SWAP

Sustainable solid WAste management and Policies

D2.3 Improvement of the developed academic educational products

Project Acronym	**SWAP**
Work Package	WP2
Deliverable	D2.3
Deliverable Lead	P8-UHST
Type	Report
Dissemination Level	Confidential
Contractual delivery date	N/A
Actual submission date	13/12/2023
Author(s)	Sok Pheak, UHST

HAMBURG UNIVERSITY OF TECHNOLOGY

ifoa

POLITECNICO DI BARI

eurotraining

1967

1969

COMPOSTED

MAEJO UNIVERSITY

Versions

Version	Date	Main Author	Summary of updates
Draft version	13/12/2023	Sok Pheak	Final draft
Final version	02/01/2024	Christina Stamataki	Final version

ABSTRACT

As part of Work Package 2 (WP2), Deliverable 2.3 was completed to provide information on the academic courses implemented. These courses represent the finest offerings at the Bachelor's and Master's levels in the field of sustainable solid waste management. The aim is to address the specific knowledge and skill gaps identified in Asian partner countries. The collaborative effort enabled the identification of these industrial gaps and the development of educational programs to cultivate experts capable of providing solutions to effectively close these gaps.

This report offers detailed information about the implementation of academic courses at Asian partner universities, led by UHST. It encompasses all crucial information such as prerequisites, learning outcomes, content, delivery methods, and the duration of training and assessments. Additionally, the report includes feedback from students on the courses, as well as recommendations for future improvements to enhance employability prospects**.**

KEYWORDS

Academic courses, syllabus, Bachelor’s Degree, Master’s Degree, practical course, problem-based learning

DISCLAIMER

ACKNOWLEDGEMENT

This document is a deliverable of the SWAP project. This project is co-funded by the Erasmus+ Programme of the European Union under the call for proposals EAC/A02/2019 and carries the project n° 618723-EPP-1-2020-1-DE-EPPKA2-CBHE-JP.

ABBREVIATIONS

CMU: Chiang Mai University

HEIs: Higher Education Institutions

HUAF: Hue University of Agriculture and Forestry

MJU: Maejo University

MFA: Material Flow Analysis

LCA: Life Cycle Assessment

POLIBA: Polytechnic University of Bari

RUA: Royal University of Agriculture

TUAF: Thai Nguyen University of Agriculture and Forestry

UHST: University of Heng Samrin Thbongkhmum

Table of Contents

1 INTRODUCTION

The current situation of waste management in higher education institutions is generally a complex and multidisciplinary activity. It demands experienced management to work with more experienced individuals to integrate it into the curriculum for academic course implementation. This work discusses implementing updated waste management plans as academic courses in higher education institutions of developing countries. In addition, managing chemical and construction waste accumulated over many years could be achieved through knowledge and skills obtained from the university. Environmental awareness, encountered challenges, and their solutions are also discussed. The proposed methodology is ideally suited for developing countries due to its high efficiency and low cost, leading to greener universities. Under the SWAP project, EU partners collaborated with Asian counterparts to develop academic courses for implementation.

Based on the results of Deliverable D1.1 from WP1, and a survey conducted by Thai Nguyen University of Agriculture and Forestry (TUAF) in Asian partner countries (Cambodia, Thailand, Vietnam), it was noted that there is a lack of cooperation between Universities and Stakeholders. Additionally, there are not many specific and well-developed programmes, curricula, courses, and research projects in the field of solid waste management.

Furthermore, the focus of this deliverable is on the teaching materials developed in D2.2 for the SWAP project's pilot phase and its evaluation. The Bachelor's degree included two modules: 1) Introduction to Sustainable Solid Waste Management and Circular Economy, 2) Secondary Raw Materials Life Cycle – A Circular Economy for Resource Recovery. Two modules were also developed for the Master's degree: Technical Aspects of Waste Management (with a Problem-based learning approach) (Option 1), and Advanced Waste Management Aspects in a Circular Economy (Option 2). These educational products were applied for two semesters in the Asian universities. The curriculum, aimed at students pursuing Bachelor's and Master's degrees, was designed to enhance their skills in waste management and circular economy. This is to foster a strong connection between university students and the industrial sector, enabling them to apply their knowledge in the industry.

2 Preparatory Process for the course implementation

Overview of the Preparatory Process at each HEI for Academic Programs:

The preparatory phase for academic programs at Asian HEIs involved meticulous planning and resource allocation to ensure successful course implementation in solid waste management. Utilizing their robust human resources and state-of-the-art facilities, each HEI prepared for the execution of academic courses.

In terms of human resources, each university mobilized experienced faculty members, researchers, and experts specializing in environmental sciences, waste management, and related fields. These professionals played pivotal roles in designing updated curricula, imparting knowledge, and facilitating practical training sessions for students.

Moreover, the commitment of all Asian HEIs to providing an optimal learning environment was evidenced by the utilization of modern facilities, laboratories, and specialized equipment essential for hands-on training and experiential learning. The universities ensured that resources such as lecture halls, laboratories, and teaching materials were made readily available to facilitate effective training delivery.

Educational Approach, Prerequisites, and Course Content:

The academic courses developed under the SWAP project employed a comprehensive educational approach. Emphasizing a blend of theoretical knowledge and practical application, these courses aimed to equip participants with a holistic understanding of solid waste management principles and practices.

Each program had specific prerequisites to ensure participants had the necessary foundational knowledge. Course prerequisites included fundamental knowledge in environmental sciences, biology, chemistry, or related disciplines, enabling effective engagement with the course content.

The training content covered a broad spectrum of topics crucial for effective waste management. These included waste characterization, collection systems, treatment technologies, recycling processes, and circular economy concepts. The content was structured to provide a comprehensive understanding of the complexities involved in waste management and offered practical insights into sustainable waste treatment methods.

3 Implementation of developed courses/modules at "pilot" semester at HEIs

Name of HEIs	Lecture Module	Title of lecture and seminar	When? (Semester & Year)	Is it an extra course or is it included in the curriculum?	Updated Course Or New?	Accreditation Date?	Date of Implementation	# of students	Use of SWAP-Equipment?
CMU	Master Level (Elective course)	253743: Circular Economy and Sustainable Resource and Waste Management	2nd semester 2022	Included	New	4/1/2022	6/15/2022	3	Yes
	Bachelor level (Compulsory course)	253441: Solid Waste Management	1st semester 2022	Included	Updated	4/1/2022	6/20/2022	58	Yes
	Bachelor level (Elective course)	253456: Fundamental of Material Flow Analysis and Life Cycle Assessment	2nd semester 2022	Included	Updated	4/1/2022	6/15/2022	34	Yes
MJU	Bachelor level (elective course)	solid waste management aspects in circular economy	1st semester 2022	Included	New	22nd January 2022	4/6/2022	20	Yes
	Bachelor level (elective course)	Pollution prevention	1st semester 2022 and 1st semester 2023	Included	Updated	30th April 2017	4/5/2022	5	Yes

	Master Level elective course	Solid and hazardous waste disposal and management	2nd semester 2022	Included	Updated	10th June 2017	4/6/2022	2	Yes
	Master Level mandatory course	Environmental pollution treatment technologies	1st semester 2022	Included	Updated	5th Mar 2022	4/6/2022	2	Yes
UHST	Bachelor levels (mandatory)	Introduction to Sustainable Solid Waste Management and Circular Economy	Year 2, 2nd semester 2023	Included	New	6/3/2023	13/03/2023	20	Yes
	TVET	Introduction to Sustainable Solid Waste Management	Year 2, 2nd semester 2023	Included	New	5/3/2023	25/09/2023	19	Yes
RUA	Bachelor	Introduction to Sustainable Solid Waste Management and Circular Economy	2nd semester 2023	Extra courses	New	Approved the rector	16/6/2023	28	Yes
TUAF	Master Level (Elective course)	Waste resources management (2 credits)	2nd semester 2023	Included	Updated	15/6/2022	15/9/2023	15	Yes
	Bachelor level (Elective course)	Solid waste management and treatment (3 credit)	2nd semester 2023	Included	Updated	4/1/2022	15/8/2023	5	Yes
	Bachelor level (Elective course)	Environmental Microbiology (3 credits)	1st semester 2023	Included	Updated	4/1/2022	4/1/2023	10	Yes

HUAF	Master Level (Compulsory course)	Environment and Sustainable Development (2 credits)	2nd semester 2023	Included	Updated	None (approved by University Committee of Science and Training dated 19th May 2023)	15-18th August 2023	19	Yes
	Bachelor level (Compulsory course)	Environmental Management of Urban and Industrial zone (2 credits)	2nd semester 2023	Included	Updated	None (approved by University Committee of Science and Training dated 19th May 2023)	18-21 September 2023	25	Yes
	Bachelor level (Elective course)	Solid Waste Management (2 credits)	1st semester 2023	Included	Updated	None (approved by University Committee of Science and Training dated 19th May 2023)	23-26th May 2023	38	Yes

Table 1: Implementation of developed courses/modules at "pilot" semester at HEIs

3.1 Thailand

MJU: The course development for MJU was approved the university council on 5th March 2022. As of the academic year 2022, 1st semester was started from 4th July 2022 – 7th November 2022., and 2nd Semester: 21st November 2022 – 27th March 2023.

