

**FIRAT UNIVERSITY INSTITUTE OF SCIENCE**  
**PhD Program in Civil Engineering Technologies**  
**Fall Semester Course and Thesis Credits and ECTS Credit Information**

Code	Course Name	Theory	App.	Credit	ECTS
INS600	PhD Thesis	-	-	-	24
INS601	Specialization Field Course	6	-	-	6
INS602	PhD Seminar	-	2	-	6
INS603	Urban Transformation Process	3	0	3	6
INS605	Heat Flow in Soil	3	0	3	6
INS607	Bioharmological Building Design	3	0	3	6
INS609	Nonlinear Vibrations	3	0	3	6
INS611	Finite Element Methods	3	0	3	6
INS613	Displacement-Based Design of Buildings	3	0	3	6
INS615	Change Methods	3	0	3	6
INS617	Damage Mechanics	3	0	3	6
INS619	Material Modeling	3	0	3	6
INS621	Stability Theory	3	0	3	6
INS623	Composite Materials in Construction	3	0	3	6
INS625	Geopolymer Concrete	3	0	3	6
INS627	Stochastic Processes in Hydrology	3	0	3	6
INS629	Computational Fluid Dynamics-II	3	0	3	6
INS631	Quality Management in Construction Projects	3	0	3	6
INS633	Stations-Station Buildings-Terminals	3	0	3	6
INS635	Inland Waterways	3	0	3	6
INS637	Treatment Plant Hydraulics	3	0	3	6
INS639	Groundwater Hydrology	3	0	3	6
INS641	Analytical Methods in Engineering-I	3	0	3	6
INS643	Solid Material Transport	3	0	3	6
INS645	Waste Geotechnics	3	0	3	6
INS647	Structural Earthquake Engineering	3	0	3	6
INS649	Creep in Concrete	3	0	3	6

INS651	Numerical Analysis in Engineering Applications	3	0	3	6
INS653	Modeling Transportation Systems	3	0	3	6
INS655	Structural Fire Safety	3	0	3	6
INS699	PhD Qualification	-	-	-	24

Spring Semester Course and Thesis Credits and ECTS Credit Information

Code	Course Name	Theory	Uyg.	Credit	ECTS
INS600	PhD Thesis	-	-	-	24
INS601	Specialization Field Course	6	-	-	6
INS602	PhD Seminar	-	2	-	6
INS604	Civil Defese and Sanctuary Buildings	3	0	3	3
INS606	Using of Geosynthetics in Geotechnic Practice	3	0	3	6
INS608	Fracture Mechanics of Engineering Materials	3	0	3	6
INS610	Nonlinear Analysis of Structural Systems	3	0	3	6
INS612	Plasticity Theory	3	0	3	6
INS614	Computer Computational Modeling of Building Materials	3	0	3	6
INS616	Nonlinear Behavior of Reinforced Concrete Building Elements	3	0	3	6
INS618	Optimization Methods in Building Design	3	0	3	6
INS620	Behavioral Models in Reinforced Concrete	3	0	3	6
INS622	Advanced Structure Dynamics	3	0	3	6
INS624	Sustainable Building Technologies	3	0	3	6
INS626	Plate Theory	3	0	3	6
INS628	Computational Fluid Dynamics-I	3	0	3	6
INS630	Turbulence Models	3	0	3	6
INS632	Operations Research in Transportation	3	0	3	6
INS634	Simulation Applications in Transportation	3	0	3	6
INS636	Advanced Soil Dynamics	3	0	3	6
INS638	Drinking Water Treatment Technology	3	0	3	6
INS640	Boundary Element Method	3	0	3	6
INS642	Analytical Methods in Engineering-II	3	0	3	6

INS644	Special Topics in Geotechnical Engineering	3	0	3	6
INS646	Soil-Structure Interaction	3	0	3	6
INS648	Shrinkage in Concrete	3	0	3	6
INS650	Protection of Reinforced Concrete from External Factors	3	0	3	6
INS652	Metallic Building Materials	3	0	3	6
INS654	Special Topics in Advanced Structural Statics	3	0	3	6
INS656	Advanced Strength of Materials Basics and Equations	3	0	3	6
INS699	PhD Qualification	-	-	-	24