

**List of Subjects for Exchange Students**  
**Undergraduate Level**  
**Major: Building & Industrial Construction**

Subjects	Code	NUCE Credits	Class Hours	Teaching Language	Description	Prerequisites/ Co-requisites
<b>Semester 5</b>						
Structure Mechanics 1	030211	3	57	English	Introducing the objectives and module descriptions, studying methods used for determining the reactions, displacements of linear simple frame due to external loads.	
Strength of Material 2	060222	2	39	English/ French	Calculating displacement by transposing and energy methods. Stability of bar under bending and pressing load. Oscillation by self-weight and under mobile load .Calculating structural strength by limited load methods	Prerequisites: Strength of Material 1
Soil Mechanics	130211	3	57	French	Constitutions and phenomena of soil, the strength of soil	
<b>Semester 6</b>						
Structure Mechanics 2	030212	2	39	English	Studying methods used for determining the reactions ,displacements of complex linear frame and space frame due to static and dynamic loads : energy methods, force methods, combined methods.	Prerequisites: Structure of Mechanics 1
Reinforced Concrete Structures	040212	3	57	English	Characteristic of concrete and reinforced concrete, classifying grade of concrete. Calculation theory due to strength of material ,and due to the deflection of components under loads. Design individual RC components : beam, column, slab. Introducing about pre-stressed concrete.	

Structure Reinforced Concrete mini Project	040213	1	30	English	Caculate, lay –out steel reinforment and draw components of a buildings	
Steel Structure 1	050211	2	39	English	General design considerations: types of structures, design procedures, steel products, steel strength; elements of frame and truss design, beam analysis, truss analysis, rigid frame analysis; elastic, plastic, and buckling behavior of steel structures; design of beams for bending.	
English for Civil Engineering	440214	2	45	English	Foreign Language in construction fields	
<b>Semester 7</b>						
Structure of Reinforced Concrete Building	040350	3	57	English/ French	Construction of the building components of reinforced concrete structures	
Structure of Reinforced Concrete Building mini Project	040352	1	30	English/ French	Proceed building with reinforced concrete structures for civil house	
Foundation	130213	2	39	English/ French	Studying methods to analysis and design spread footing, combined footing, pile foundation. Introducing about the structural diagram under dynamic loads.	
Foundation mini Project	130214	1	30	English/ French	Design, analysis and draw a foundation of a real building	
<b>Semester 8</b>						
Steel Structure Building	050350	3	45	English	Calculations for special steel components: columns, beams and slabs according to limit states	
Steel Structure building mini Project	050353	1	30	English	Design, analyse and draw all steel structural components of a real building	
Construction Technology 1	020301	3	45	English	Providing methods of earthwork with construction	

					machines and workers introducing about steel work, mortar work, casing work and divide the construction process based of the quality of work.	
Construction Technology mini Project 1	020303	1	45	English	Methods of construction; organization of construction site; drawing up a schedule of construction	
<b>Semester 9</b>						
Construction Technology 2	020353	2	30	English/ French	continued from Construction Techniques 1 focus on Industrial Factory and Prefabricated House	Prerequisites: Construction Technology 1
Construction Technology mini Project 2	020308	1	30	English/ French	Planning a typical plan of a building	
Construction Management	020309	4	60	English/ French	Methods of construction; organization of construction site; drawing up a schedule of construction	
Construction Management mini Project	020310	1	30	English/ French	Design of a construction, the student and his supervisor will choose a specific topic for designing.	