours/Week		ECTS Credits	Teaching Responsibility
Lect.	Lab				
Transportation Systems Analysis and Design I*	CIV_8665A	3	0	5	Division C
Construction Project Organization and Management	CIV_0683A	3	0	5	Division C
Smart Cities, Infrastructure and Transportation	CIV_8658A	3	0	5	Division C
Optimization and Applications	CIV_8659A	3	0	5	Division C
Environmental Impact Assessment of Technical Works	CIV_9560A	3	0	5	Division C
Building Information Modeling	CIV_0274A	2	2	5	Department
Air Pollution	CIV_8555A	3	0	5	Division C
External Elective Course Track_4_5	CIV_9145A	3	0	5	
External Elective Course Track_4_6	CIV_9146A	3	0	5	

* Elective course only for the other Tracks.

