Course Syllabus

1. **Course Title:** ARCHitecture
2. **Course Code:** ARCH230217
3. **Credit Units:** 3 (3/0/6) (3 units of theory/ 0 unit of practice/ 6 units of self-study)
   Duration: 15 weeks (3 hours of theory+0 hours of practice, and 6 hours of self-study per week)
4. **Course Instructors**
   1/ MSc. Phan Thành Trung
   2/ MSc. Architect. Nguyễn Khoa Thanh Vân
   3/ MSc. Architect. Nguyễn Ngọc Án
   3/ Architect. Bùi Ngọc Hiển
   4/ Dr. Nguyễn Đình Hiển
5. **Course Requirements**
   Prerequisite courses: None
   Previous courses: Descriptive Geometry and Engineering Drawing (DGED121023)
   Parallel courses: None
6. **Course Description**

As a basic part of base knowledge, the subject provides basic knowledge, including parts as follows:

Basic part: Presenting concepts, design concepts, classification in construction design, factors affecting on construction design measures.

Architectural design part: Presenting principles, theoretical basis for architectural design of construction works. Presenting sequences and contents of architectural design; standards and requirements for preparing architectural design drawings.

Architectural structure design part: Presenting basic knowledge of the architectural structures and analysis methods of detailed designs of construction parts; from the lowest to the highest part of the works.

7. **Course Goals**

Goals	Goal Description	Programme ELOs
G1	Specialized knowledge in the field of architectural works such as basic concepts, architectural principles, terminology; bases for architectural design and structural design of architectural works.	1.2
G2	Capability to analyze, explain and argue for addressing technical issues relating to architectures and structures of works.	2.1, 2.3, 2.4
G3	Creativity, team work	3.1
G4	Capability of assessment and selection of proper architectural measures; design of architectural works.	4.1, 4.3, 4.4

8. **Course Learning Outcomes (CLOs)**

CLOs		CLO Description	Programme ELOs
G1	**G1.1**	Understanding the entire works through shop-drawings from architecture to structure.	1.2
G2	**G2.1**	Analyzing and resolving issues that may arise from the conformity of architectural and construction drawings	2.1
	G2.2	Selecting proper architectural measures	2.3
	G2.3	Reviewing architectural elements to structures of works	2.4
G3	**G3.1**	Capacity of working in groups to discuss and solve issues relating to construction architecture majors.	3.1
G4	**G4.1**	Assessing and proposing effective measures in the actual construction works by analyzing design methods.	4.1, 4.3
	G4.2	Carrying out the design and calculation of the whole or any part of works for work construction.	4.4

9. Learning Resources

- Textbooks:

1. Tạ Trường Xuân, *Nguyên lý thiết kế kiến trúc*, NXB Xây dựng, 1999.
2. Phan Tấn Hài, Võ Đình Diệp, Cao Xuân Lương, *Nguyên lý cấu tạo kiến trúc*, NXB Thống Kê, 2004.
3. Nguyễn Minh Thái, *Thiết kế kiến trúc công nghiệp*, NXB Xây dựng, 1996.

- References:

1. Đặng Thái Hoàng, *Kiến trúc nhà ở*, NXB Xây dựng, 1996.
2. Công ty tư vấn xây dựng dân dụng Việt Nam, *Cấu tạo kiến trúc*, NXB Xây dựng, 2010.
3. Nguyễn Đức Thiềm, *Nguyên lý thiết kế cấu tạo kiến trúc*, NXB Khoa học Kỹ thuật, 2007.
4. Ernst Neufert, *Architect Data (Dữ liệu kiến trúc sư)*, NXB Blackwel, 2012.
5. Bộ Xây Dựng, *Quy chuẩn xây dựng Việt Nam*, NXB Xây dựng, 2011.

10. Student Assessment

- Grading scale: **10**
- Assessment plan:

Type	Content	Timeline	Assessment method	CLOs	Rate (%)
Exercise					**30**
BT#1	Analysis of concepts, general issues of architecture.	Week 2	Minor exercises in class	G1.1	5
BT#2	Design calculations of civil works	Week 4	Minor exercises in class	G2.2, G2.3	5
BT#3	Design calculations of architectural structures of civil works	Week 7	Minor exercises in	G2.1	5

			class		
BT#4	Design calculations of industrial architectures	Week 11	Minor exercises in class	G2.2, G2.3	5
BT#5	Design calculations of architectural structures of industrial works	Week 13	Minor exercises in class	G2.1	5
BT#6	Analysis of characteristics of architectural structures of industrial and civil works	Week 15	Minor exercises in class	G2.3	5
Project					**20**
BL#1	Team-working to know how to analyze and understand characteristics of an architectural work	Week 14	Product assessment	G4.1, G4.2	20
Final examination					**50**
	- Contents cover all important standard output of the subject. - Duration: 90 minutes.		Essay examination	G1.1, G2.1, G2.3	

11. Course Content

Week	Content	CLOs
1	***Chapter 1:*** **Architectural design of civil works**	
	A/ Content and pedagogical methods in class*: (3)* **Content:** 1.1 General introduction to architectural designs of works **Pedagogical methods**: + Lecture + Group discussion + Presentation	G1.1
	B/ Self-study content: *(6)* Learning and collecting architectural works. Understanding design documents of a work. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.3, G3.1
2	***Chapter 1:*** **Architectural design of civil works** *(cont'd)*	
	A/ **Content and pedagogical methods in class**: *(3)* **Content:** 1.2 Design documents of works **Pedagogical methods**: + Lecture + Presentation + Group discussion	G1.1, G2.3, G3.1

	***B/* Self-study content**: *(6)* Learning and collecting architectural works. Understanding design documents of a work. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.3, G3.1
3	***Chapter 1:* Architectural design of civil works** *(cont'd)*	
	***A/* Content and pedagogical methods in class**: *(3)* **Content:** 1.3 Architectural design **Pedagogical methods**: + Lecture + Presentation + Group discussion	G2.2, G4.1
	***B/* Self-study content**: *(6)* Learning and collecting architectural works. Understanding design documents of a work. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.3, G3.1
4	***Chapter 1:* Architectural design of civil works** *(cont'd)*	
	***A/* Content and pedagogical methods in class**: *(3)* **Content:** 1.3 Architectural design *(cont'd)* **Pedagogical methods**: + Lecture + Presentation + Group discussion	G2.2, G4.1
	***B/* Self-study content**: *(6)* Learning and collecting architectural works. Understanding design documents of a work. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.3, G3.1
5	***Chapter 2:* Architectural structure design of civil works**	
	***A/* Content and pedagogical methods in class**: *(3)* **Content:** 2.1 Basic issues in architectural structure designs of works. 2.2 Structures of foundations - bases of works. **Pedagogical methods**: + Lecture + Presentation + Group discussion	G1.1, G2.1, G4.2
	***B/* Self-study content**: *(6)* Learning and collecting structures of parts of architectural works on the basis of documents and actual conditions.	G1.1, G2.1, G2.3

	Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	
6	***Chapter 2:*** **Architectural structure design of civil works** *(cont'd)*	
	A/ **Content and pedagogical methods in class**: *(3)* **Content:** 2.3 Structures of work walls. **Pedagogical methods**: + Lecture + Presentation + Group discussion	G1.1, G2.1, G4.2
	B/ **Self-study content**: *(6)* Learning and collecting structures of parts of architectural works on the basis of documents and actual conditions. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.1, G2.3
7	***Chapter 2:*** **Architectural structure design of civil works** *(cont'd)*	
	A/ **Content and pedagogical methods in class**: *(3)* **Content:** 2.4 Design and structure of the roof. **Pedagogical methods**: + Lecture + Presentation + Group discussion	G1.1, G2.1, G4.2
	B/ **Self-study content**: *(6)* Learning and collecting structures of parts of architectural works on the basis of documents and actual conditions. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.1, G2.3
8	***Chapter 2:*** **Architectural structure design of civil works** *(cont'd)*	
	A/ **Content and pedagogical methods in class**: *(3)* **Content:** 2.5 Structures of the ground - floor of works. **Pedagogical methods**: + Lecture + Presentation + Group discussion	G1.1, G2.1, G4.2
	B/ **Self-study content**: *(6)* Learning and collecting structures of parts of architectural works on the basis of documents and actual conditions. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.1, G2.3

9	***Chapter 2:*** **Architectural structure design of civil works** *(cont'd)*	
	A/ **Content and pedagogical methods in class**: *(3)* **Content:** 2.6 Design and structure of stairs of works. **Pedagogical methods**: + Lecture + Presentation + Group discussion	G1.1, G2.1, G4.2
	B/ **Self-study content**: *(6)* Learning and collecting structures of parts of architectural works on the basis of documents and actual conditions. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.1, G2.3
10	***Chapter 3:*** **Architectural design of industrial works**	
	A/ **Content and pedagogical methods in class**: *(3)* **Content:** 3.1 General introduction to industrial architecture design. 3.2 Bases for planning of industrial works: - Planning of industrial works. - Overall design of layout of industrial works. - Organizations of engineering networks for industrial works. **Pedagogical methods**: + Lecture + Presentation + Group discussion	G1.1, G2.2, G2.3, G4.1
	B/ **Self-study content**: *(6)* Learning and collecting industrial architecture works on the basis of documents and actual conditions. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.3, G3.1
11	***Chapter 3:*** **Architectural design of industrial works** *(cont'd)*	
	A/ **Content and pedagogical methods in class**: *(3)* **Content:** 3.3 Architectural design of building and industrial works - Major bases - Architectural design of single storey industrial buildings. - Architectural design of multi-storey industrial buildings. **Pedagogical methods**: + Lecture + Presentation + Group discussion	G1.1, G2.2, G2.3, G4.1
	B/ **Self-study content**: *(6)* Learning and collecting industrial architecture works on the basis of	G1.1, G2.3, G3.1

	documents and actual conditions. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	
12	***Chapter 4:*** **Design of architectural structure design of industrial works**	
	A/ **Content and pedagogical methods in class**: *(3)* **Content:** 4.1 General issues in structural design of industrial works: - Parts of general structures of industrial works. - Principals of structural designs of industrial works - Basic parameters for references in industrial works - Frame materials of industrial works. **Pedagogical methods**: + Lecture + Presentation + Group discussion	G1.1, G2.2, G2.3, G4.1
	B/ **Self-study content**: *(6)* Learning and collecting structures of parts of industrial architecture works on the basis of documents and actual conditions. Comparing the differences between structures of bearing systems of civil and industrial works. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.3, G3.1
13	***Chapter 4:*** **Design of architectural structure design of industrial works** *(cont'd)*	
	A/ **Content and pedagogical methods in class**: *(3)* **Content:** 4.2 Bearing structures of single-storey industrial works – reinforced concrete frame - Foundation - Column – Bridge girder - Roof structures - Bracing - Wall structure system 4.3 Bearing structures of single-storey industrial works – Steel frames - Steel foundation - Column – Bridge girder - Roof structures - Bracing - Wall structure system **Pedagogical methods**: + Lecture + Presentation + Group discussion	G1.1, G2.2, G2.3, G4.2

	***B/* Self-study content**: *(6)* Learning and collecting structures of parts of industrial architecture works on the basis of documents and actual conditions. Comparing the differences between structures of bearing systems of civil and industrial works. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.3, G3.1
14	***Chapter 4:* Design of architectural structure design of industrial works** *(cont'd)*	
	***A/* Content and pedagogical methods in class**: *(3)* **Content:** 4.4 Bearing structures of multi-storey industrial works - Scope of uses - Structure systems - Structures of floor structures with beams - Structures of floor structures without beams 4.5 Coverage structures of industrial works - Horizontal coverage structures - Vertical coverage structures **Pedagogical methods**: + Lecture + Presentation + Group discussion	G1.1, G2.2, G2.3, G4.2
	***B/* Self-study content**: *(6)* Learning and collecting structures of parts of industrial architecture works on the basis of documents and actual conditions. Comparing the differences between structures of bearing systems of civil and industrial works. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.3, G3.1
15	***Chapter 4:* Design of architectural structure design of industrial works** *(cont'd)*	
	***A/* Content and pedagogical methods in class**: *(3)* **Content:** 4.6 Structures of floors - grounds - General requirements - Structures of types of foundations - floors - Structures of some major parts 4.7 Auxiliary structures - Stair structures - Partition structures - Technical storey – Working platform - Machine bases. **Pedagogical methods**: + Lecture	G1.1, G2.2, G2.3, G4.2

	+ Presentation + Group discussion	
	***B/* Self-study content**: *(6)* Learning and collecting structures of parts of industrial architecture works on the basis of documents and actual conditions. Comparing the differences between structures of bearing systems of civil and industrial works. Preparing reports of self-study contents in the form of powerpoint, presenting such reports in the class.	G1.1, G2.3, G3.1

12. Learning Ethics

Students must do homework and project by themselves. If plagiarism is found students will get zero point.

13. Date of first approval: August 1st, 2012

14. Approved by

Dean	**Head of Department**	**Instructor**
A/Prof. Dr. Nguyễn Trung Kiên	**MSc. Nguyễn Văn Hậu**	**MSc.Architect Nguyễn Khoa Thanh Vân**

15. Date and Up-to-date content

1st time: Date:	Instructor: Head of Department: