



FACULTY OF ARCHITECTURE, CTU IN PRAGUE  
**Examination Issues for the Final State Exam in the Course Block  
DESIGN PRACTISE and MANAGEMENT**

Design Master follow-up degree program

Guarantee of the Final State Exam – Department of Building Construction 15 124

The condition for the SE is the successful completion of the specified courses:

- **Economics and Management**
- **Materials and Technology**
- **Law**

## PRINCIPLE AND EXAM ISSUES

### PRINCIPLE

The master's final examination should verify the student's ability to approach **independently** the problem/assignment solved and to introduce the manner of its **solution**. The state examination differs from the ordinary examinations in particular subjects in its form: this examination does not primarily require a number of partial information and data but, on the contrary, it concentrates on the depth of the theme **comprehension** and the quality of the creative **approach**. Therefore, the main essence is not a presentation of encyclopaedic knowledge but a debate on the theme. The student presents his own understanding of the theme (cc. 7 min) and consequently answers the complementary questions of the examining board (cc. 7 min). The capability of orientation in the thematical area is assessed as is finding phenomena, information and approaches substantial for the architectural design and depth of knowledge. The source material for preparation for the exam is primarily the content of requisite subjects of the master's study at FA CTU and the relevant literature. Gathering knowledge of relevant themes from other subjects within the study and from individual sources is also required.

### SOURCE MATERIALS

The source material for the examination is primarily the content of the compulsory **subjects** within the master study program at FA CTU and the corresponding **literature**. Supposed is also acquiring knowledge of the themes concerned and of the other subjects within the study program and from individual sources as well. An essential part of the answers will be introducing **examples** from practice, i.e. possibilities of real **utilization** of the particular knowledge, i.e. links to both theoretical and practical **sources**.

### EXAM ISSUES

#### 1. **The role of the designer in the stages of preparation and execution of the design work**

Basic orientation in the market economy environment and life cycle phases. Participation of the designer in investment projects.

#### 2. **Business, the process of founding a company**

Market economy, basic economic concepts. The role of information. Characteristics of the subject of business. Founding budget. Marketing tools – marketing mix. Long-term and short-term company goals.



### **3. Planning, preparation and implementation of a design project**

Evaluation in terms of time, material resources, financial costs and needs. Time planning. Calculation in the work of a designer. Economic feasibility. Technical feasibility.

### **4. Material and technology and their role in engineering design**

Material design as part of the production design.

The useful properties of the product and their characterization using a design index.

### **5. Progressive materials for selected industrial design sectors**

High-strength steel, stainless steel, prospective cast iron.

Alloys of titanium, copper, aluminium and magnesium.

Technical-based materials for structural ceramics, materials produced by powder metallurgy, classifications, technological aspects, applications.

### **6. Polymers, basic distribution**

Specific properties and their application to industrial applications.

Use and perspective of modern composite materials in industrial design.

### **7. Surface engineering in design**

Issues of surface treatment, surface layers and coatings.

### **8. Design and relative and intangible property rights (obligations and intellectual property rights)**

Obligations based on legal action.

Contracts with intangible subject of performance.

Protection of intellectual property rights in general, international and national protection system.

### **9. Design and technical standardization, metrology and testing**

Technical standardization, legal nature of standards, relationship of standards to legislation.

Metrology and testing, certificates and attestations in design creation, declaration of conformity.

### **10. Design and care of selected public interests**

Public interests in relation to design creation: healthy living conditions, environmental care, monument care and other components of cultural heritage (preservation, restoration)

Environmental Impact Assessment (SEA/EIA and its link to design creation).

### **11. Design and management of a studio, workshops, offices**

Design studio, workshop, office.

Structure and personnel composition, types of organizational arrangements, management method.

Essential requirements and formalities and mutual relations of responsibility.