

Civil Engineering Faculty of Warsaw University of Technology
Field of study: Civil Engineering
Level of study: second degree (M.Sc.)
Profile of education: general academic
Diploma Path: Building Construction and Structural Engineering
Form of study: full-time in English

Wydział Inżynierii Łądowej Politechniki Warszawskiej
Kierunek studiów: Budownictwo
Poziom kształcenia: studia II stopnia
Profil kształcenia: ogólnoakademicki
Ścieżka dyplomowania: Konstrukcje Budowlane i Inżynierskie
Forma studiów: stacjonarne anglojęzyczne

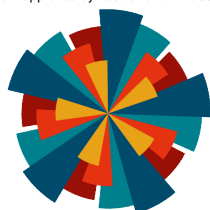
Curriculum for graduate (second cycle) studies
Diploma Path: Building Construction and Structural Engineering
Valid for studies starting on 2025/2026 academic year

No		YEAR 1												YEAR 2															
		sem.1						sem.2						sem.3						sem.4									
		h	ECTS	W	C	ZK	L	P	h	ECTS	W	C	ZK	L	P	h	ECTS	W	C	ZK	L	P	h	ECTS	W	C	ZK	L	P
Common obligatory courses																													
1	HC - Intellectual Property Law							15	1	15																			
2	HC - Law in Civil Engineering													15	1	15													
3	HC - ESG Engineering																			18	1	18							
4	HC - AI & Machine Learning	25	2	25																									
5	Statistics in Civil Engineering	30	2	15	15																								
6	Mathematics in Mechanics	30	2	10	20																								
7	Theory of Elasticity and Plasticity	75	6	45	30																								
8	Finite Element Method	25	2	10				15																					
9	Timber Structures	40	3	10	15			15																					
#	Concrete Structures	40	3	10				30																					
#	Metal Structures	40	3	10				30																					
#	Building Materials in circular economy	25	2	10				15																					
#	Road and railway diagnostic methods	40	3	20	20																								
#	Geotechnical and structural monitoring	30	2	15	15																								
#	Life Cycle Assessment and Life Cycle Cost													25	2	10	15												
#	Research & Development in Civil Engineering																			30	2	15					15		
#	Integrated project													100	8	10			90										
#	Diploma Seminar																			18	1				18				
#	Dissertation and Defence																			20									
Elective Diploma Path: Building Construction and Structural Engineering - Specialization courses																													
1	Mechanics of Structures							40	3	25			15																
2	Computer Methods for Structural Design							40	3	15		25																	
3	Engineering of Building Materials							40	3	15	15	10																	
4	Advanced Production Process Engineering							40	3	10			30																
5	Durability of Building Materials and Structures							40	3		25	15																	
6	Fire Safety of Buildings							25	2	10			15																
7	Special Concrete Structures							50	4	20			30																
8	Special Metal Structures							50	4	20			30																
9	Renovation and Demolition Works							25	2	10	15																		
#	Reliability of Structures							25	2	10		15																	
#	Technology of Building Composites													50	4	20			30										
#	Structural Dynamics													25	2	15	10												
#	Composite Steel-Concrete Structures													25	2	10	15												
#	Industrial Concrete Structures													40	3	15			25										
#	Industrial Metal Structures													40	3	15			25										
#	Computer-Aided Design of Structures													40	3		40												
#	Practical aspects of infrastructure diagnostics													15	1	15													
#	Low-emission economy in civil engineering													15	1	15													
#	Elective Specialized Course (3 x 30h/2ECTS)																			30	2	15	15						
#																				30	2	15	15						
Number of class hours per semester		400						390						390						156									
Classes per week		27						26						26						10									
Classes per week without HC		25 ≤ 25						25 ≤ 25						25 ≤ 25						9									
ECTS per semester		30						30						30						30					30				
Accumulated ECTS		30						60						90						120									
Total classes in hours		1336	400					390						390						156									

Program zatwierdzony Uchwałą Senatu PW z dnia 26.06.2025 r.

Program approved by Resolution of the Senate of the Warsaw University of Technology on June 26, 2025.

- examination



European Funds
for Social Development



Republic
of Poland

Co-funded by the
European Union



Warsaw University
of Technology

OMNIS 2
Otwartość. Modernizacja. Nowoczesność. Integracja. Społeczność.