Course title	Level of Education (Bachelor or Master)	Semester of teaching	Credit	New or updated	% of course update compared to the previous version	Mandatory or optional course
10302314 Waste treatment and utilization (version 2)	B.Sc.Biotechnology	Semester 1/2024		Updated	15%	Mandatory course
10302533 Waste minimization and clean technology (version 2)	B.Sc.Biotechnology	Semester 2/2024		New		Optional course
10302530 Solid waste management aspects in circular ecology (version 2)	B.Sc.Biotechnology	Semester 2/2024		New		Optional course
BI 460 Waste treatment and utilization (version 1)	B.Sc.Biotechnology	Semester 2/2022		Current	15%	Mandatory course
BI 465 Pollution prevention (version 1)	B.Sc.Biotechnology	Semester 2/2022, Semester 1/2023		Current	15%	Optional course

Table 2: Course development: BSc. Biotechnology

For the course implementation in Master level in Environmental Technology in MJU.

Course title	Level of Education (Bachelor or Master)	Semester of teaching	Credit	New or updated	% of course update compared to the previous version	Mandatory or optional course
20312511 Environmental technology for sustainable development (version 2)	M.Sc.Environmental technology	Semester 1/2022	3 (3-0-6)	Updated	10%	Mandatory course
20312513 Environmental pollution treatment technologies (version 2)	M.Sc.Environmental technology	Semester 1/2022	3 (3-0-6)	Updated	15%	Mandatory course
20312512 Environmental quality sampling and analysis (version 2)	M.Sc.Environmental technology	Semester 1/2022	3 (1-6-5)	Updated	15%	Mandatory course
20312541 Integrated municipal solid waste management (version 2)	M.Sc.Environmental technology	Semester 2/2022 , Semester 1/2023	3 (2-2-5)	Updated	50%	Optional course
20312641 Sustainable solid waste management (version 2)	M.Sc.Environmental technology	Semester 2/2022 , Semester 1/2023	3 (3-0-6)	New		Optional course
20312542 Hazardous waste disposal and management (version 2)	M.Sc.Environmental technology	Semester 2/2022 , Semester 1/2023	3 (2-2-5)	Updated	50%	Optional course
20312642 Waste management technology aspects in a circular economy (version 2)	M.Sc.Environmental technology	Semester 2/2022 , Semester 1/2023	3 (3-0-6)	New		Optional course
ET 523 Solid and hazardous waste disposal and management (version 1)	M.Sc. Environmental technology	Semester 1/2022	3 (2-2-5)	Current	15%	Optional course

Table 3: Course implemented: Semester 1/2022 (Version 1)

Course title	Credit	New or updated	Utilization of Educational materials from SWAP Project
ET 523 Solid and hazardous waste disposal and management (version 1) (Optional course)	3 (2-2-5) 45 hr.	Current	Using partly of SWAP materials as supplementary materials; Waste collection, transportation and transfer, Overview on waste treatment technologies, landfill, material recovery, packaging waste, LCA and some new topic ; construction and demolition waste, WEE,

Course title	Credit	New or updated	Utilization of Educational materials from SWAP Project
20312511 Environmental technology for sustainable development (mandatory course)	3 (3-0-6) 45 hr.	Updated	Using partly of SWAP materials as a new topic : Circular Economy, Law and regulations
20312513 Environmental pollution treatment technologies (mandatory course)	3 (3-0-6) 45 hr.	Updated	Using partly of SWAP materials as supplementary materials; Waste collection, transportation and transfer, Overview on waste treatment technologies, landfill, material recovery, packaging waste, LCA and some new topic ; construction and demolition waste, WEE,
20312512 Environmental quality sampling and analysis (mandatory course)	3 (1-6-5) 45 hr.	Updated	Using partly of SWAP materials as a supplementary material such as waste segregation, organic waste treatment

Table 4: Course implemented: Semester 1/2022 (Version 2)

CMU:

Three courses have already applied in the 1st semester of academic year 2022 (20th June 2022 – 21st Oct 2022). "Solid Waste Management" 3 Credit (45 hour of teaching): The conduct of this course partly utilized academic materials developed for the SWAP course entitled "Introduction to Sustainable Solid Waste Management and Circular Economy". This is course compulsory in Bachelor's degree; 58 students.

"Fundamental of Material Flow Analysis and Life Cycle Assessment" 3 Credit (45 hour of teaching): The conduct of this course partly utilized academic materials developed for the SWAP course entitled "Secondary raw materials life cycle – A Circular Economy for resources recovery". The course is elective applied in Bachelor' degree; 34 students).

"Circular Economy and Sustainable Resource and Waste Management" 3 Credit (45 hour of teaching) The conduct of this course fully utilized academic materials developed for the SWAP course entitled "Advanced Waste Management Aspects in a Circular Economy". The name of the course opened for CMU curriculum has slightly been modified so that course contents cover wider scope and more relevant to Thai's students. This course is applied for Master's degree elective; 3 students)

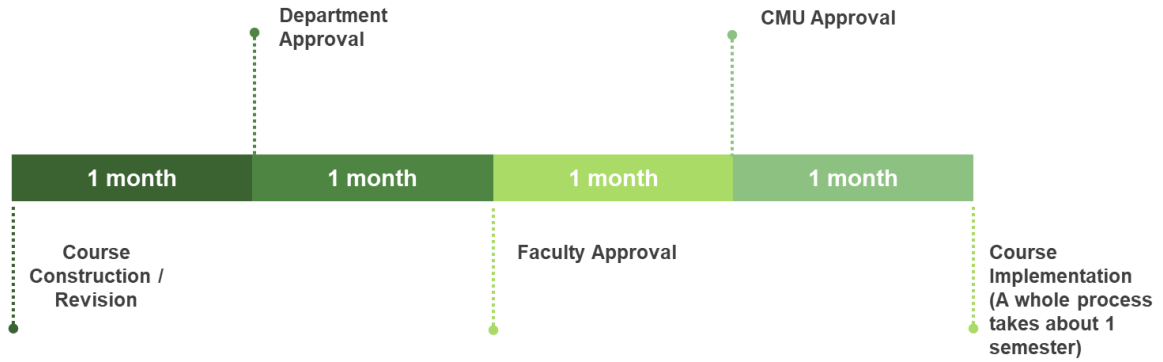


Figure 1: Accreditation process for CMU

Two courses were planned to be opened in the 1st semester of 2023 (approximately between 20th June 2023 – 21st Oct 2023). “Technical Aspects of Waste Management” 3 Credit (45 hour of teaching); Master’s elective; Either as the new course or being merged with the existing course: “Advanced Solid Waste Management”. “Advanced Waste Management Aspects in a Circular Economy” 3 Credit (45 hour of teaching); TVET level; This course is planned to be open as a course in the CMU Lifelong Education (https://www2.lifelong.cmu.ac.th/).

3.2 Vietnam

HUAF:

For the course development at HUAF, the university implemented 3 courses (2 courses in Bachelor level and 1 Master level) from the SWAP project as follows:

- Bachelor level (updated the existing courses)

Course 1: Environmental Management for Urban and Industrial Zone: delivered from 23rd to 26th May 2023 and 41 bachelor students involved in this course. For this course, 3 Modules were integrated: Introduction Waste Management and Circular Economy; Landfill (Introduction, elements and operation); Environment, safety and health in solid waste management, occupational health.

Course 2: Solid Waste Management (started in July 2023). 4 Modules were integrated into this course: Waste collection, transportation and transfer: collection of mixed waste or of source-separated waste, collection logistics, transfer stations; machine park planning; Economic aspects in waste management (costs of collection, equipment, social costs); Treatment of Organic Waste; Practical exercise - Plastic waste upcycling.

- Master level: (updated the existing courses)

Course 1: Environment and Sustainable Development (Started in September 2023). 3 Modules: International Regulations, Treaties and Goals (SDG) in Circular Economy; International waste management; Regulations and framework conditions in the region. The following is the course implementation process for accreditation. In the case of Vietnam, the study programs updated for academia has just been approved by the University Committee of Science and Training. It requires at least 5 years for accreditation of any new/updated curricula since the beginning of these courses. Therefore, this study program is in progress of national level accreditation preparation.

