STUDY GUIDE

Blended Intensive Program 'Sustainable and resilient infrastructure and buildings'

Academic year: 2021-2022

Study guide number: 9100FTIIWK International Week BK

Semester: 2

Enrollment requirements: Last year BA or MA student

Contact hours: 30

Credits: 3

Work load (hours): 84

Contract restriction(s): Not applicable

Instruction language: English

Lecturers: Wim Van den bergh – Bert Belmans - Johan Blom - Bart Craeye - Ron Gerards - Ben Moins - David Hernando - Kostas Anastasiades - Manuel Romana - Elisabete Freitas - Iran Segundo - Eduardo B. Pereira - Evangelos Manthos - Vanessa Garcia

1. Prerequisites

At the start of the course the student needs to have the following competences:

speaking and writing of:

- English

specific prerequisites for this course:

Basic knowledge of civil engineering technology and sustainability.
It is recommended to follow this course in your final bachelor year or master years.

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2. Learning outcomes

- The student is familiar with the methods to find information in the literature and can apply these to find information.
- The student can apply literature data to chart a practical problem.
- The student develops a research attitude and is capable of solving a practical problem.
- The student can apply current engineering knowledge to the problem at hand.
- The student is able to set up a plan and timeline schedule, divide the work and manage the arrangements that have been made.
- The student can work in an international and multidisciplinary team, virtually as well as face-to face.
- The student can elaborate correctly on a well-defined project in an international and multidisciplinary team.

- The student knows the reporting requirements and can make a written report concerning the project.
- The student can orally present the project in front of fellow students and professors.
- The student is able to situate the results of his/her project in an international context in which economy, social context, ecology, ethics and safety play an important role.

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3. Course contents

The objective of the Blended Intensive Program is to foster a global perspective and intercultural climate. By exposing students to international perspectives on current issues concerning sustainability in civil engineering and constructions, the Blended Intensive Program experience will provide an opportunity to reflect on ethical issues in the civil engineering and construction, through a multidisciplinary approach. Students will participate in lectures delivered by visiting professors and members of industry and government. The Blended Intensive Program focuses on the topic of sustainability, with different topics from the start of a construction (planning), through the construction itself as considering long-term service life and maintenance. These topics contain social, environmental and technical-economic perspectives.
Lectures about the background methodology about sustainability and calculation tools (e.g., LCA, LCCA) are related to real cases about infrastructures (bridges, rivers, roads, tunnels) and buildings. In the different lectures/workshops and plenary sessions, the different contexts will be illustrated and discussed. Specific themes or contexts can further be discussed in smaller groups for projects.
During the whole semester, a project is part of the BIP. The students select a certain topic provided by and under supervision of a professor this topic will be further elaborated, reported and presented to the whole class. The objective of the project work is also to collaborate in an international team and obtain experiences with working with students from another country.
When enrolling for this course please note that attendance during this week is mandatory, attendance will be registered at multiple occasions. For the Antwerp students, other classes of regular courses will not be suspended. For online (international) students: if you live in a different time zone which does not allow you to attend a session in real-time you will be able to look at the recordings of these sessions.

4. International dimension

- The course has an international dimension.
- The lecturers teach in a language other than mother tongue.
- The lecturers use course materials in a foreign language.
- Students learn to give presentations in English.
- Students learn to write reports in another language (English).
- The lecturers teach the subject of the course mainly as an internationally oriented comparison.
- The lecturers give information about their own cultural frame of reference in relation to other perspectives
- The lecturers actively use the presence of international students to create an international classroom, on campus as well as virtually.
- Students collaborate face to face as well as in a virtual environment within an international context of partner universities.

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5. Teaching methods and planned activities

5.1 Used teaching methods

Class contact teaching

- Lectures
- Seminars/Tutorials
- Guest lectures

Personal work

Assignments

- In a team context

Case studies

- In a team context

5.2 Planned teaching and learning activities

The International Week is part of a new **Blended Intensive Program (BIP)** that will run between 1 February 2022 and 30 April 2022. During this program the learning activities from the students will be organized via virtual mobility from 1 February to 30 April, as well as physical mobility (*) from 14 to 18 March 2022.