Civil Engineering Faculty of Warsaw University of Technology
Field of study: Civil Engineering
Level of study: second degree (M.Sc.)
Profile of education: general academic
Diploma Path: Infrastructure and Geotechnical Engineering
Form of study: full-time in English

Wydział Inżynierii Lądowej Politechniki Warszawskiej
Kierunek studiów: Budownictwo
Poziom kształcenia: studia II stopnia
Profil kształcenia: ogólnokademycki
Ścieżka dyplomowania: Inżynieria Infrastrukturalna i Geotechniczna
Forma studiów: stacjonarne anglojęzyczne

Curriculum for graduate (second cycle) studies
Diploma Path: Infrastructure and Geotechnical Engineering
Valid for studies starting on 2025/2026 academic year

No.	Course Unit	YEAR 1														YEAR 2														
		sem.1							sem.2							sem.3							sem.4							
		h	ECTS	W	C	ZK	L	P	h	ECTS	W	C	ZK	L	P	h	ECTS			W	C	ZK	L	P	h	ECTS	W	C	ZK	L
Common obligatory courses																														
1	HC - Intellectual Property Law							15	1	15																				
2	HC - Law in Civil Engineering															15	1	15												
3	HC - ESG Engineering																								18	1	18			
4	HC - AI & Machine Learning	25	2	25																										
5	Statistics in Civil Engineering	30	2	15	15																									
6	Mathematics in Mechanics	30	2	10	20																									
7	Theory of Elasticity and Plasticity	75	6	45	30																									
8	Finite Element Method	25	2	10				15																						
9	Timber Structures	40	3	10	15			15																						
10	Concrete Structures	40	3	10				30																						
11	Metal Structures	40	3	10				30																						
12	Building Materials in circular economy	25	2	10			15																							
13	Road and railway diagnostic methods	40	3	20	20																									
14	Geotechnical and structural monitoring	30	2	15	15																									
15	Life Cycle Assessment and Life Cycle Cost															25	2	10	15											
16	Research & Development in Civil Engineering																							30	2	15		15		
17	Integrated project															100	8	10			90									
18	Diploma Seminar																							18	1	18				
19	Dissertation and Defence																								20					
Elective Diploma Path: Infrastructure and Geotechnical Engineering - Specialization courses																														
1	Bridge foundations							40	3	40																				
2	Soil - Structure Interaction							45	3	20	25																			
3	Introduction to advanced constitutive models for soils							40	3	20	20																			
4	Tunnel construction methods							50	4	30			20																	
5	Road materials and pavement technology							50	4	20		30																		
6	Railroads Engineering							50	4	20		30																		
7	Sustainable Road Infrastructure							50	4	20		30																		
8	Orthotropic Bridge Decks							50	4	10	15	25																		
9	Soil Improvement															25	2	25												
10	Numerical modelling of geotechnical problems and underground structures															25	2		25											
11	Advanced Infrastructure Technologies and Industry Practice															45	3	45												
12	Deep excavations															25	2	15		10										
13	Pavement structure design															25	2	10		15										
14	Computer-aided railroads design															25	2	15		10										
15	Road Traffic Engineering															25	2	10		15										
16	Reliability of bridges															25	2	25												
17	Industrial Structures															15	1	15												
18	Low-Emission Building Design															15	1	15												
19	Elective Specialized Course (3 x 30h/2ECTS)																							30	2	15	15			
20																								30	2	15	15			
21																								30	2	15	15			
Number of class hours per semester		400							390							390							156							
Classes per week		26,7							26							26							10							
Classes per week without HC		25 ≤ 25							25 ≤ 25							25 ≤ 25							9							
ECTS per semester		30							30							30							30							
Accumulated ECTS		30							60							90							120							
Total classes in hours 1336		400							390							390							156							

Program zatwierdzony Uchwałą Senatu PW z dnia 26.06.2025 r.

Program approved by Resolution of the Senate of the Warsaw University of Technology on June 26, 2025.

■ - examination



OMNIS 2
Otwartość. Modernizacja. Nowoczesność. Integracja. Społeczność.



Co-funded by the European Union



Civil Engineering Faculty of Warsaw University of Technology
Field of study: Civil Engineering
Level of study: second degree (M.Sc.)
Profile of education: general academic
Diploma Path: Management and Sustainable Engineeri
Form of study: full-time in English

Wydział Inżynierii Łądowej Politechniki Warszawskiej
Kierunek studiów: Budownictwo
Poziom kształcenia: studia II stopnia
Profil kształcenia: ogólnoakademicki
Ścieżka dyplomowania: Zarządzanie i Inżynieria Zrównoważonego Rozwoju
Forma studiów: stacjonarne anglojęzyczne

Curriculum for graduate (second cycle) studies
Diploma Path: Management and Sustainable Engineering
Valid for studies starting on 2025/2026 academic year

No.	Course Unit	YEAR 1														YEAR 2																		
		sem.1							sem.2							sem.3							sem.4											
		h	ECTS	W	C	ZK	L	P	h	ECTS	W	C	ZK	L	P	h	ECTS	W	C	ZK	L	P	h	ECTS	W	C	ZK	L	P					
Common obligatory courses																																		
1	HC - Intellectual Property Law							15	1	15																								
2	HC - Law in Civil Engineering														15	1	15																	
3	HC - ESG Engineering																						18	1	18									
4	HC - AI & Machine Learning	25	2	25																														
5	Statistics in Civil Engineering	30	2	15	15																													
6	Mathematics in Mechanics	30	2	10	20																													
7	Theory of Elasticity and Plasticity	75	6	45	30																													
8	Finite Element Method	25	2	10				15																										
9	Timber Structures	40	3	10	15			15																										
10	Concrete Structures	40	3	10				30																										
11	Metal Structures	40	3	10				30																										
12	Building Materials in circular economy	25	2	10			15																											
13	Road and railway diagnostic methods	40	3	20	20																													
14	Geotechnical and structural monitoring	30	2	15	15																													
15	Life Cycle Assessment and Life Cycle Cost													25	2	10	15																	
16	Research & Development in Civil Engineering																					30	2	15		15								
17	Integrated Project													100	8	10					90													
18	Diploma Seminar																					18	1		18									
19	Dissertation and Defence																					20												
Elective Diploma Path: Management and Sustainable Engineering - Specialization courses																																		
1	Mechanics of Structures							40	3	25			15																					
2	Risk assessment and decision-making							40	3	15		25																						
3	Optimization methods in energy-efficient civil engineering							40	3	20		20																						
4	Sustainable building design							40	3	10	30																							
5	Engineering of Building Materials							40	3	15	15		10																					
6	Statistical Methods in Building Materials Technology							25	2	10	10		5																					
7	Building Physics in Practice							50	4	20			30																					
8	Energy-efficient timber and masonry structures							50	4	20			30																					
9	Alternative Energy Sources							25	2	10			15																					
10	Mineral Composites							25	2	10			15																					
11	Thermomodernization and Renovation of Buildings													50	4	20			30															
12	Revitalisation of Buildings													25	2	10			15															
13	Modification Methods of Building Materials													25	2	10	15																	
14	Advanced Production Process Engineering													40	3	10			30															
15	Renovation and Demolition Works													40	3	20	20																	
16	Durability of Building Materials and Structures													40	3		25	15																
17	Industrial Structures													15	1		15																	
18	Practical aspects of infrastructure diagnostics													15	1		15																	
19	Elective Specialized Course (3 x 30h/2ECTS)																					30	2	15	15									
20																						30	2	15	15									
21																						30	2	15	15									
Number of class hours per semester		400								390								390								156								
Classes per week		27								26								26								10								
Classes per week without HC		25 ≤ 25								25 ≤ 25								25 ≤ 25								9								
ECTS per semester		30								30								30								30								
Accumulated ECTS		30								60								90								120								
Total classes in hours		1336	400								390								390								156							

Program zatwierdzony Uchwałą Senatu PW z dnia 26.06.2025 r.

Program approved by Resolution of the Senate of the Warsaw University of Technology on June 26, 2025.

- examination



OMNIS 2
Otwartość. Modernizacja. Nowoczesność. Integracja. Społeczność.



Co-funded by the European Union



Warsaw University of Technology