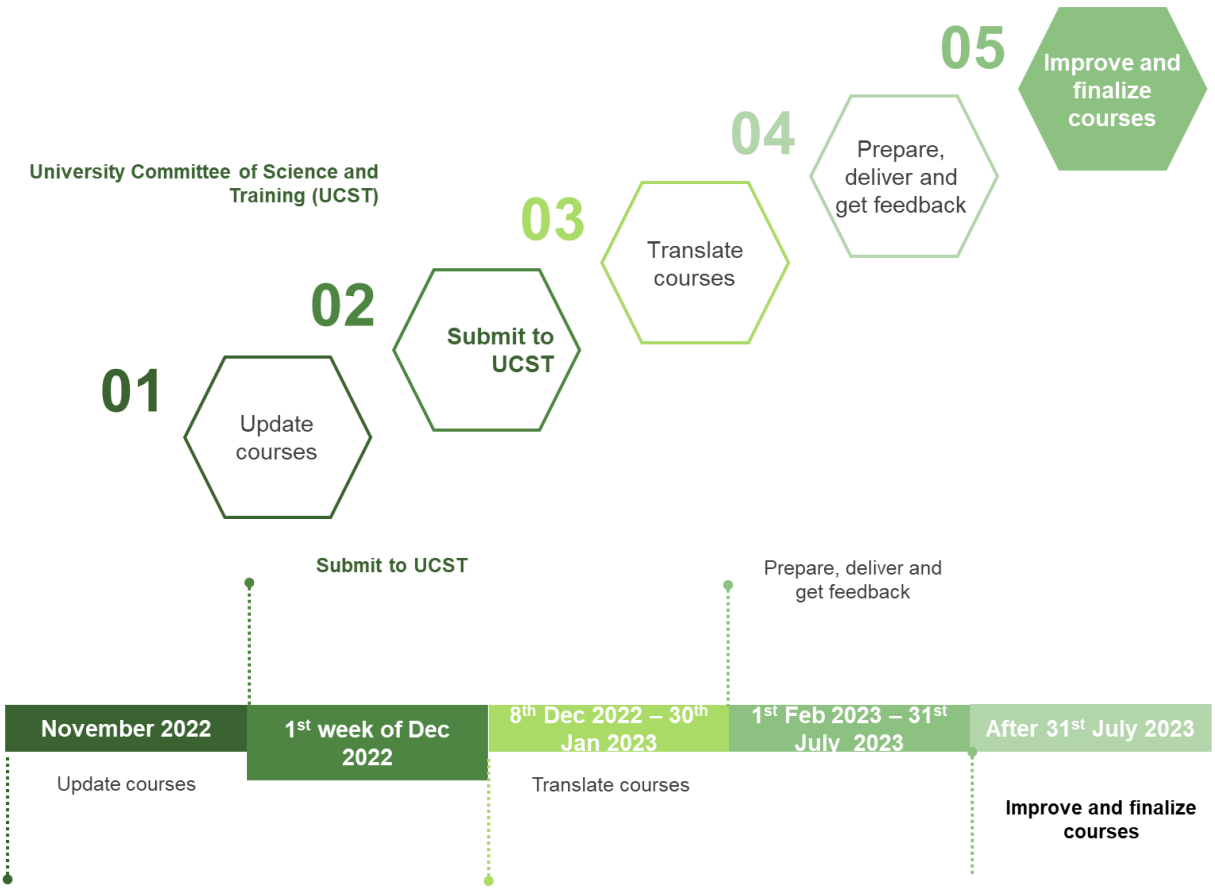


Figure 2: Timeline for courses implementation progress in HUAF as follows:

TUAF:

For the course implementation at TUAF, the university was implemented in 1st Semester: 14 August 2022 – 30 December 2022, and 2nd Semester: 02 January 2023 – 30 June 2023.

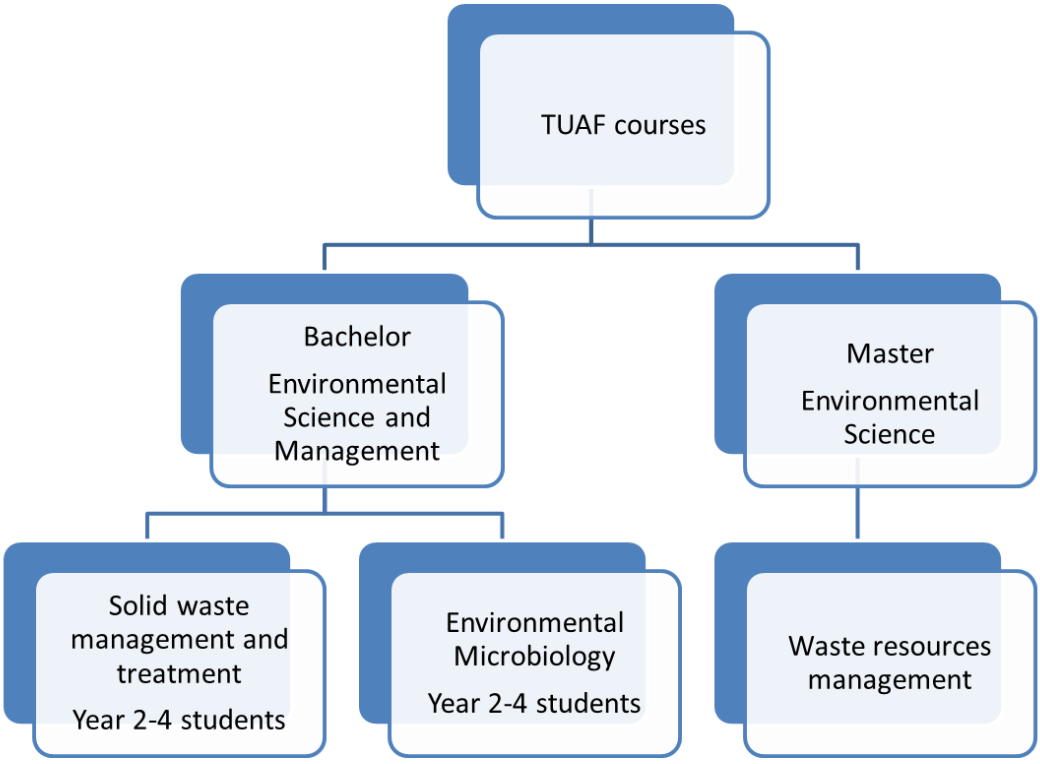
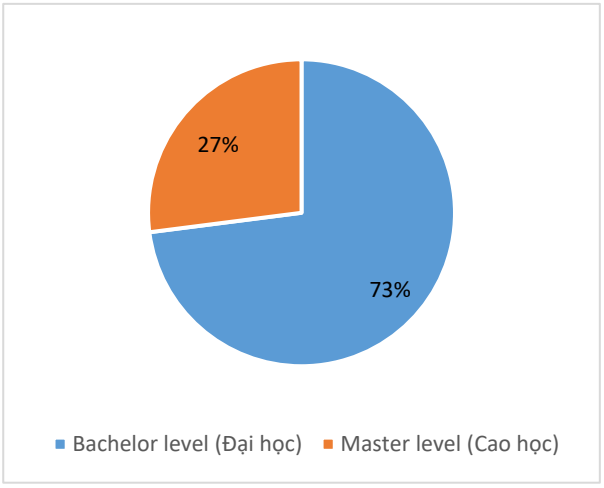


Figure 3: Course implementation at TUAF from SWAP project



The academic courses focusing on solid waste management were conducted during the spring and autumn semesters of 2023 at Thai Nguyen University of Agriculture and Forestry. The courses were held within the university premises, utilizing designated lecture halls, laboratories, and specialized facilities conducive to theoretical and practical training sessions.

Participants in these courses comprised students pursuing Bachelor's and Master's degrees of Environmental Studies. In total, 37 students engaged in these academic courses, including 73% (27 students) is Undergraduate students and 27% (10 students) is Graduate students.

Lecture Module	Title of lecture and seminar	When? (Semester & Year)	Is it an exrta course or is it included in the curriculum?	Updated Course Or New?	Date of Implementation (running of courses)	Number of Students enrolled
Master Level (Elective course)	Waste resources management (2 credits)	2nd semester 2023	Included	Updated	15/9/2023	10
Bachelor level (Elective course)	Solid waste management and treatment (3 credit)	2nd semester 2023	Included	Updated	15/8/2023	15
Bachelor level (Elective course)	Environmental Microbiology (3 credits)	1st semester 2023	Included	Updated	4/1/2023	12

Table 5. Academic courses were conducted at TUAF

3.3 Cambodia

UHST:

For the course implementation at UHST, the university implemented two courses (1 course in Bachelor level and 1 TVET level) from the SWAP project as follows:

Bachelor level (new course and mandatory)

- Course 1: Introduction to Sustainable Solid Waste Management and Circular Economy: delivered from 13 March 2023 to 18 September 2023 and 20 bachelor students involved in this course. For this course, 8 Modules were integrated: 1) Introduction of solid waste, 2) Kinds of solid waste, 3) Source of solid waste, 4) Effect of solid waste to environment, How to manage solid waste, and Environment, safety, and health in solid waste management, 5) Waste separation and Concept of 3R (Reduce, Reuse, and Recycle), 6) The process of compost from waste, 7) Waster collection and transport (lesson in English), and Biomass (lesson in English)

TVET level (new course and mandatory)

- Course 1: Introduction to Sustainable Solid Waste Management (started in September 2023), 19 TVET students. 5 Modules were integrated into this course: 1) Introduction to solid waste management, 2) Type of waste, 3) Urban waste management, 4) Issues of waste management, 5) 3R principles.

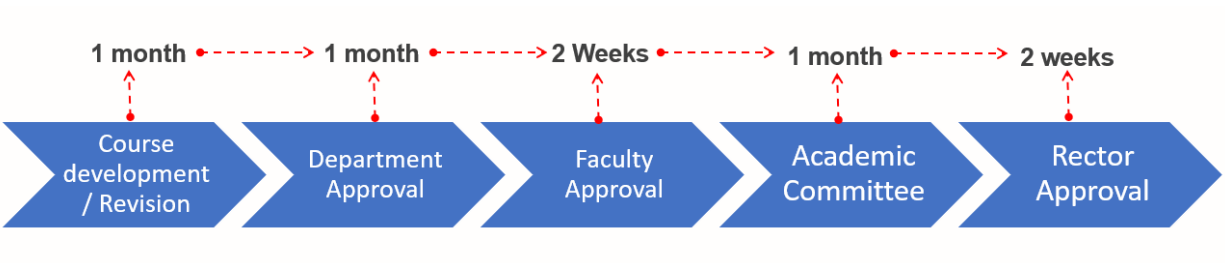


Figure 5: Accreditation process for UHST

RUA:

For the course implementation at RUA, the university implemented 1 course in Bachelor level, namely: Introduction to Sustainable Solid Waste Management and Circular Economy from 16 June 2023 in 2nd semester of year 2 students, with 28 students. This course has been updated the title to the Introduction to Sustainable Solid Waste Management and Circular Economy and updated the course content accordingly.

