Course Syllabus

1. **Course title: Environmental Research Design**
2. **Course code: REES327410**
3. **Credit units: 2** (2/0/4) (2 units of theory/ 0 units of practice, experiment/ 4 units of self- study)

   Duration: 5 weeks (3 hours of theory in class + 0 hour of practice + 6 hours of self-study per week) + 5 weeks (5 hours of theory in field + 0 hour of practice + 6 hours of self-study per week)
4. **Course intructors:**

   1/ Tran Thi Kim Anh

   2/ Hoang Thi Tuyet Nhung
5. **Course requirements:**

   Preresiquisite courses: None

   Previous course: None

   Parallel course: None
6. **Course Description:**

   The course provides students with basic knowledge of the methods how to conduct a research in a systematic and scientific way. Students will be introduced some steps involved in doing a research including research question, documentation review, information gathering, research proposal and report that can be applied on their research project later. Students will be guided into groups and undertake various studies to address environmental issues, provide solutions to these problems…
7. **Course Goals**

Goals	Goal description	Programme expected learning outcomes ELOs
G1	Basic knowledge of the methods how to conduct a study in a systematic and scientific way.	ELO1, ELO2
G2	Determining, analyzing, and solving the environmental problem to complete the research report.	ELO4
G3	Skills of teamwork, writing and presentation	ELO9, ELO10

8. Course learning outcomes (CLOs):

CLOs		CLOs description (After accomplishing this course, students are able to:)	Programme ELOs
G1	CLO1	Describe studying steps involved with study question, appropriate research methodology, and information collection to ensure reliability and authenticity.	ELO1
	CLO2	Investigate current environmental issues needed to be solved.	ELO2
G2	CLO3	Dicuss the solution for environmental issues.	ELO4
G3	CLO4	Demonstrate the ability to work as a team leader and as a team member in solving environmental issues.	ELO9
	CLO5	Write a scientific report, poster for environmental solution.	ELO10

9. Learning Resources

- Text book:

  1. Dawson, Catherine (2002). *Practical Research Methods*: How to books, Oxford, UK.

  2. Robert. A. Day (1998). *How to Write & Publish a Scientific Paper*. Oryx Press, Arizona.

- References :

  1. Cao Vu Dam (2003). Phuong phap luan nghien cuu, Ha Noi. NXB KHKT.

10. Student Assessment :

- Grading scale: 10
- Assesement plan:

Type	Content	Timeline	Assessment Method	CLOs	Rate (%)
Mid-term test					**50%**
Ex#1	**Exercise:** Students study about their current environmental problems, ask questions, research questions and research objectives, and the importance of research.	Week 2	Research Outline	CLO1, CLO2	20
Ex#2	**Exercise:** (for reading and analyzing specialized papers and abstract writing). Each group of students will read a paper on scientific research on environmental issues. Students will analyze the research content and write the abstract of that research**.**	Week 4	Report	CLO3, CLO4, CLO5	20
	Weekly report (5 weeks in field)	Week 5 - 10	Report	CLO4, CLO5	10

Final test					**50%**
	The content covers all of course outcomes - Students will work in teams (4-5 students) to write a complete research report. - Poster presentation	Week 12	Report Rubric for presentation	CLO1, CLO2, CLO3, CLO4, CLO5	50%

11. Course content

Week	Content	CLOs
1	***Chapter 1. Overview of scientific research*** *(3/0/6)*	
	***A/* Teaching content in classroom (6)** + What is scientific research? + Why do scientific research? + Research at the university level **Summary of teaching methodology:** • Speech • Slide presentation (Powerpoint)	CLO1
	***B/* The contents of home self-study (12)** + Extra knowledge about scientific research	CLO1
2	**Chapter 2. Research topic selection (3/0/6)**	
	***A/* Teaching content in classroom (3)** + How to choose the right topic + Research questions and study hypotheses + Steps to conduct a research and outline of a scientific research Research topic Reason for choosing research topic Overview of the research problem Study objectives Methodology Research significance Research content Study plan Expected results **Summary of teaching methodology:**	CLO1

	• Speech • Slide presentation (Powerpoint)	
	***B/* The contents of home self-study (6)** + Extra knowledge about scientific research	CLO1
3	**Chapter 3. Literature review and Methodology (6/0/12)**	
	***A/* Teaching content in classroom (6)** **+** Literature review Narrative literature review Systematic review Meta analysis + Methodology Information collection Documentation study Non – experimental study Experimental study **Summary of teaching methodology:** • Speech • Slide presentation (Powerpoint)	CLO1
	***B/* The contents of home self-study (12)** + Extra knowledge about literature review and Methodology	CLO1
4	**Chapter 4. Data presentation in scientific research (6/0/12)**	
	***A/* Teaching content in classroom (6)** + Present the results of scientific research: Introduction, Content, Reference + How to cite a paper + How to list the reference A guide to use a reference management software (e.g. EndNote) + Ethical issues in scientific research: Honesty, Inheritance **Summary of teaching methodology:** • Speech • Slide presentation (Powerpoint)	CLO1
	***B/* The contents of home self-study (12)** + Extra knowledge about scientific research	CLO1
5	**Exercise to analyze the scientific report and writing an abstract (6/0/12)**	

	***A/* Teaching content in classroom (6)** + Giving each group one scientific paper for analyzing the content and from that writing an abstract. **Summary of teaching methodology:** • Speech • Slide presentation (Powerpoint) • Group discussion	CLO1, CLO2, CLO4
	***B/* The contents of home self-study (12)** + Extra knowledge about assigned scientific paper	CLO1, CLO2, CLO4
6 - 10	**Research project (15/0/30)**	
	***A/* Teaching content in classroom (6)** + Field visits or laboratory work **Summary of teaching methodology:** • Group discussion in the field	CLO1,CLO2, CLO3, CLO4, CLO5
	***B/* The contents of home self-study (12)** + Extra knowledge about research project	
12	**Presentation of research result** - Each group presents their research outline / report. - Comment and summarize the subject	CLO1,CLO2, CLO3, LO4, CLO5

12. Learning ethics:

The homework and projects must be implemented by the students themselves. If the copy is detected, the students will be evaluated with the zero of the processing grade and final exam.

13. Date of first approval: January 16st, 2015

14. Approved by:

Dean	Head of Department	Compiler
Vo Thi Nga	**Tran Thị Kim Anh**	**Tran Thi Kim Anh**

15. Date and Up-to-date content

1st time: Date: - Update content and structure of the programme adjusted in:	Instructor: Head of Department: Dr. Tran Thi Kim Anh