ERASMUS AND EXCHANGE - COURSE DESCRIPTION

555 DA1/2  
History of Architecture 1/2  
Lecturer: prof. PhDr. Pavel Kalina, CSc.  
The aim of the course is to trace the most important features of Gothic cathedral architecture including its social context and building technology. Students should acquire the ability to interpret Gothic architecture according to its geometrical design and social function.  

555 DA3/4  
History of Architecture 3/4  
Lecturer: prof. PhDr. Pavel Kalina, CSc.  
The aim of the course is to analyse the basic features of Baroque religious architecture, its formal language, its social background and its technology. Students should acquire the capacity to read Baroque architecture according to the theoretical principles of the age of its origin.  
Contents: Renaissance architecture - introduction. Art and architecture around 1600. The triumph of the church - art and architecture after the battle at the White Mountain. Tendencies in Prague art and architecture in the second half of the 17th century. High Baroque church as a Gesamtkunstwerk. St Nicholas Church and the churches of the Lesser Quarter. The decay of the Baroque world. St Michael’s mystery - problems of monument care and the use of monuments.

555 DA5  
History of Architecture 5 - Modern Architecture  
Lecturer: doc. Ing. arch. Petr Vorlík, Ph.D.  
Explores the tradition of modern architecture of 20th century in the Czech Republic and Central Europe with international interactions and influences. The lectures are accompanied with excursions in Prague, Brno, Hradec Králové etc.  

555 SAT  
Contemporary Architecture  
Lecturer: prof. Ing. arch. Vladimír Šlapeta, DrSc.  
Lectures explaining the main streams of architecture development of the post-WW II period of the 20th century in Czechoslovakia and Central Europe with the emphasis on the issues of globalisation, contemporary societies and cities. The lectures are accompanied with excursions in Prague, Brno, Hradec Králové etc.  
555 PP2
Monument Preservation 2
Lecturer: doc. PhDr. Josef Štulc
The course includes the introduction to the philosophy, ethic, methods and practice of monument conservation, historic buildings, urban ensembles and landscapes in their historical development and current state. It gives the basic information on historical and archaeological survey and documentation of monuments, their listing and legal protection in the Czech Republic. The current state of conservation practice including the technological aspects will be demonstrated on the selected illustrative cases. Attention will also be paid to the international context and collaboration in these fields.

555 I2
Interior 2 - History of Interior
Lecturer:
The course will include lessons on the development of furniture interior design, manufacturing technology and aesthetics of material culture of the society in different historical periods.

555 I3
Interior 3 - History of Theatre
Lecturer:
The course will cover the development of theatre from antiquity until today focusing mainly on the typology of theatre buildings. Czech theatres, the theatre machinery and the present theatre trends such as using non-theatre spaces will be also presented. The excursions to Czech theatres will be included in this course.

555 U2
Urbanism 2 – History
Lecturer: Ing. arch. PhDr. Lenka Burgerová, Ph.D.
The course familiarizes students with the most important stages of the development of urbanism focused on Czech countries as a part of the Middle Europe Region. Principal questions and problems of formation, rise and changes of the cities are widely explained and linked to economic, social and cultural conditions of the described era. Significant part of the lecture is devoted to the modern city (formation, impact on the structure of historical cities) urban theories and their authors will be introduced and connected with examples, which can be easily seen in Prague or nearby cities. Educational excursions are part of the teaching methods because of their immediate binding of the theory with the physical body of cities. Students are welcomed to become aware of the specific development and possible problems of our cities and compare it with the knowledge about the development and problems of the cities in their home country. Attention is paid also to the importance and changing role of the countryside.

555 U3
Urbanism 3 – Theory
Lecturer: Doc. Ing. arch. Irena Fialová
(requisite optional course for the full Master-degree programme)
This course familiarizes the students with the most important urban theories of the 20th and 21st century. The goal is to show the emergence and transformation of these theories on the background of social and economic development of the society. By means of the case study approach the students are guided to critical thinking, analysis, evaluation, comparison and recognition of these theories’ impact on the city.

555 U4
Urbanism 4 – Design
Lecturer: doc. Ing. arch. Jan Jehlík
This course familiarizes the students with both basic and advanced knowledge in the field of urban design, morphology, topography and typology of settlement structures. It is focused on the relations between mass, space and activities in settlements, the form and structure of public space, the influences of infrastructure on urban fabric and new tendencies in the above described fields. Suburbanization, different types of urban low-rise formations and buildings or the so-called „urban sprawl“ are just some of the problems of today’s urban design, where we can find questions which require to be answered. Other issues dealt with on the lectures include countryside, villages and settlements in open space, historical and regional points of view, the character of the landscape frame within cadastre limits transformations in the countryside during the last century (namely in agricultural technologies, housing, transportation). Lectures, where the problems and questions are opened, are complemented by practical field studies based on the research of some “fringe areas“ in the city of Prague.

555 P1
Planning 1 – Urban Planning
Lecturer: doc. Ing. arch. Jakub Vorel, Ph.D.
The discipline of urban planning is presented as a tool to cope with various urban problems specific to each historical period. Brief review of the urban planning history is concluded by the identification of major challenges for the contemporary urban planning. Students are introduced to the mission and role of urban planning in the present liberal society. The objectives, concepts, agendas and strategies of European spatial planning as well as the basic institutional framework and legal instruments of European urban planning are
presented on the example of the Czech Republic. The up-to-date urban issues and planning responses are documented on several case studies from all over the world.

555 UP2
Planning 2 – Spatial and Strategic Planning
Lecturer: doc. Ing. arch. Jakub Vorel, Ph.D.
*(requisite optional course for the full Master-degree programme)*
The course increases the competences and skills of students in practical planning tasks. The applied approach is learning-by-doing based on localization tasks. Starting from the analytical planning documents and other available information on the Prague city the students are proposing an alternative location of a set of typical development projects in the city. Subsequently they evaluate the suitability of the proposed locations with respect to explicit criteria and propose the strategy for new development integration in a new locality. Through these exercises the students learn to apply information and basic analytical and assessment techniques typically used in spatial planning. Finally, the students learn about spatial relations in a typical European metropolis.

555 EKL2
Ecology 2
Lecturer: prof. Ing. Petr Sklenička, CSc.
The objective of the course is to provide students with theoretical and practical basis of ecological disciplines in the landscape scale. On the course completion the students will be able to assess the landscape from different ecological and landscape-ecological perspectives. The course presents direct methods of landscape assessment, as well as applied methods (landscape classification, typology, etc.). The landscape is presented as a framework in which architects design their works, but also as the very object of their interest. The course also presents basic tools of environmental planning in the landscape and puts them into context with architecture and urban planning.

555 EKL3
Ecology 3 – Social Ecology
Lecturer: arch. Henry Hanson
*(requisite optional course for the full Master-degree programme)*
This course explores the relationship between humans and the environment. It introduces students into the history, theory and strategies associated with social ecology, contemporary research activities and citizen’s participation in shaping the urban and rural environment. The theoretical foundation includes readings and discussions on Darwin, Laugier, Recluse, Commoner, Carson and Bookchin. A collection of strategies is then explored to connect the theoretical foundation with specific case study investigation. The conclusion of the course is the preparation of a statement or “manifesto” to be used as an individual and professional guide to cognitively resolve ethical dilemmas.

555 TKZ1
Landscape Architecture 1 – Introduction
Lecturer: Ing. Radmila Fingerová
This course is about obtaining knowledge through sharing and developing ideas regarding the history of garden art and landscape architecture and contemporary trends of landscape architecture worldwide. Students write essays, make site research in Prague (historical gardens, contemporary parks, public spaces), and make Powerpoint presentation concerning landscape architecture in their country.
555 TKZ3
Landscape Architecture 3 –Technology
Lecturer: arch. Henry Hanson
(requisite optional course for the full Master-degree programme)
This course introduces fundamental technical subject matters necessary for the development of basic site realization plans. The subject matters include terrain, drainage, hard surfaces, planting, walls and other structures. The course instruction will be a combination of lectures and laboratory exercises on site. The lectures deal with landform creation, drainage patterns, perception and scale of the landscape experience, landform modelling and landform manipulation; surface water management and soil erosion sedimentation control, surface water management, planting installation methods; design of landforms for function and appearance.
The evaluation will be based on participation in class, exercises and the final project.

555 TZI2
Technical Infrastructure II – Urban Utilities
Lecturer: doc. Ing. František Medek,CSc., Ing. Petr Hrdlička
This course introduces the students into settlement’s utilities, transportation systems, their function, the interaction between the systems of technical infrastructure and urban space with the purpose to determine the limits of factors which are important for the future of the settlements development and with the purpose to develop the ability to design the basic parts of technical infrastructure.
The service systems which supply the urban space with gas, heat and electricity and ensure the transmission of information are described in detail. They also remove wastes and ensure their recycling and final disposal. In addition the energy systems, alternative resources and the principles of sustainable development are discussed.

555 NK4/5
Load-bearing Structures 4/5
Lecturer: prof. Ing. Milan Holický, DrSc.
(requisite optional course for the full Master-degree programme)
Basic concepts of building structures; the Eurocodes system, masonry, concrete, precast concrete, basic formulas; indicative dimensions for concrete components, beams, slabs; durability, serviceability, shear; failure examples; foundations - various types of foundations, pad footings, continuous footings, strip footings, piled foundations. high-rise buildings - fundamental requirements, deformations, rigid joints, bracing, core, shear walls, tube, double tube, examples.

555 PAM2
Building Technology and Management
Lecturer: Ing. Ficek
The aim of the course is preparation of future architects for their role as a project designer or manager starting from the project investment programme up to the constructional stage by means of providing students with adequate tools and techniques for competent quantitative project of construction process in situ under the competitive (red-ocean) and highly bureaucratic post-modern conditions. The students submit solutions to the temporary site accommodation and organization based on their individual building projects. Both general mathematical formulas, algorithms and the lecturer’s expertise and skills will develop the student’s knowledge of how to design the documentation for the construction process per se. BT seminars are devoted to practical problems in the form of an individual student’s project “Prepare the technology documentation to a building permit” (design development phase) with emphasis on the specific location (the layout and dimensions of the site accommodation), temporary site infrastructure and the needs of resources (energy,
manpower, machines), programming (CPM, BKM, space-time graph...), construction process organization (staging, health and safety measures...) and the architect’s supervision (the building log). Thus, following crucial information is inevitable: project layout, cost of construction works, contracted conditions, and project general location influence.

555 EKON
Economics
Lecturer: Ing. Ficek

Decision-making in building projects consists of both economic and non-economic criteria for design and its implementation, e.g. income - expenditures or cost - benefit analysis. Both general mathematical formulas, algorithms and the lecturer’s expertise and skills will develop the student’s knowledge of how to identify optimal strategies and to predict the outcome of strategic interactions within the project life cycle. The seminars are devoted to practical problems in the form of an individual student’s project "Create your own business in CZ by buying and refurbishing the existing premises" (prefeasibility study) with emphasis on the construction work cost and the architect’s design team costing and pricing. Thus, following crucial information is inevitable: total initial project costs, operating/manufacturing project costs in use, project life-time schedule, financing, externalities (EIA, IPPC) and CZ business environment assessment (PEST analysis), contracting, and construction job estimating (the bill of quantities, elemental cost analysis). The objective of the course: to provide students/participants with adequate tools and techniques for competent assessment and strategic decision on capital investment projects under competitive (red ocean) and sophisticated (growing entropy) post-modern conditions.

555 CAD3
Computer Aided Design 3
Lecturer: doc. Dr. Henri Hubertus Achten

(requisite optional course for the full Master-degree programme)

The course provides a basic introduction into 3Dstudio Max. The students will learn how to create models in Max, apply modifiers, create and assign materials, create lights and cameras, and how to make animations. Throughout the course the students will do exercises.


555 CAD4
Computer Aided Design 4
Lecturer: doc.Dr. Henri Hubertus Achten

(requisite optional course for the full Master-degree programme)

The course provides advanced techniques that are used in 3Dstudio Max. Students need to have completed the 3Dstudio Max basic course first or have knowledge of the program. The subject matters are project management, IK structures, particle systems, reactor, morphing and advanced rendering styles.

Computer Aided Design 5 – GIS – Geographic Information Systems
Lecturer: Mgr. Jiří Čtyroký, Ph.D.

(requisite optional course for the full Master-degree programme)
Geographic information systems are at present a substantial technology or collecting, processing and evaluation of space-attached data. The course provides students with a basic orientation in the technology, which may be used in the practice of spatial / urban and regional planning. GIS analyses related to spatial planning are trained in the course on individual basis, with use of a specialised computer laboratory and special software. The knowledge and skills received in the course can be immediately utilised in the course of Planning 2 as well as in the urban studio project.