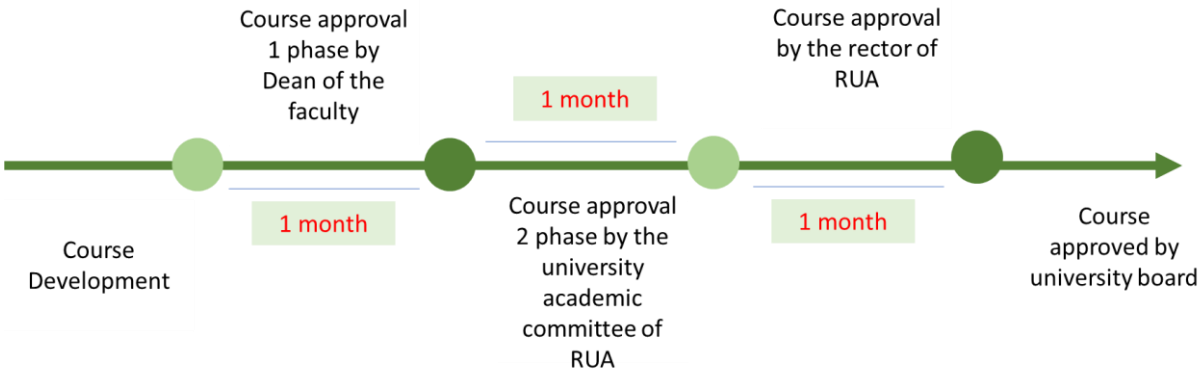


Figure 6: Accreditation process for RUA

4 Post-training Evaluation of academic courses

MJU:

In the case of MJU, students provided feedback on the educational products developed during their trip to Hamburg, Germany.

They found the course contents easy to understand, noting that examples and pictures in the slides helped them grasp key concepts more easily. The content fosters critical thinking, covering topics like types of collection trucks and collection hours. However, they suggested providing more information on less familiar topics like the circular economy. Students found the task materials understandable and practical. They appreciated the media in the slides,

such as pie charts and line graphs, and recommended including more video clips or animations.

The students' feedback after the course included:

1. The ability to apply and choose technologies and treatment processes for waste and hazardous waste management.
2. Understanding the composition, quantity, and characteristics of hazardous waste.
3. Planning suitable waste and hazardous waste management strategies.
4. Developing a positive attitude towards working in waste and hazardous waste management.

Overall, students expressed satisfaction, highlighting that:

- Practice tasks and video clips enhanced their learning process.
- The knowledge gained could be applied in other courses or further studies, such as a Master's degree thesis.
- The content volume was appropriate, and the slides were engaging and informative

CMU:

At CMU, students similarly shared their feedback on the developed educational products during their trip to Hamburg, Germany.

HUAF:

- Students' feedback of course of Solid Waste Management as follows:

When asked about content repetition in the solid waste management course, 100% reported no repetition. 66% rated the structure of lecture material as good, and 31% as very good (see Figure 6). The presentation of lecture material was rated as good by 21.55% (Figure 7).

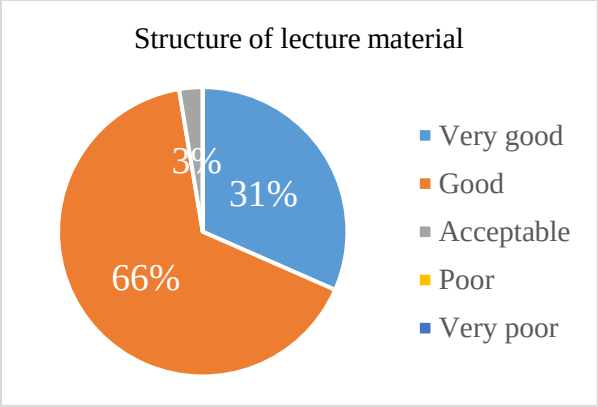


Figure 6: Structure of lecture material

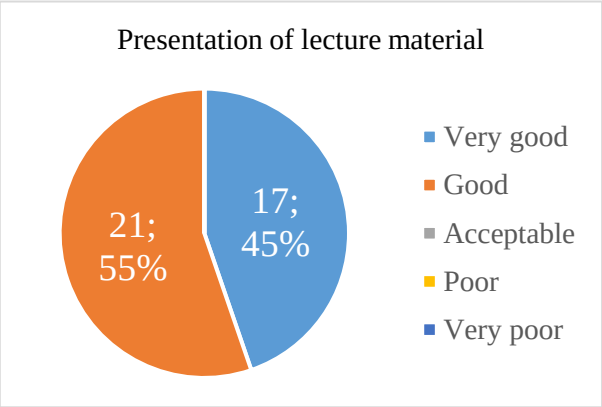


Figure 7: Presentation of lecture

The degree of implementing the obtained knowledge in the working field was reported as 100%. Additionally, 74% of respondents strongly agreed that the course is valuable for the working sector in the field of solid waste management, while 24% agreed (see Figure 8).

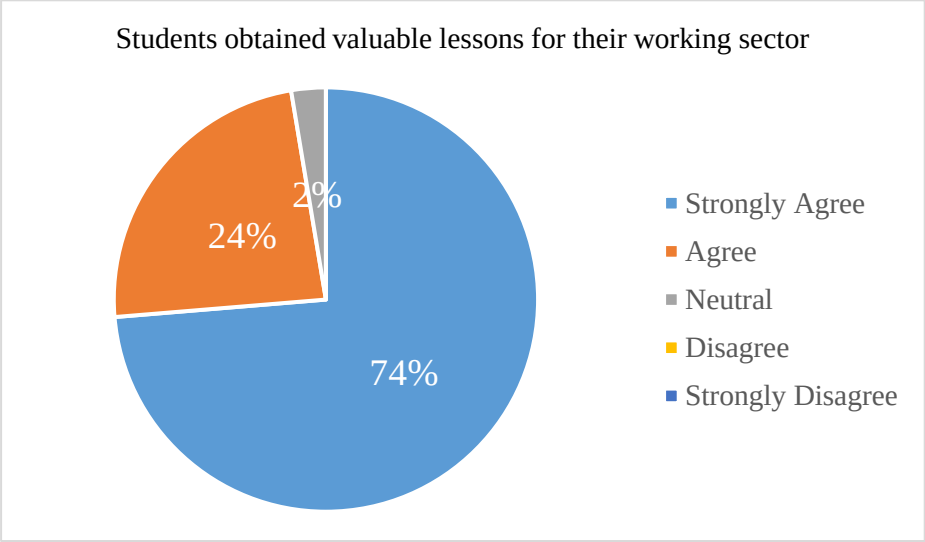


Figure 8: valuable lesson for their working sector

Regarding the depth of understanding of the course content, 74% of the students responded 'Definitely yes', while 24% chose 'Probably yes' (see Figure 9). After the training, 89% of students reported a

definite improvement in skills and knowledge (see Figure 10).

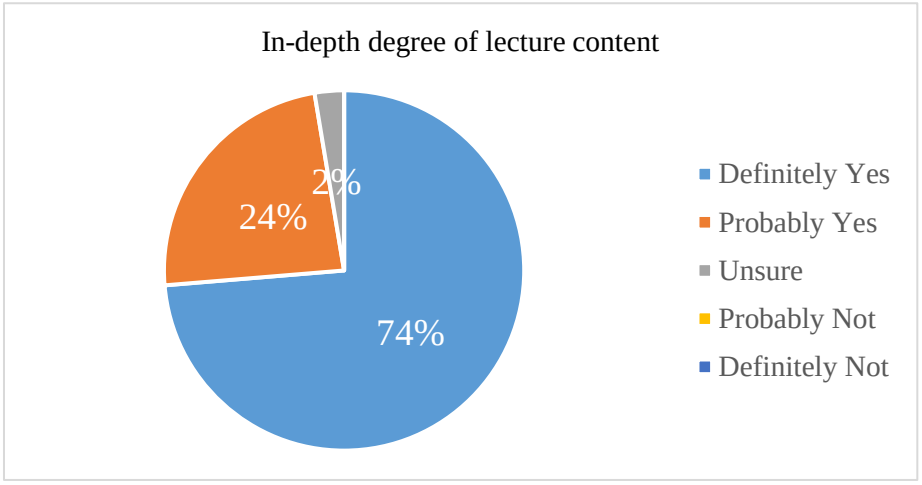


Figure 9: In-depth degree of lecture content

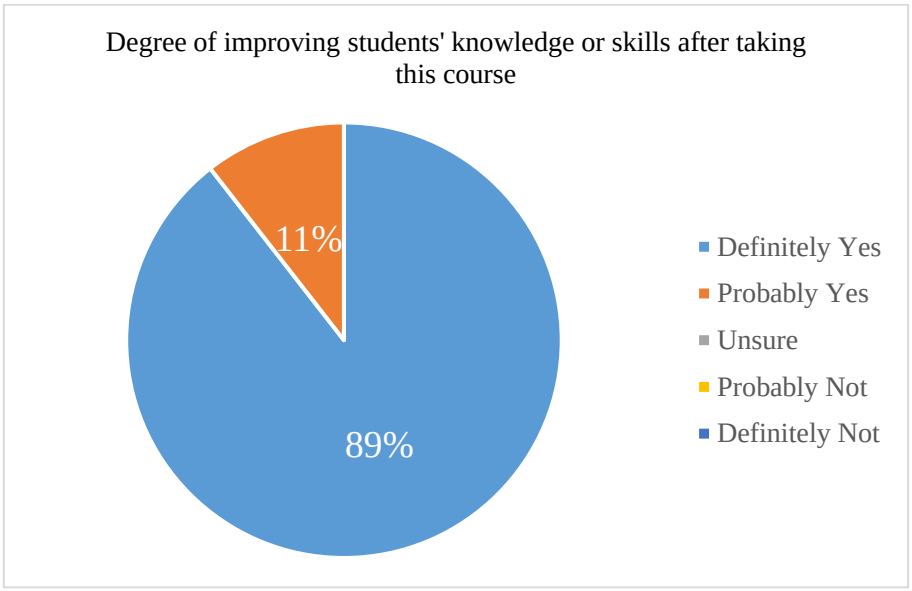
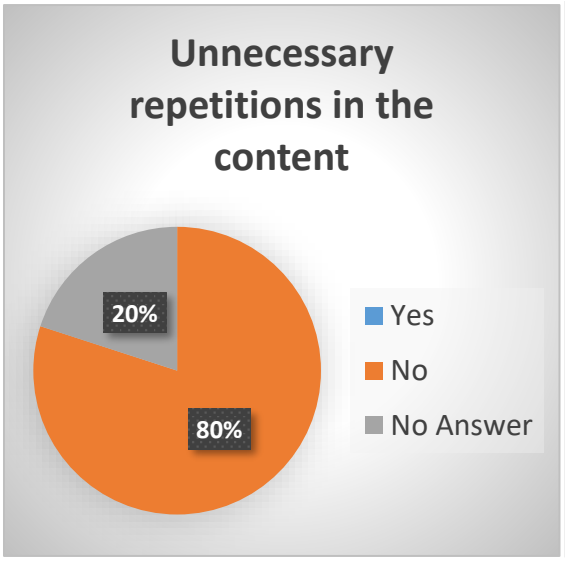
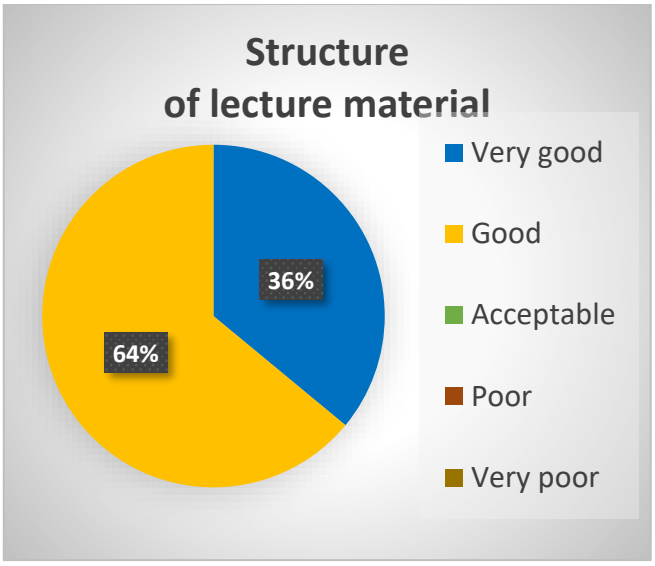
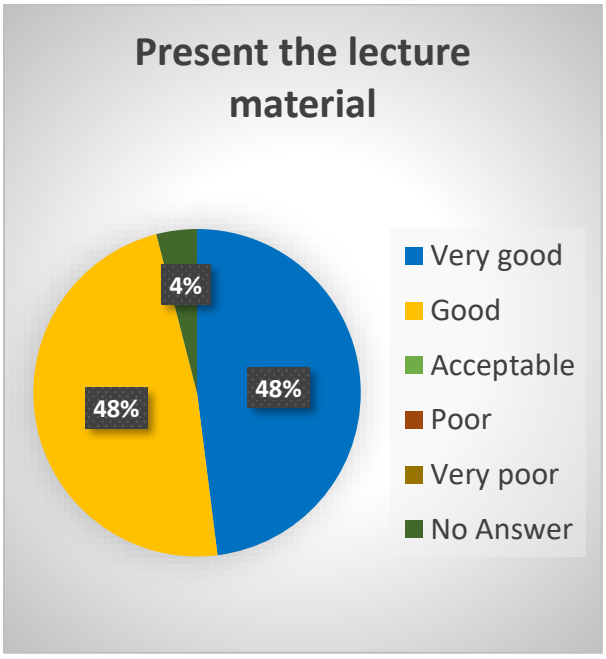


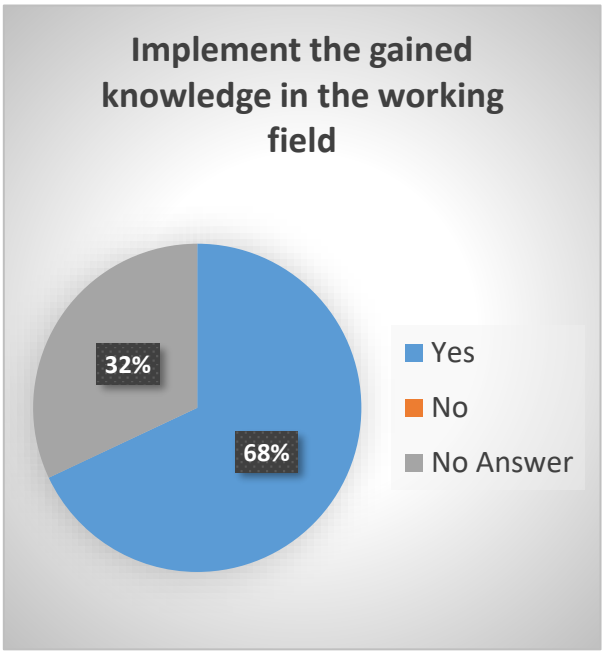
Figure 10: skill and knowledge improved

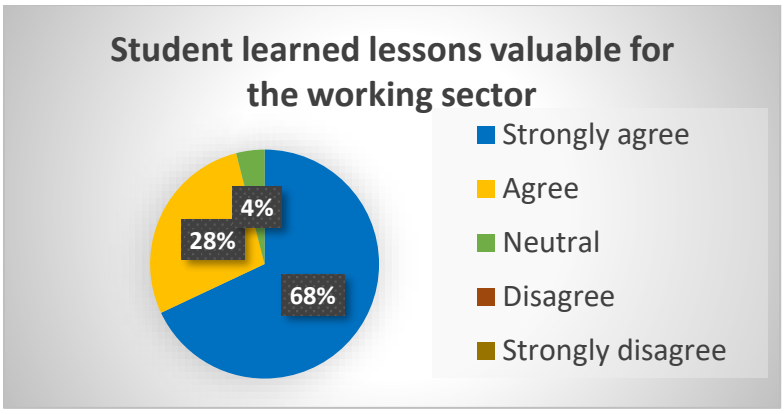
- Students' feedback of course of Environmental Management of Urban and Industrial zone as follows:

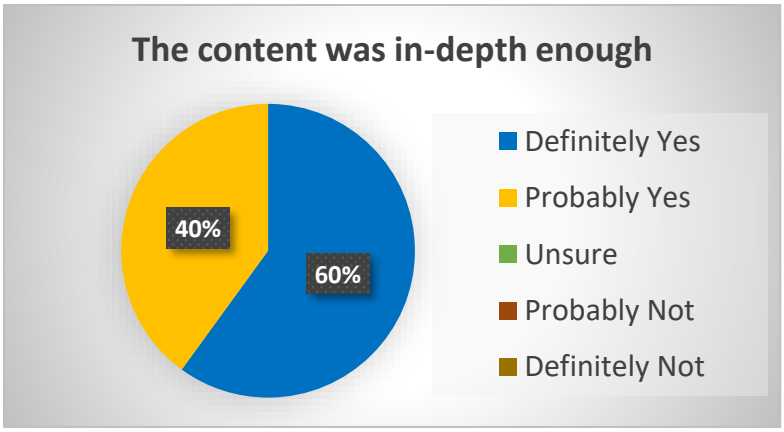


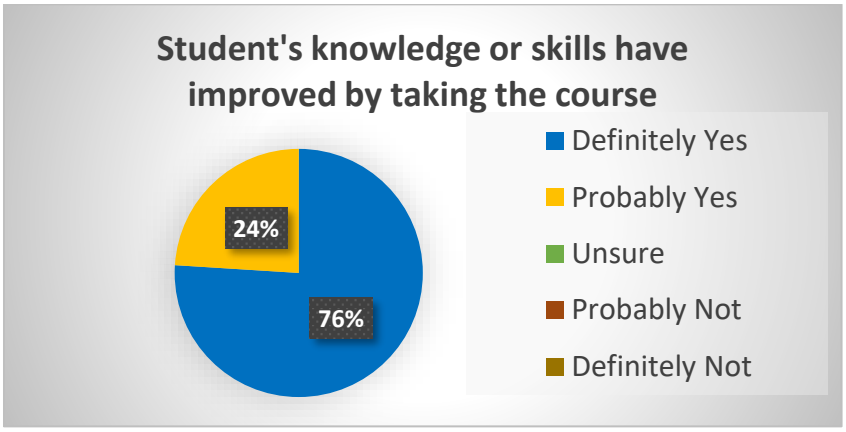




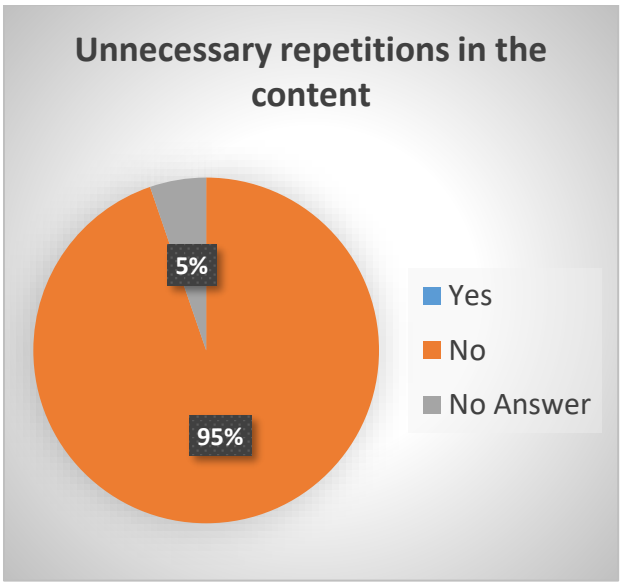


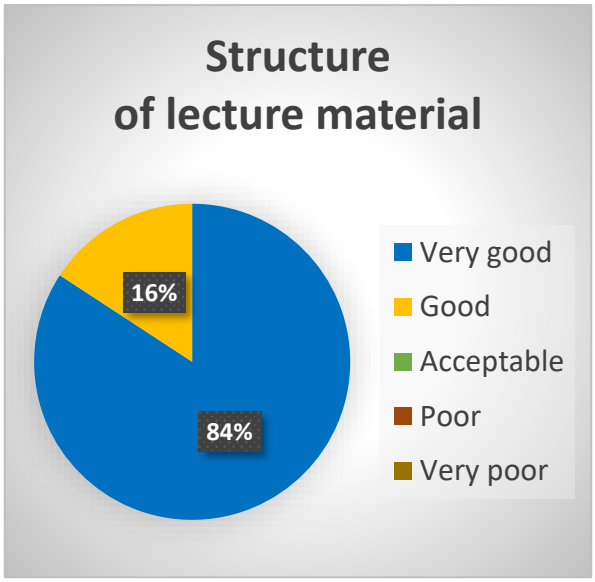


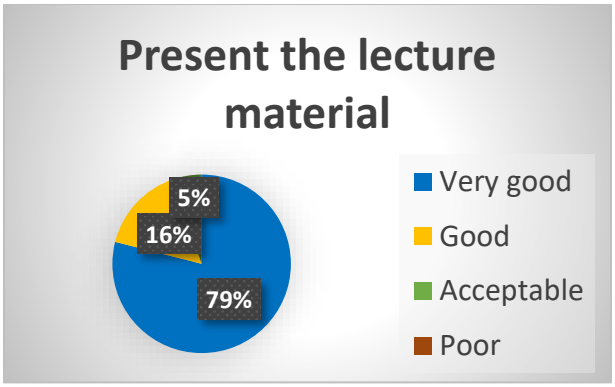


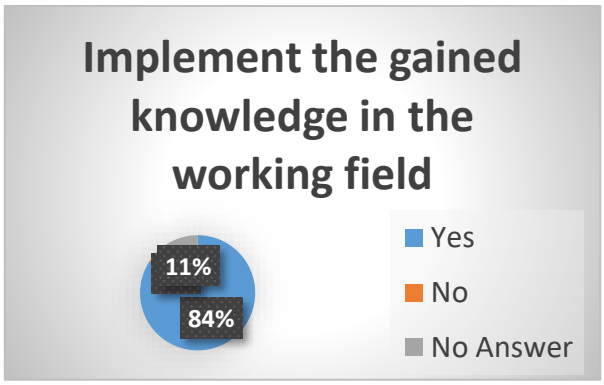


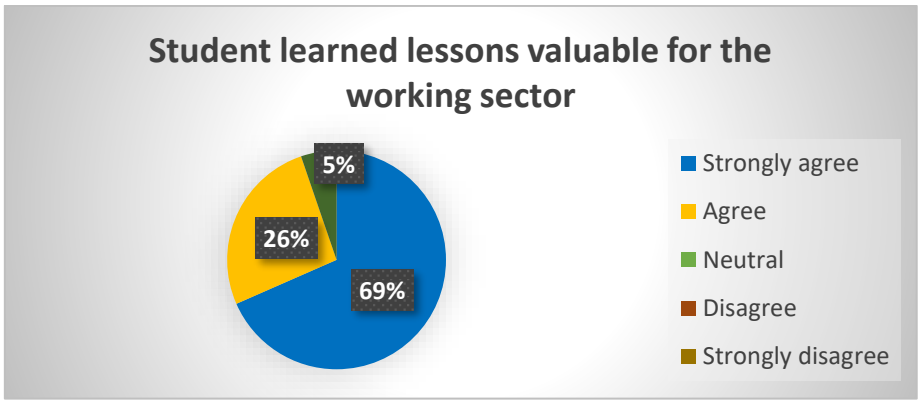
- Students' feedback of course of Environmental Management of Urban and Industrial zone as follows:

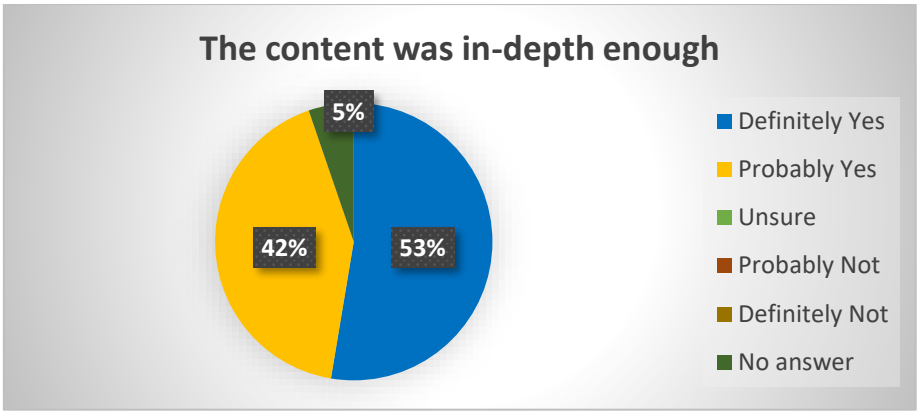


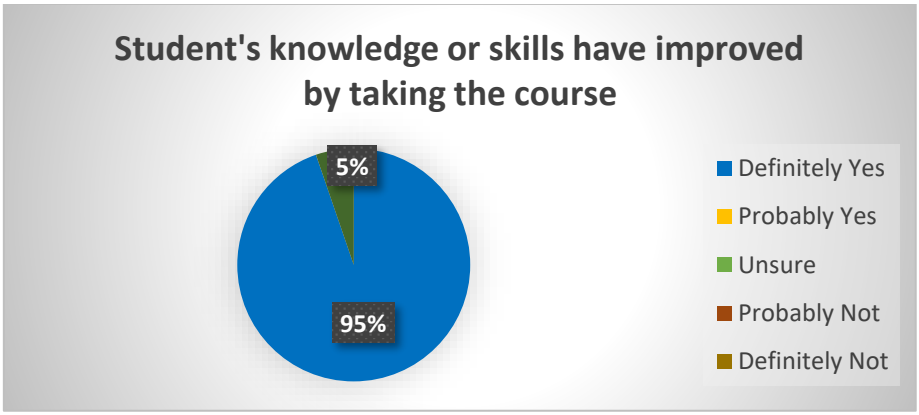












TUAF

The evaluation was categorized into three content groups:

- Content of the training and materials
- Lecturers
- Overall assessment

Besides Likert scale questions (1-5 for strongly agree to strongly disagree), the survey included open-ended questions for students to express their opinions on the course. Student information was not collected to maintain respondent confidentiality.

Overall, students provided positive feedback on the course and trainers. Scores indicating agreement with the quality of the course content were above 3 (medium to strongly agree) (see Figure 2), with the highest satisfaction expressed for the training materials. The balance between theoretical content, exercises, and discussions received the lowest average score of 3.8. In response to open-ended questions, students suggested adding more practical exercises. Additionally, most students agreed

that the quality of trainers was high and the course met their initial expectations.

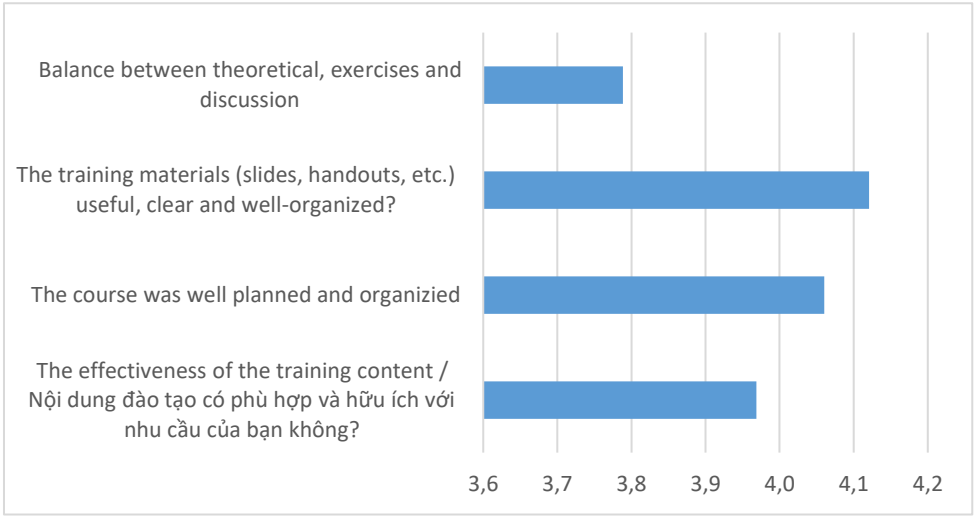


Figure 1. Students' feedback on the training contents and materials

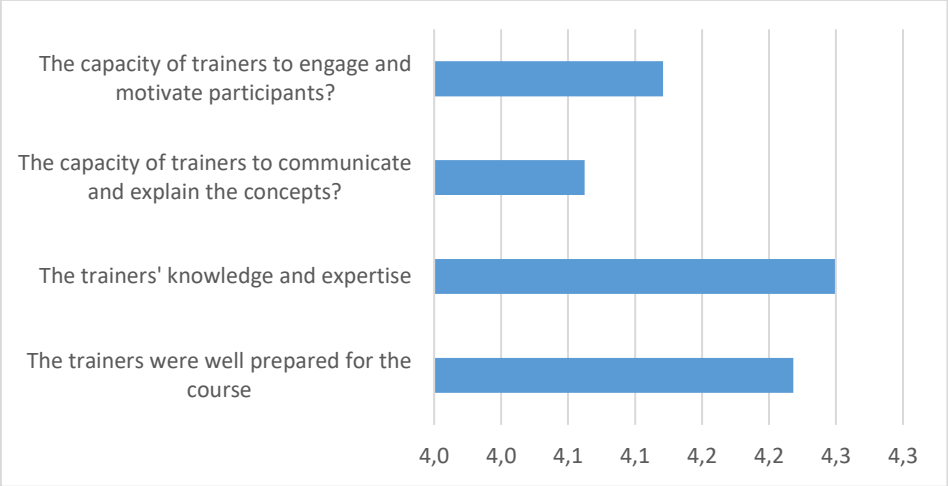


Figure 2. Students' feedback on trainers

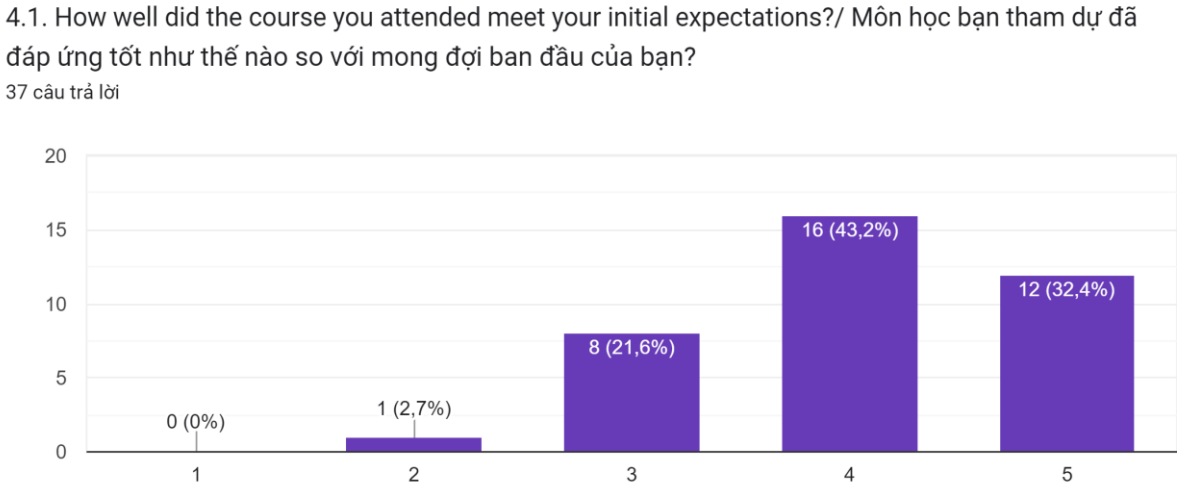
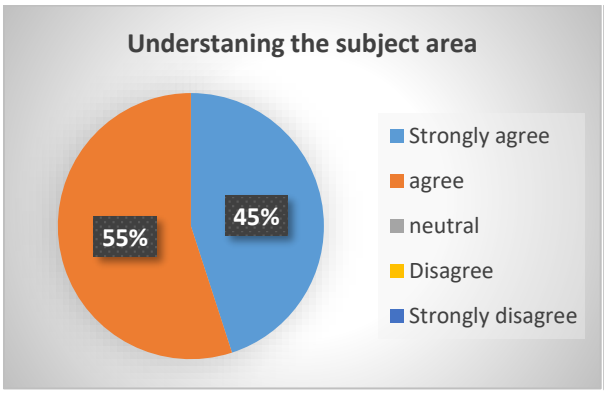
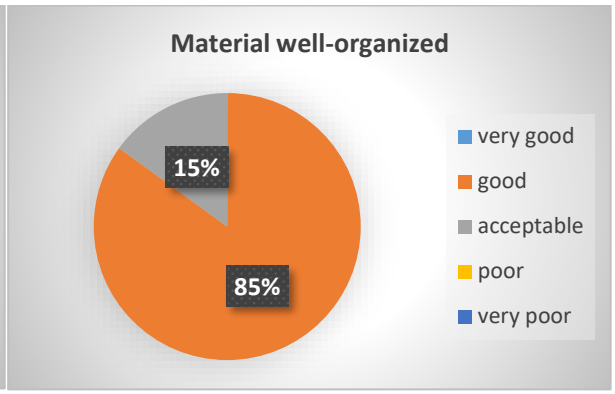


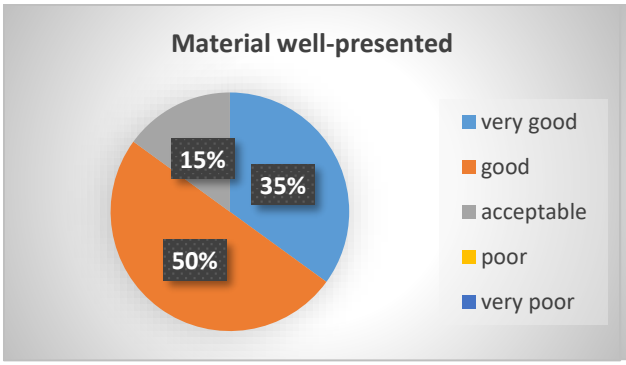
Figure 3. Students' feedback on the satisfaction in the courses

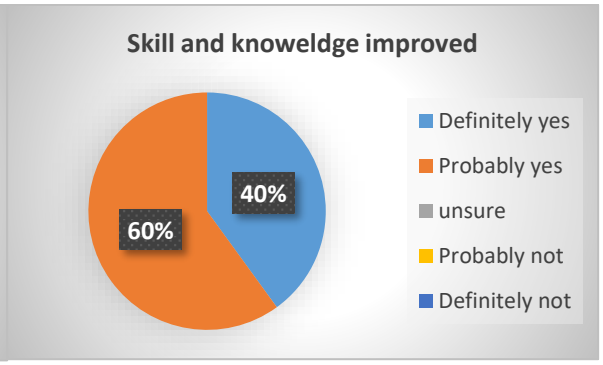
UHST:

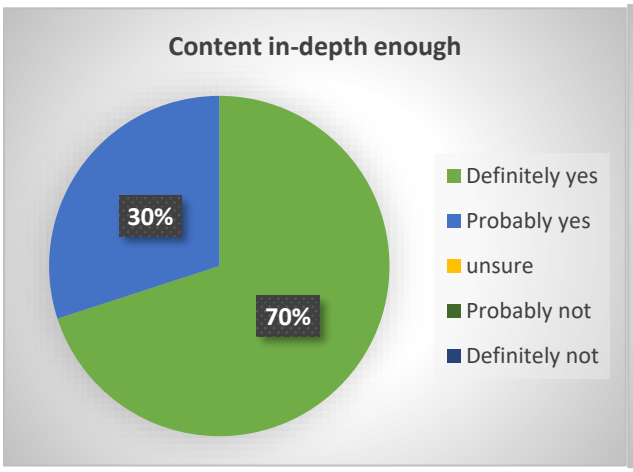
- Students' feedback of course of introduction to Sustainable Solid Waste Management and Circular Economy as follows:

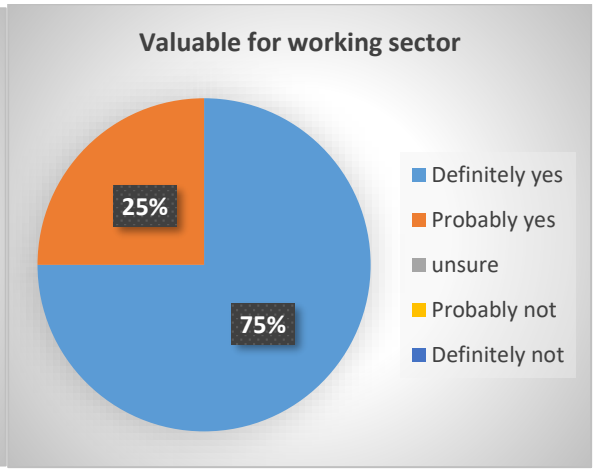






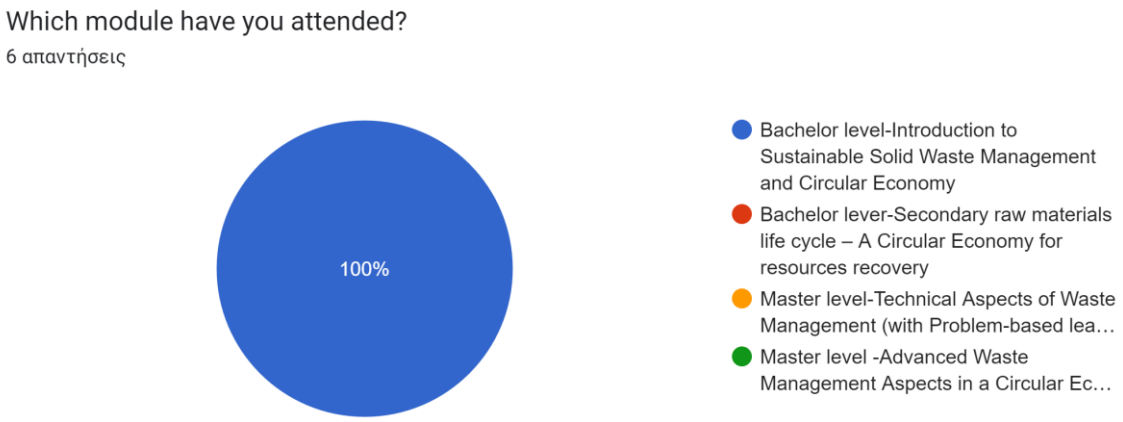






RUA

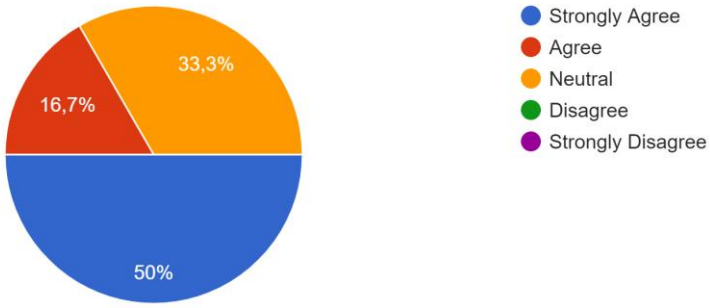
The feedback on the educational module "Introduction to Sustainable Solid Waste Management and Circular Economy" from Bachelor's students at the Royal University of Agriculture provides a multifaceted view of the course's effectiveness. Students' responses on the organization and presentation of lecture materials suggest that while some found the structure clear and engaging, others felt improvements could be made for better clarity and engagement. Regarding their understanding of the subject, the module appears to have successfully enhanced students' knowledge, but there's an expressed desire for more in-depth information and practical examples to deepen their understanding.



The real-world relevance of the course content was generally appreciated, underscoring the importance of connecting theoretical concepts to practical, real-life scenarios. This aspect of the course seems to have been particularly impactful, bridging the gap between academic learning and real-world applications. In terms of time investment and meeting expectations, students' views varied. Some considered the time spent on the module appropriate and felt that the course met or exceeded their expectations, while others indicated a need for better alignment of content with the time invested.

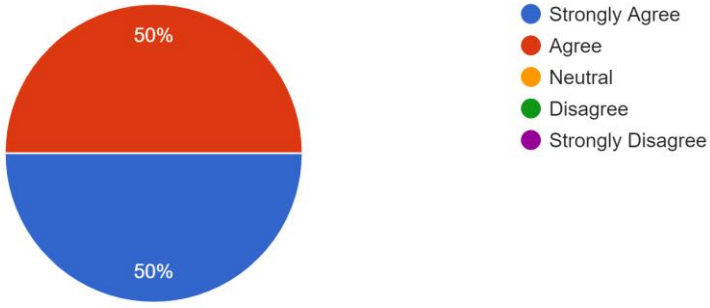
1.1 The module expanded my understanding of the subject area

6 απαντήσεις



1.2 The module allowed me to develop my own intellectual interests

6 απαντήσεις



The suggestions for improvement provided by the students are particularly insightful. These include calls for more interactive elements in the course and the inclusion of more real-world examples to enhance understanding. Such feedback is important for course developers, as it provides direct insights into student experiences and needs. The suggestions point towards a desire for a more interactive learning environment, which could be achieved through various pedagogical techniques such as group discussions, case studies, or practical workshops. Moreover, the inclusion of more real-world examples and applications of sustainable waste management principles in different contexts could make the learning process more engaging and relatable for students. This balanced approach between theoretical knowledge and practical application seems to be a key aspect that students are seeking in their educational experiences. Overall, the feedback reflects a positive reception of the module with constructive recommendations for further enhancement.

5 Conclusion

The training pilots conducted for undergraduate and graduate students at Asian partner institutions have demonstrated significant success. These training sessions, a part of the SWAP project, focused on enhancing skills and knowledge in the field of solid waste management. The materials provided for these training sessions were not only well-received but also highly appreciated by the students. They played a crucial role in elevating the training quality within higher education in this vital field.

Students reported that the content was both engaging and informative, striking the right balance between theory and practical application. The comprehensiveness of the materials helped students gain a deeper understanding of solid waste management principles and practices. This included learning about innovative recycling techniques, waste reduction strategies, and sustainable waste treatment methods.

The training also emphasized the importance of environmental stewardship and responsible waste management. Through practical exercises and case studies, students were able to see the real-world impact of effective waste management practices. This hands-on approach was instrumental in fostering a deeper commitment to environmental sustainability among the students.

Furthermore, the training materials were noted for their accessibility and relevance. They were tailored to meet the specific needs and contexts of the Asian partner institutions, making the learning experience more relatable and effective. The use of local case studies and examples was particularly appreciated, as it provided students with a clear understanding of how solid waste management techniques can be applied in their own communities.

Instructors, too, found the materials to be a valuable resource in their teaching. They noted an improvement in student engagement and understanding, attributing this to the high-quality content provided by the SWAP project. Overall, the training pilots have been a resounding success, significantly enhancing the educational offerings in solid waste management at the participating Asian institutions.

Annexes

- Questionnaire for student feedback

Feedback questionnaires for Students

I. General information

1.1 University:

1.2 Academic level:

Master level☐ Bachelor level☐ TVET☐

1.3 Course:

II. About the course

2.1. The module expanded my understanding of the subject area
Strongly agree ○ Agree ○ Neutral○ Disagree○ Strongly disagree○

2.2 The module allowed me to develop my own intellectual interests
Strongly agree ○ Agree ○ Neutral○ Disagree○ Strongly disagree○

2.3 The way the module materials were presented helped to maintain my interest
Strongly agree ○ Agree ○ Neutral○ Disagree○ Strongly disagree○

2.4 How would you rate the overall course content?

1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○

2.5. Did you notice any unnecessary repetitions in the content?
……
……

2.6. What improvements would you make to the courses?

……

……

2.7. What was the most interesting part?

……

III. About the learning activities for the course

3.1. Lecture material was well organised

Very good ○ Good○ Acceptable○ Poor○ Very poor○

3.2. Lecture material was well presented

Very good ○ Good○ Acceptable○ Poor○ Very poor○

3.3. Were your training expectations fulfilled?

01	02	03	04	05	06	07	08	09	10
○	○	○	○	○	○	○	○	○	○

IV About the objectives of the course

4.1. Can you describe how successful the course outcome was compared to your expectations?

……

……

4.2. Do you think that the knowledge that you gained are going to be implemented in the working field?

……

……

4.3. Why did you find that the course to be so useful?

……

……

4.4. Do you have any further comment about the courses?

……

……

V. About the learning experience

5.1. Do you feel that your knowledge or skills have improved by taking the course?
Definitely Yes ☐

Probably Yes ☐
Unsure ☐
Probably Not ☐
Definitely Not ☐

5.2.Was the content in-depth enough?
Definitely Yes ☐
Probably Yes ☐
Unsure ☐
Probably Not ☐
Definitely Not ☐

5.3. I learned lessons valuable for the working sector
Strongly agree ☐
Agree ☐
Neutral ☐
Disagree ☐
Strongly disagree☐