- January 2022: Team compilation for project
- 1 February 2022: Start project work
- 14 March – 18 March 2022: International week in UAntwerp
- 20 March – 30 April 2022: Written report project and final presentation

(*) In case the COVID-19 pandemic wouldn't allow a physical mobility, the International week in UAntwerp will be replaced by a virtual week.

6. Assessment methods and criteria

6.1 Used assessment methods

- Project: written reports
- Project: presentations
- Permanent evaluation

6.2 Assessment criteria

- Project: written reports (60/100)
    - Intermediate written report 40%
    - Final report 20%

(1) Technology expert (weight 50%)

Possible indicators are:

- The provided information is scientifically correct and described in an accurate way.
- The provided information has been described sufficiently complete.
- The methodology used is clearly defined.
- The student can place the project correctly in a broader context (scientific, technological, social or economic, …).
- The project was ambitious, innovative, creative, original, ground-breaking, surprising,

(2) Researcher (weight 25%)

Possible indicators are:

- The (literature) study is well elaborated and correctly shaped.
- The conclusions reached are logical, correct and justified.

(3) Soft skills & Citizen (weight 25%)

Possible indicators are:

- There is a clear structure present.
- The layout of the written 'report is correct and the language use, the spelling and grammar are flawless.
- The student's own text is easy to read and the writing style is adapted to fit a scientific, technical text.
- The graphs, tables and figures are used, redacted, referred to and represented in a correct way.

- Project: presentations, Q&A (40/100)
  - Evaluation process by intermediate presentation and questions: (weight: 25%)
  - End presentation (weight 15%)

(1) Technology expert & Researcher (weight 66%)

Possible indicators are:

- The student gives a **technical convincing** and comprehensible presentation: the content is correct and the structure is logical.
- During the discussion, the student can **reply** to **technology** related questions in an appropriate way.
- During the discussion, the student can **reply** to **research** related questions in an appropriate way.
- The student presents the applied **methodology** in a proper way.

(2) Soft skills & Citizen (weight 33%)

Possible indicators are:

- The student has elaborated a **clear structure** for his/her presentation (the goal is indicated; in the presentation, introduction, core and conclusion are clearly defined; the general theme remains visible).
- The student has created an **attractive visual** presentation (illustrations, layout).
- The student has a **good attitude** (relaxed, eye contact, gestures).
- The argumentation is vivid and **exciting**.
- The student **speaks clearly**: neat language, clear formulations, intelligible, simple syntax.
- The student respects the allocated **time**.

- Permanent evaluation
  - Students will attend 80% of all lectures. Students attending less than 80% of the lectures are excluded for credits.

The group will receive a total score based on the method above and to demonstrate the efficacy of team work. A peer assessment between the team members is foreseen, in order to adjust by individual work and appreciation from other team members. This adjustment is done within 3/20 of the group score. In special cases, students can be invited to discuss the reasons behind their score before a final grade is given. In case of obvious lack of contribution to the group report, students can get a score "absent" (i.e. no score) for the course.

As it is important in this course to gain knowledge from different speakers and to apply this knowledge in a group project (see 'learning outcomes'), there will be **no re-sit** is possible for this course.

More information can be found on Blackboard. A guideline will be made available with templates, submission, communication rules, supervisor etc.

Guidelines: the content of the reports and the presentations should show evidence of:

- Understanding of the basic concepts of sustainability
- Analysis of the subject using the concepts and main ideas introduced during the course
- Comprehensiveness and clarity of message
- Evidence of an international perspective
- Variety and quality of references used
- Synthesis of various perspectives on sustainability
- Professional language and academic argumentation
- Quality of recommendations or conclusions
- Evidence of critical and/or ethical thinking
- Evidence of (visual) creativity

7. Course material

7.1 Required reading

Available on Blackboard

7.2 Optional reading

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8. Contact details

Academic Coordinator: Prof. Wim Van den bergh wim.vandenbergh@uantwerpen.be
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