Course Syllabus

1. **Course Title:** ENgineering Drawings Practice
2. **Course Code:** ENDP120317
3. **Credit Units:** 2 credits (0/2/4) (0 units of theory/ 2 unit of practice/ 4 units of self-study)
   Duration: 15 weeks (0 hours of theory + 2*3 hours of practice and 4 hours of self-study per week)
4. **Course Instructors:**
   1/ Dr. Phạm Đức Thiện
   2/ MSc. Đoàn Ngọc Tịnh Nghiêm
   3/ MSc. Nguyễn Thanh Tú
   4/ MSc. Lê Phương Bình
   5/ MSc. Lê Phương
   6/ MSc. Nguyễn Tổng
5. **Course Requirements:**
   Prerequisite: None
   Previous courses: Descriptive Geometry and Engineering Drawing (DGED121023)
   Parallel courses: None
6. **Course Description:**
   This module provides students with the basic knowledge about reading architectural and structural drawings in construction. The course also helps the learners to develop architectural and structural drawings by using CAD software. Furthermore, the course introduces basic terminologies in the construction (names of structural components, parts of building, types of drawings in the construction...) and procedures to draw basic structural components mades of reinforced concrete or steel such as foundations, columns, beams, slabs, staircases, water tanks, trusses, bracing systems, or connections.
7. **Course Goals:**

Goals	Goal Description	Programme ELOs
G1	Basic knowledge about drawing and construction drawing	1.2
G2	Read, draw and develop construction drawings.	3.2

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

CLOs		CLO Description	Programme ELOs
G1	**G1.1**	Explain, analyse and distinguish drawings: architectural, reinforce concrete structure drawings, steel structure drawings.	1.2
G2	**G2.1**	Read, draw, develop architectural drawings, structure drawings in order to implement design, construction and management	3.2

9. Learning resources:

- Textbooks:

1. Nguyễn Hữu Lộc, **AutoCAD 2007**, *General Publishing House*

- References:

1. Nguyễn Quang Cự, **Draw construction technology**, Education publishing House
2. Nguyễn Quang Cự, **Problem of draw construction technology**, Education publishing House
3. Vietnamese code: **TCVN 7284:2003, TCVN 7285:2003, TCVN 7286:2003, TCVN 8-20:2002**

10. Student Assessment:

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

Type	Content	Timeline	Assessment method	CLOs	Rate (%)
Diligence					**10**
Students submit drawing to lecturer every lesson					10
Project					**40**
BT#1	Reinforce concrete structure drawings	Week 10	Practice in class	G1.1, G2.1	20
BT#2	Steel structure drawings	Week 13	Practice in class	G1.1, G2.1	20
Final exam					**50**
	Construction technology drawings		Exam in class with computer	G1.1, G2.1	

11. Course Content

Week	Content	CLOs
1	***Chapter 0: Basic Command***	
	***A/* Content and pedagogical methods in class:** *: (6)* **Content:** + The Concept relate AutoCad software + Basic command – AutoCad 2D: - Open, Close, Save drawings (dwg) (metric unit, 2D dwg) - Command: Line, Circle, Polyline, Rectange, Polygon... - Osnap, Polar, Otrack… - Modify command: Erase, Copy, Mirror, Offset, Move, Rotate, Trim, Extend, Fillet, Scale, Stretch, Lengthen… - Hatch… **Pedagogical methods:** + Instruct + Presentation	G1.1

	***B/* Self-study content**: *(12)* + Practice command + Find advanced command	G1.1
2	***Chapter 1: Setting to technical drawing***	
	***A/* Content and pedagogical methods in class:** *(6)* **Content:** + Paper sizes use technical dwg + Scale + Text, number type + Stroke type in technical dwg + Setting frame + Review basic command **Pedagogical methods:** + Instruct + Presentation	G1.1
	***B/* Self-study content**: *(12)* + Review command + Review setting technical dwg	G1.1
3	***Chapter 2: Architectural drawing***	
	A/* Content and pedagogical methods in class: (6)* **Content:** + The concept of element of building + Read and draw architectural dwgs: Plan, elevation, section. + Draw plan of existing building. **Pedagogical methods:** + Instruct + Presentation	G1.1, G2.1
	***B/* Self-study content**: *(12)* + Review + Practice more building	G1.1, G2.1
4	***Chapter 2: Architectural drawing (cont')***	
	A/* Content and pedagogical methods in class: (6)* **Content:** + Draw elevation and section of existing bulding. + Read and draw remain section + Draw some element: stair, WC, detail section of room. **Pedagogical methods:** + Instruct + Presentation	G1.1, G2.1
	***B/* Self-study content**: *(12)* + Review	G1.1, G2.1

	+ Practice more building	
5	***Chapter 2: Architectural drawing (cont‘)***	
	A/* Content and pedagogical methods in class: (6)*** **Content:** + Read and draw remain section + Draw some element: stair, WC, detail section of room. **Pedagogical methods:** + Instruct + Presentation	G1.1, G2.1
	***B/* Self-study content**: *(12)* + Review + Practice more building	G1.1, G2.1
6	***Chapter 3: Reinforce concrete structure drawing – Footing drawing***	
	A/* Content and pedagogical methods in class: (6)*** **Content:** + The concept of reinforce concrete structure + Read, develop plan and detail of footing + Setting, format many scales per dwg **Pedagogical methods:** + Instruct + Presentation	G1.1, G2.1
	***B/* Self-study content**: *(12)* + Review + Practice	G1.1, G2.1
7	***Chapter 3: Reinforce concrete structure drawing – Footing drawing (cont‘)***	
	A/* Content and pedagogical methods in class: (6)*** **Content:** + Read, develop plan and detail of footing + Setting, format many scales per dwg **Pedagogical methods:** + Instruct + Presentation	G1.1, G2.1
	***B/* Self-study content**: *(12)* + Review + Practice	G1.1, G2.1
8	***Chapter 3: Reinforce concrete structure drawing – Footing drawing (cont‘)***	
	A/* Content and pedagogical methods in class: (6)*** **Content:**	G1.1, G2.1

	+ The concept of reinforce concrete structure + Read, develop plan and detail of footing + Setting, format many scales per dwg + Statistic rebar **Pedagogical methods:** + Instruct + Presentation	
	***B/* Self-study content**: *(12)* + Review + Practice	G1.1, G2.1
9	***Chapter 3: Reinforce concrete structure drawing – column, beam, slab drawing***	
	A/* Content and pedagogical methods in class: (6)* **Content:** + Read and develop slab dwgs + Develop plan and section of slab **Pedagogical methods:** + Instruct + Presentation	G1.1, G2.1
	***B/* Self-study content**: *(12)* + Review + Practice	G1.1, G2.1
10	***Chapter 3: Reinforce concrete structure drawing – column, beam, slab drawing (cont')***	
	A/* Content and pedagogical methods in class: (6)* **Content:** + Read and develop beam, column dwgs + Develop beam – column connection **Pedagogical methods:** + Instruct + Presentation	G1.1, G2.1
	***B/* Self-study content**: *(12)* + Review + Practice + Draw stair, water tank	G1.1, G2.1
11	***Chapter 4: Steel structure drawing – Truss with weld connection***	
	A/* Content and pedagogical methods in class: (6)* **Content:** + The concept of steel structure dwgs. + Develop section of main frame, weld connection, beam – column weld connection + Statistic hot rolled	G1.1, G2.1

	Pedagogical methods: + Instruct + Presentation + Discuss	
	***B/* Self-study content**: *(12)* + Review + Practice + Draw remain connection	G1.1, G2.1
12	***Chapter 4: Steel structure drawing – Truss with bolt connection***	
	A/* Content and pedagogical methods in class: (6)*** **Content:** + Develop section of main frame, bolt connection, beam – column bolt connection **Pedagogical methods:** + Instruct + Presentation	G1.1, G2.1
	***B/* Self-study content**: *(12)* + Review + Study and develop bracing system in building + Practice	G1.1, G2.1
13	***Chapter 4: Steel structure drawing – Knee connection***	
	A/* Content and pedagogical methods in class: (6)*** **Content:** + Develop knee connection with weld/bolt connection **Pedagogical methods:** + Instruct + Presentation	G1.1, G2.1
	***B/* Self-study content**: *(12)* + Review + Develop ridge connection + Practice	G1.1, G2.1
14	***Chapter 4: Steel structure drawing – Base connection, basket connection***	
	A/* Content and pedagogical methods in class: (6)*** **Content:** + Develop base connection, basket connection **PPGD chính**: **Pedagogical methods:** + Instruct + Presentation	G1.1, G2.1
	***B/* Self-study content**: *(12)* + Review	G1.1, G2.1

	+ Practice	
15	***Review – Final exam***	
	A/* Content and pedagogical methods in class: (6)* **Content:** + Review and lecturer answer student's question **Pedagogical methods:** + Discuss + Practice	G1.1, G2.1

12. Learning Ethics

Projects must be done by the students. Plagiarism found will get zero point in project and final exam

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**	**Dr. Phạm Đức Thiện**

15. Date and Up-to-date content

1st time:	Instructor Head of Department: