

# Faculty of Architecture

## IMPORTANT NOTES

If for one subject you can find several different types (lecture, practice, laboratory) of courses then please choose one and only one course from each type in order to be able to perform the subject's requirements successfully. Civil Engineering courses are on the website separately. Courses chosen from the offer of Faculty of Civil Engineering will be checked and arranged individually by the departmental coordinator.

Subject code	Subject name			Requirement	ECTS credit
BMEEPAG0236	CAAD and Architects Informatics F			Mid-semester mark	3
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>		
Practice	EN1-ER	English	WED:16:15-18:00		
This course aims to expand the existing CAD knowledge of students to be able to create and modify complex CAD models easily. During the course, we use Archicad, so a basic knowledge of the program is expected.					
Subject code	Subject name			Requirement	ECTS credit
BMEEPAG0246	Constructive CAAD F			Mid-semester mark	3
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>		
Practice	EN1-ER	English	WED:16:15-18:00		
Design and documentation with Revit Architecture - Introductory course. Design and basic CAD knowledge is recommended. (Architectural informatics 2)					
Subject code	Subject name			Requirement	ECTS credit
BMEEPAG0247	Constructive CAAD G			Mid-semester mark	3
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>		
Practice	EN1-ER	English	TUE:12:15-14:00		
Introduction to Google Sketchup, an easy to use 3D design software to create 3D visual models of buildings together with its surroundings. Basic modelling, textures, creating models from plans and matching photo. (See <a href="http://www.epab.bme.hu/?sketchup/index.en.html">http://www.epab.bme.hu/?sketchup/index.en.html</a> ). Architects from all around the world use Google SketchUp in nearly all phases of design, starting from solid modelling to photorealistic 3D rendering. Sketchup is a simple, but powerful tool to visualize ideas in 3D. Easy to learn, simple, fullz understandable, helps the user to evolve creativity. Needs less time to find the right tool enables to spend more time with what we learn for... to be an architect!					
Subject code	Subject name			Requirement	ECTS credit
BMEEPAG0249	Constructive CAAD CE			Mid-semester mark	3
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>		
Practice	EN1-ER	English	THU:12:15-14:00		
Advanced CAD modelling course for students who are familiar with AutoCAD. The course deals with modeling concepts and techniques, texture, lighting and rendering. In the second part of the semester students work more or less autonomously (with occasional one-on-one consultations) on a model of their choice. See: <a href="http://www.epab.bme.hu/en/?ccce/">http://www.epab.bme.hu/en/?ccce/</a>					
Subject code	Subject name			Requirement	ECTS credit
BMEEPAGA401	Architectural Informatics 2 - Digital Representation			Mid-semester mark	3
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>		
Lecture	EN0-ER	English	TUE:12:15-13:00		
Practice	EN1-ER	English	THU:13:15-15:00		
Fundamentals of vector graphics, two-dimensional (2D), and three-dimensional (3D) Computer Aided Design (CAD) systems. Application of Cartesian and polar coordinate systems. CAD principles from simple 2D drafting to the developing of architectural drawings with the use of layers and library elements (blocks). 3D modelling of geometrical shapes and architectural details.					
Subject code	Subject name			Requirement	ECTS credit
BMEEPEG0995	Architectural Research for Exchange Students - EG			Mid-semester mark	6
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>		
Practice	EN1-ER	English			
Architectural Research for Exchange Students on the topics of the Department's competency. The aim of the subject is to carry out a research on a special topic. The research contains specifying and processing the related					

international literature, summing up the findings in a study and finally a presentation. The language of the research depends on the consultant - the available topics are listed on the department's homepage.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPEGA601	Building Service Engineering 2		Exam	2
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Lecture	EN0-ER	English	FRI:10:15-12:00	
Calculation of heat loss of buildings. Energy consumption of a heated space. Introduction to fluid flow. Classification of Heating. Central heating. Elements of water heating system. Pipe distributing networks Emitters and surface heating. Controlling. Renewable energy sources for heating and producing domestic hot water. Introduction to psychometrics. Psychometric processes. Ventilation (Classification, natural ventilation and mechanical one, fundamental systems of air inlet and extract) Estimation of the necessary air volume. Air heating and cooling systems. Air conditioning.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPEK0633	Facility Management		Exam	2
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Lecture	EN1-ER	English	TUE:15:15-17:00	
The goal of the subject is to present theory of Facility Management, introduction of Cost Efficiency concepts. Based on case studies and several site visits on commercial properties, list of managerial tasks will be identified and explained as registration, maintenance, crisis management and others. The course also will cover related subjects as Workspace Planning and CAFM (Computer Aided Facility Management).				
Subject code	Subject name		Requirement	ECTS credit
BMEEPEK0995	Architectural Research for Exchange Students - EK		Mid-semester mark	6
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Practice	EN1-ER	English		
Architectural Research for Exchange Students on the topics of construction technology and management. The aim of the subject is to carry out a research on a special topic. The research contains specifying and processing the related international literature, summing up the findings in a study and finally a presentation. The language of the research depends on the consultant - the available topics are listed on the department's homepage.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPEKA701	CM3 - Planning of Construction Technology		Exam	4
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Lecture	EN0-ER	English	WED:10:15-12:00	
Practice	EN1-ER	English	WED:12:15-14:00	
The goal of the subject is to present information on the planning of elementary construction technologies related to superstructures and finishing work. The subject introduces how to apply recent innovations of building technologies during design and realisation. It gives a basic knowledge to evaluate construction options and make appropriate decisions about technology. There are case studies of building technologies used in construction of loadbearing structures, finishing and cladding works. The practical part contains workshops on planning of construction technologies: connection of structures and technologies, volume calculation, resource estimation, scheduling and construction site planning.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPEKA801	Building and Architectural Economics		Mid-semester mark	2
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Lecture	EN0-ER	English	WED:10:15-12:00	
Aim: investigate the economic side of a real estate development emphasizing the Social cost and benefit of development. This module concentrates economical computation models, theories dealing with real estate valuation. There is a homework concerning with calculation, valuation of a real estate development. Successful submission is required for the module acceptance. Written mid-semester test as indicated, minimum pass grade required. Following main topics are discussed: construction cost, estimates, time value of money, building life cycle cost, measuring the worth of real estate investments.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPEKAT41	Construction Management		Mid-semester mark	3
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Lecture	EN0	English	TUE:12:15-14:00(KF12); TUE:12:15-14:00(KF12)	
Practice	EN1	English	WED:10:15-12:00(KF10)	
Curricula, themes, individual projects, tests, subjects of lectures and seminars of the Course are embracing				

managerial and organizational learnings useful and necessary for all civil engineers, such as: - jobs and organizational structure of Contracting Construction Trade; - jobs and relations of parties collaborating in executing construction projects;- time and resource needs of executing construction projects (basic methods and terms of time -, resource- and cost estimates);- basics of mechanizing Construction, construction equipments and auxiliary plants, typical applications;- organizing construction site (site layout designs).Individual project: Organizational plans (time estimates, resources calculations and site layout designs) of building a simple linear structure (reinforced concrete retaining wall) well known in practice of all civil engineers.

Subject code	Subject name	Requirement	ECTS credit
BMEEPEKK801	CM4. Controlling of Construction technologies	Exam	4

Course type	Course code	Course language	Timetable information
Lecture	EN0-ER	English	MON:14:15-16:00
Practice	EN1-ER	English	MON:16:15-18:00

Subject obligatory for BSc degree - The goal of the subject is to present information on the controlling process of the whole construction activity and the applied technologies involving the legal environment, the quality management, the quality survey, the work safety and the fire protection. Site and company visits are integrated in the theoretical lectures. Main topics: Regulations concerning to the construction Building permission/building consentQuality in construction, Fire protectionDry construction systemsThe work of the quality surveyorHealth and safety during building constructionControlling activities in Construction Projects

Subject code	Subject name	Requirement	ECTS credit
BMEEPESA201	Building Constructions 1.	Exam	4

Course type	Course code	Course language	Timetable information
Lecture	EN0-ER	English	MON:08:15-10:00
Practice	EN1-ER	English	FRI:08:15-10:00

This subject presents the details of the main load-bearing constructions (walls, floors, stairs) and the joints between them. Wall supported / skeleton frame, or mixed construction. Walls: Effects on walls, and how to fulfil the requirements. Sorting the walls by function, position, material, by layer-order. Walls built from elements, the development of walling elements. Floors: Functions, effects on floors, how to fulfil the requirements. Elements of floor construction. Types: plain floors (in details), arches (overview). The materials, construction lines, building methods, About the future of floors Joints between walls – floors, skeleton frames – floors. Methodology of the floor design. Stairs: Functions, effects on staires, how to fulfil the requirements, principles of stressing and how to choose construction. Sorting the constructions by material, load bearing method, building method ... etc. Design possibilities.

Subject code	Subject name	Requirement	ECTS credit
BMEEPESA401	Building Constructions 3	Exam	4

Course type	Course code	Course language	Timetable information
Lecture	EN0-ER	English	MON:08:15-10:00
Practice	EN1-ER	English	FRI:08:15-10:00

General and detailed review of the structures of the elevation constructions. The most important aim of the subject is the analysis of the external separating constructions. Principles of the continuity of the protecting levels depending on the position in the structure. Multi-layer external separating walls, construction methods of the elevation claddings and elevation coverings, the ordinary and special external doors and windows. Complementary structures for the external doors and windows, especially the shading devices. Requirements for the external separating structures and performances of the different constructions. Building physics: heat and vapour physics, acoustic features of the external separating structures.

Subject code	Subject name	Requirement	ECTS credit
BMEEPEST602	Building Constructions 5T	Mid-semester mark	4

Course type	Course code	Course language	Timetable information
Lecture	EN0-ER	English	WED:14:15-16:00
Practice	EN1-ER	English	FRI:08:15-10:00

Subject code	Subject name	Requirement	ECTS credit
BMEEPET0408	History of Theory of Architecture 2	Exam	2

Course type	Course code	Course language	Timetable information
Lecture	EN1-ER	English	THU:12:15-14:00

HISTORY OF THEORY OF ARCHITECTURE 2. BMEEPET0408 The course presents, exposes and explains the most important constituent facts, selected from the innumerable different intellectual reflections of the twentieth century and the second millennium, as a rich and simultaneous interplay of parallel stories, either promoting, or opposing each other. It doesn't interpret history as a homogeneously evolving story, emerging from the past,

but at the same time, it doesn't deny the importance and operative function of creating histories. Instead of a simple, successive presentation of well-known historical facts, or a collection of fashionable notions, topics and themes, it rather concentrates on exploring their synchronic functional relationships and finding creative and relevant conclusions. 1. Introduction, theory and history in the 20th century. 2. Dominant modern reflections: Riegl, Loos, Corbusier. 3. Science, technology, art, future, constituent parts of the modern identity. Submission and discussion of first paper. 4. Great histories of modern architecture. History, or theory? 5. The destructions of modern technologies. Totalitarian regimes, and the war. Post war time, neo-technicism and total utopias of the sixties, Banham, Archigram. 6. Rediscovery of the operative function of history. Kahn, Venturi. Vulgar modernism and vulgar historicism. Submission and discussion of second paper. 7. The global, the regional, the rural, the archaic. Structuralism, accidentism. 8. Positive and negative side of modern urbanism. 9. Beyond modern histories. Critical theories anthologies. Presence and representation. Deconstruction, phenomenology, hermeneutics. Submission and discussion of third paper.

Subject code	Subject name		Requirement	ECTS credit
BMEEPET0995	Architectural Research for Exchange Students - ET		Mid-semester mark	6
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Practice	EN1-ER	English		

Architectural Research for Exchange Students – BMEEPET0995 BME Department of History of Architecture and of Monuments Similarly to the international practice the course aims primarily research activity in architecture and its documentation. The possible horizon of the research topics is determined by the course lists of the departments and the personal interest of the students. Beside the architectural topics the course will give an appreciation of interdisciplinary and special fields in international environment too. The project work will demonstrate generic and specific skills and understanding of the open and synthetic character of the research. The objective of this course is to hone the skills of analysis and abstraction in order to develop a framework for research. The student should be able to draw from precedent in the art, architecture and engineering in the development of this framework, which will act as scaffolding for the theoretical, experimental and creative decisions. This course will consist of a series of consultations to the teachers, but the essay should write by the student. The available topics are given by the Departments of the Faculty. The student can propose also a special topic for research during the course, but the teacher has to be agreeing with the proposal.

Course list 2018/2019/fall semester consultants in the following languages for the following topics

Dr. habil. KRÁHLING, János	Associate professor	English	max. 3
Architectural analysis of sacral buildings	Dr. habil. MEZ S, Tamás	Professor	English max. 3
Architectural research	DARAGÓ, László DLA	Associate professor	English max. 2
Architectural analysis of historic ensembles	SZALAI, András DLA	Associate professor	English max. 1
Contemporary architecture	VUKOSZÁVLYEV, Zorán PhD	Associate professor	English max. 2
Contemporary architecture	GY. BALOGH, Ágnes PhD	Assistant professor	English max. 1
19th century architecture	HALMOS, Balázs PhD	Assistant professor	English max. 2
Historical building research	MARÓTY, Katalin PhD	Assistant professor	English max. 1
19th century architecture	PAZÁR, Béla DLA	Assistant professor	English Deutsch max. 1
Contemporary architecture	Zeitgenössische Architektur	RABB, Péter PhD	Assistant professor English max. 1
Norman architecture in South Italy	ZSEMBERY, Ákos PhD	Assistant professor	Italiano English max. 1
Restauro dei monumenti. Principi e metodo	KISS, Zsuzsanna Emília	Assistant research fellow	English max. 1.
Turn of the century architecture	PILSITZ, Martin PhD	Assistant research fellow	Deutsch English max. 1
Historische Industriearchitektur	Historic industrial architecture	FEHÉR, Krisztina	Assistant lecturer English French max. 1
Mediaeval architecture			

Subject code	Subject name		Requirement	ECTS credit
BMEEPETA201	History of Architecture 2. (Antiquity)		Mid-semester mark	3
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Lecture	EN0-ER	English	WED:13:15-15:00	
Practice	EN1-ER	English	WED:15:15-16:00	

The intended task of the subject is to investigate the evaluation and formation of the European architecture of the four main cultures as Mesopotamia, Egypt, Greece and Rome. Before introducing to the evaluation of architecture we are speaking the used building materials and the structures involved. The presentation of architecture follows chronological order, analysing the functional expectation of the building types used. In Mesopotamia we discuss the space demands of the sacral, the dwelling and the palace architecture. The analysis makes possible to prove the early use of space systems in architecture. The accented topic in Egypt is the evaluation of monumental architecture in stone. It is important to understand, that the later funerary buildings are not unique architectural constructions, but part of a composition. The Hellenic and the Roman civilisation is basically an urbanistic culture. That is the reason, that both cultures are discussed through their developments in settlements. The analysis of Hellenic temple construction gives opportunity to discuss the evaluation of the Greek and Roman orders.

Subject code	Subject name			Requirement	ECTS credit
BMEEPETA401	History of Architecture 4			Exam	3
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>		
Lecture	EN0-ER	English	MON:12:15-14:00		
Practice	EN1-ER	English	MON:14:15-15:00		
Brunelleschi and the early renaissance architecture in Tuscany. The evolution of the renaissance palace in Florence and in the Northern regions of Italy. The architect and scholar Leon Battista Alberti. Bramante and the influence of his circle in the first half of the 16th century. Michelangelo Buonarroti architect. Renaissance in Lombardy and Venice. Mannerist architecture. The late sixteenth century: Palladio and Vignola. Urban development and early baroque architecture in Rome under Pope Sixtus V. The architecture of Lorenzo Bernini and Francesco Borromini. Baroque in Venice and in Piemont. Architecture in France in the 16-17th centuries. Baroque in central Europe: Austria, Bohemia and Germany.					
Subject code	Subject name			Requirement	ECTS credit
BMEEPETO601	History of Architecture 6			Mid-semester mark	3
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>		
Lecture	EN0-ER	English	MON:09:15-12:00		
The course gives an overview of the architecture in the 20-21st centuries. The classes follow chronology with focusing on the works of some great architects: Modernism and Modern Movement. Architecture between the two world wars ndash; De Stijl, Bauhaus, Russian Constructivism, Less is more ndash; Architecture of Ludwig Mies van der Rohe, Toward a New Architecture ndash; Architecture of Le Corbusier. The Nordic Classicist Tradition ndash; Architecture of E. G. Asplund and S. Lewerentz. Alvar Aalto and the modern Finnish architecture. In the second part the course picks up some relevant architectural trends: New Empiricism, New Humanism, New Brutalism and the Team X, the way from large housing estates to architecture without architects. Unfolding post-modern architecture, participation and the Las Vegas strip, Colin Rowersquo;s studio, Critical Regionalism. The third part concentrates on timely problems: new materials or the multi-sensorial experience of space and surface, Rem Koolhaasrsquo;s Dirty Realism, new technology and digital perception, architecture of seduction.					
Subject code	Subject name			Requirement	ECTS credit
BMEEPETO801	History of Architecture in Hungary 1			Mid-semester mark	2
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>		
Lecture	EN0-ER	English	THU:17:15-19:00		
The subject History of Architecture in Hungary I. aims to present and analyze the architecture of historic Hungary in European and domestic context from the history of Pannonia to the end of Baroque. The principle of the presentation is the chronological interdependence, however, particular attention is given to the main trends within the different periods as the main stylistic tendencies or external and internal factors that determine the historical and architectural context. A great emphasis is given to the exploration of the connections between the European and Hungarian history of architecture. Lecture topics include: The beginnings of architecture in the Carpathian Basin. Roman architecture in Hungary. Early medieval architecture in Hungary - Christian Architecture between West and East. The flourishing Romanesque and the beginnings of Gothic Architecture. The rise of Gothic Architecture - architecture in towns and Gothic architecture of the orders. The beginning and the first period of the renaissance till the middle of th 16th century. The architecture of fortified palaces and fortifications. The renaissance architecture in Transylvania. The beginnings of the baroque in Western Hungary in the 17th century. The High Baroque in Hungary.					
Subject code	Subject name			Requirement	ECTS credit
BMEEPETT611	Preservation of Historic Monuments			Mid-semester mark	2
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>		
Lecture	EN0-ER	English	THU:08:15-10:00		
The course gives an overview on history and theory of the architectural preservation in Europe and Hungary. Presents the evaluation of the way of thinking from purism to the modern practice of restoration. It is an important part, when national and international documents and theoretic papers are discussed, form Morris and Ruskinrsquo;s work, over Boitorsquo;s lquo;Prima carta del restaurordquo; (1883) to Krakow Charter 2000. Following the historic part some technical aspects of preservation are discussed, i.e. surveying methods and techniques, non-destructive and destructive building archaeological methods etc. The brief introduction to building archaeology helps to understand the importance of theoretic reconstruction of independent building phases of the historic monument. The detailed discussion of the topic is part of the Preservation of historic buildings 2 ndash; Building archaeology elective subject. The third part is dealing with architectural and design-methodological questions of preservation. Especially the architectural problems of presentation of archaeological heritage, the reuse and functional problems of industrial and vernacular buildings for modern purposes.					

Subject code	Subject name		Requirement	ECTS credit
BMEEPIP0893	Contemporary Architect Offices		Exam	2
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Lecture	EN1-ER	English	FRI:14:15-16:00	
<p>This subject is about contemporary Hungarian architecture. The course is set up of weekly lectures or a site visits by a famous/talented Hungarian architects. The lectures are Hungarian language, for the international students it will be translated by an interpreter. For execution of the subject an essay is to be written about one of the lectures. The topics will be personalized for everyone during the last lecture.</p>				
Subject code	Subject name		Requirement	ECTS credit
BMEEPIP0995	Architectural Research for Exchange Students - IP		Mid-semester mark	6
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Practice	EN1-ER	English		
<p>Similar to the international practice aims the course primary research activity on architecture and its documentation. The possible horizon of the research topics is determined by the course lists of the departments and the personal interest of the students. Beside the architectural topics will give the course an appreciation of interdisciplinary and special fields in international environment too. The project work demonstrating generic and specific skills and understanding of the open and synthetic character of the research. The objective of this course is to hone the skills of analysis and abstraction in order to develop a framework for research. The student should be able to draw from precedent in both art, architecture and engineering in the development of this framework, which will act as scaffolding for the theoretical, experimental and creative decisions. This course will consist of a series of consultations to the teachers, but the essay should written by the student. The available topics are given by the Departments of the Faculty. The student can propose also a special topic for research during the course, but the teacher has to be agree with the proposal.</p>				
Subject code	Subject name		Requirement	ECTS credit
BMEEPIPA401	Architecture of Workplaces 1		Exam	2
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Lecture	EN0-ER	English	THU:08:15-10:00	
<p>The history of industrial architecture, the history of Hungarian industrial architecture. Load-bearing structures of halls and of multi-storey buildings. Size standardization. Constructions of space separation, facades, subsystems of space separation constructions (foundations, roof structures, intermediate floors, external wall systems, finishes. Characteristic architectural requirements, social facilities. Logistics: transport, storage. From location to layout, emplacement of industrial plants. Design methodology, re-use, reconstruction. Offices.</p>				
Subject code	Subject name		Requirement	ECTS credit
BMEEPKO0995	Architectural Research for Exchange Students - KO		Mid-semester mark	6
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Practice	EN1-ER	English		
<p>Similar to the international practice aims the course primary research activity on architecture and its documentation. The possible horizon of the research topics is determined by the course lists of the departments and the personal interest of the students. Beside the architectural topics will give the course an appreciation of interdisciplinary and special fields in international environment too. The project work demonstrating generic and specific skills and understanding of the open and synthetic character of the research. The objective of this course is to hone the skills of analysis and abstraction in order to develop a framework for research. The student should be able to draw from precedent in both art, architecture and engineering in the development of this framework, which will act as scaffolding for the theoretical, experimental and creative decisions. This course will consist of a series of consultations to the teachers, but the essay should written by the student. The available topics are given by the Departments of the Faculty. The student can propose also a special topic for research during the course, but the teacher has to be agree with the proposal.</p>				
Subject code	Subject name		Requirement	ECTS credit
BMEEPRAA401	Drawing and Composition 4		Mid-semester mark	2
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Practice	EN2-ER	English		
Practice	EN1-ER	English	TUE:10:15-12:00	
<p>The main topic in the syllabus of the subject is the 'analytical' representation of external spaces: students learn how to recognise the invisible geometrical-structural relations beloww the surface of buildings through preparing 'X-ray drawings'. Not only the views but also the sections of buildings are studied in order to understand and grasp the gist of the architectural structure behind the view, and to prepare such 'X-ray drawings' that represent more complex architectural compositions than what the eyes can see. Students prepare drawings on external sites (such as the Museum of Fine Arts, the Great Market Hall, and the assembly halls</p>				

of BUTE and Corvinus University) to investigate the options of perspective drawing and the versions of plane representation of large spaces.

Subject code	Subject name		Requirement	ECTS credit
BMEEPRAA601	Drawing and Composition 6		Mid-semester mark	2
Course type	Course code	Course language	Timetable information	
Practice	EN1-ER	English	WED:16:15-18:00	
The main topic in the syllabus in this semester is the intuitive representation of internal and external spaces: this subject aims at teaching students perspective representation at a higher level (applying 3-6 vanishing points). While drawing the streets and squares of the Buda Castle and the internal spaces of some atmospheric old public building in Budapest (e.g. Saint Stephen Cathedral, Opera House, Hungarian National Museum) students investigate invisible geometrical and structural relations and improve their drawing skills (applying lead pencil, ink and crayon techniques). The objective is not to simply represent a naturalistic view as a camera, but to prepare a drawing of the architectural structure of a real space after grasping the gist of the composition.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPST0995	Architectural Research for Exchange Students - ST		Mid-semester mark	6
Course type	Course code	Course language	Timetable information	
Practice	EN1-ER	English		
Architectural Research for Exchange Students on the topics of the Department's competency. The aim of the subject is to carry out a research on a special topic. The research contains specifying and processing the related international literature, summing up the findings in a study and finally a presentation. The language of the research depends on the consultant - the available topics are listed on the department's homepage.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPSTA201	Statics		Exam	4
Course type	Course code	Course language	Timetable information	
Lecture	EN0	English	TUE:10:15-12:00	
Practice	EN1	English	WED:10:15-12:00	
Practice	EN2	English	WED:10:15-12:00	
The basic laws and theorems of statics are presented and applied to engineering structures. We learn to determine reactions and internal forces (stress resultants) of 2D and 3D line structures including statically determinate trusses, beams, frames, cables, vaults and assembled structures.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPSTA401	Strength of Materials 2		Mid-semester mark	6
Course type	Course code	Course language	Timetable information	
Lecture	EN0	English	MON:10:15-12:00; WED:10:15-12:00	
Practice	EN1	English	FRI:10:15-12:00	
Practice	EN2	English	FRI:10:15-12:00	
Strength of materials is a compulsory engineering subject for second year students in architecture. The goals of the subject are to show how to - determine the deformations of load-bearing structures- find the internal forces of statically indeterminate structures. In addition to theoretical methods, we also show examples in structural engineering.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPSTG201	Fundamentals of Structures		Mid-semester mark	0
Course type	Course code	Course language	Timetable information	
Lecture	EN0	English	TUE:12:15-14:00(K255); TUE:12:15-14:00(K255); THU:15:15-17:00(K255); THU:15:15-17:00(K255)	
The aim of the subject is to get acquainted students with the profession of an architectural engineer with emphasis on structures. After visits to a functioning building (the central building of the BME), to a material testing laboratory (that of the Department), to a construction site and an architectural design bureau, the experiences are treated in detail and discussed on the next lesson: what kind of requirements are to be considered by design, how to evaluate material strength test results, the collaboration of what kind of participants is necessary to design and construct a building.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPSTM101	Special Load-Bearing Structures		Mid-semester mark	4
Course type	Course code	Course language	Timetable information	
Lecture	EN0	English	MON:12:15-14:00	
Practice	EN1	English	MON:14:15-16:00	

Subject code	Subject name		Requirement	ECTS credit
BMEEPSTT601	Special Load-Bearing Structures		Mid-semester mark	4
Course type	Course code	Course language	Timetable information	
Lecture	EN0	English	MON:12:15-14:00	
Practice	EN1	English	MON:14:15-16:00	
The subject introduces the special load-bearing structures, such as large span, tall and spatial structures. We introduce the trusses, box-beams, wall-beams and arches as large span structures. We show the static behavior of tall buildings: the concept of the vertical and horizontal load-bearing structures. The behavior of spatial structures is the main topic of the semester. We introduce the RC shells, the brick-shells, the cable and textile membranes, space-trusses, grid shells				
Subject code	Subject name		Requirement	ECTS credit
BMEEPTCEP02	Interdisciplinary, Project based Design S		Mid-semester mark	16
Course type	Course code	Course language	Timetable information	
Practice	EN2-ER	English	TUE:09:15-17:00; THU:09:15-17:00	
Practice	EN1-ER	English	MON:09:15-17:00; WED:09:15-17:00	
The subject is based on the cooperation of the departments of the Faculty of Architecture. Students work in studios in groups with individual tasks as well instructed by teachers of the departments involved. There are two design tasks to be solved during the semester, that can be chosen freely from the offered opportunities. Each task is to solve in seven weeks. Some of the tasks are: sport hall for Olympic Games in Budapest, Dwelling Underground, Suspension in Architecture, The Green in the Metropolitan Area (green walls, green roofs) etc.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPU0801	Contemporary Urban Design		Mid-semester mark	2
Course type	Course code	Course language	Timetable information	
Lecture	EN1-ER	English	THU:17:15-19:00	
The course gives a stable theoretical background not only for understanding contemporary urban design theory but also to practice urban design. The semester divided into three main parts: the first focuses on contemporary housing neighborhood developments, new constructions and regenerations projects from Europe; the second is an introduction to the background of the notion of public space and how this notion requalified the use of the contemporary city; the third is about the re-use of historic urban cores in Europe, focusing Berlin, Amsterdam and Zurich.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPU0805	Urbanism		Mid-semester mark	2
Course type	Course code	Course language	Timetable information	
Lecture	EN1-ER	English	WED:16:15-18:00	
The goal of the course is to get students acquainted with the multidisciplinary characteristics of Urban Studies. The semester is divided into two blocks dealing with: urbanisation processes in the world, in Hungary and Budapest; the issues of contemporary urbanity; related fields of science and planning tools in various field of the profession. In the series of lectures professors of the Department of Urban Planning and Design and some invited experts of various fields are presenting lectures on the various topics. On the end of the semester, you have to present a specific urban topic of your home city.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPU0906	Participation, simulation, activism: new methods in urban design		Mid-semester mark	2
Course type	Course code	Course language	Timetable information	
Practice	EN1-ER	English	WED:16:15-18:00	
The elective course aims to teach students the practice of participatory design, focusing on urban public space design involving local communities. Students ndash; after analyzing the European best practices ndash; will get experience in involving different social groups and interest-groups into the design process of a public space. Students will get an extensive knowledge on the international practice of participatory design, reading much of itCloseCurlyQuote;s English literature, analyzing completed European public spaces designed with this method. During the practical classes the students will make a design proposal or activity process simulation for a selected public space in Budapest, either in a dense urban context or on the spaces of a housing estate, or in a suburban situation.				



Subject code	Subject name		Requirement	ECTS credit
BMEEPUI0995	Architectural Research for Exchange Students - UI		Mid-semester mark	6
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Practice	EN2-ER	English		
Practice	EN1-ER	English		
Architectural research for exchange and international students: with the professional leadership of the tutors of the Department of Urban Planning and Design students work on individual research topics (eg.. Urban History, Urban Tipologies, Urban Morphologies, Housing estates etc.). The course is based on individual work, with a final output of an essay.				
Subject code	Subject name		Requirement	ECTS credit
BMEEPUIQ601	Department's Design 1.		Mid-semester mark	3
<b>Course type</b>	<b>Course code</b>	<b>Course language</b>	<b>Timetable information</b>	
Practice	EN1-ER	English	THU:13:15-16:00	
A special urban design course focusing mainly on urban public space design with the help of invited lecturers and landscape designer consultants. The course is a partly theoretical and partly practical where students get acquainted with special issues and problems of public space definition, basic notions and tools of public realm and public space design. In the design assignment students deal with a smaller spatial entity, where they start from the analysis of the urban problem and provide a possible solution for the publicly attainable zones in between buildings.				