

# R4.1 AIIS exploitation in European Universities

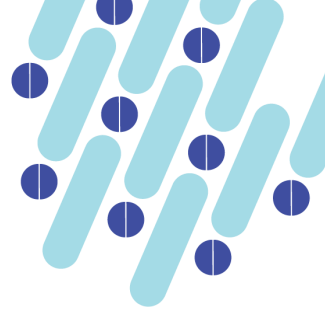
## WORKPACKAGE 4



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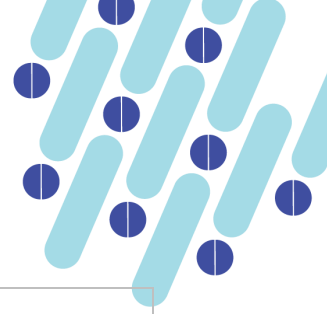
### Artificial Intelligence, Innovation & Society, the future of medicine – AIIS

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<b>Short Description</b>	<p>This exploitation plan (R4.1 AIIS exploitation in European Universities) will be the main result for WP4 and will report all the tasks made under this WP. Thus, it will cover several aspects:</p> <ul style="list-style-type: none"> <li>● Short term measures to recognize the AIIS programme. <ul style="list-style-type: none"> <li>○ certificates of participation/microcredentials will be delivered to students in WP3</li> </ul> </li> <li>● Research on integration of AIIS in student's curriculum (also taking from the experience of UTU and the learning mobility of Finland)</li> <li>● Strategy to increase the visibility of the programme, creation of a network</li> <li>● Letters of interest signed by the network</li> <li>● Specific objectives to increase the network</li> <li>● Recommendations for the collaboration framework within this network, terms of the share of the training contents and method of implementation, etc.</li> </ul>
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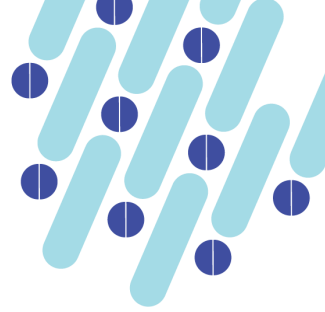
CONSORTIUM:

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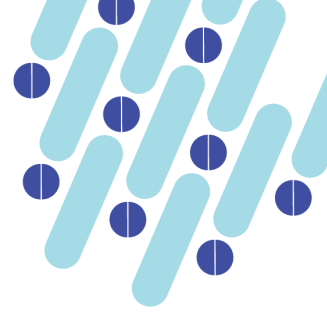
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## 4.1 Goals and Introduction for WP4

Work Package 4 focused on validation and recognition of AIIIS – Artificial Intelligence, Innovation & Society in Europe. WP4 played a pivotal role in the realization of AIIIS's primary objective, which was the integration of the programme into Higher Education Institutions' (HEIs) curricula. Primary aim was to confer lasting value upon the project outcomes, with a specific emphasis on the potential incorporation of the educational programme into official university degree programmes. Consequently, both the implementation and the dissemination/exploitation phases of the project were intricately intertwined with WP6.

For the short-term recognition of the AIIIS educational programme, certificates were delivered to students who have participated in the programme in WP3 (Implementation of collaborative learning and pilot phase). To contemplate the integration of the developed learning programme into the future official educational pathways of universities, a comprehensive integration plan must be devised. This report should address two critical questions: 1) Can this learning programme be introduced into formal university educational pathways and 2) How can it be introduced?

Partners from University of Turku presented the WP4 information in the consortium meeting on 04.02.2022. During this meeting a schedule and implementation method was proposed with distribution of tasks among the partnership for WP4. UTU presented a schedule about what information & what actions are needed from the partners, to whom, and by when to send the required information. The Task1 “Expected results”, which stated the Establishment of activities, objectives, responsibilities, and deadlines, was delivered. (T4.1 WP information with indication of expected results. Establishment of activities, objectives, responsibilities, and deadlines.)

### 4.1.1 WP4 working group

The WP4 working group was set up in June 2022 with 1-2 representatives from each partner university (USAL, UMONS, TUAS, UTU, UTH), 1 researcher from CIBER and 1 member from each company (Xebia, MEUS, SciFY). The WP4 working group had a crucial role in the AIIIS project. It was overseeing and advising WP4: validation and recognition of learning programme in Europe. The WP4 working group dealt with the short-term recognition of the AIIIS programme (e.g. decide whether certificates/microcredentials will be used for recognition) as well as the long-term value of the project results; integration of the AIIIS programme in official university degrees. The WP4 working group met regularly approximately once a month from October 2022 to June 2023. The meetings were held remotely. UTU was responsible for organizing the meetings. (T4.3 Set-up of a working group.)

The mission of the WP4 working group was to study the short-term recognition of the AIIIS programme and the integration of AIIIS in the official students' curriculum.

*Objectives were*

- To decide the suitable method for recognition of the learning programme (e.g. certificates of participation or microcredentials)



- To deliver the certificates/microcredentials to the students who have passed the pilot programme in Work Package 3 (WP3).
- To elaborate a report on the possibility to integrate AIIS in universities curriculum focusing on requirements of the universities, ECTS equivalence, certification and EU level validation
- To prepare a plan of integration focusing on the following questions: 1) Can this learning programme be introduced into formal university educational pathways? and 2) How can it be introduced?

This exploitation plan (R4.1 AIIS exploitation in European Universities) is the main result of WP4 and it reports all the tasks made under this WP. It covers several aspects:

- Short term measures to recognize the AIIS programme.
  - certificates of participation/microcredentials will be delivered to students in WP3
- Research on integration of AIIS in student's curriculum
- Strategy to increase the visibility of the programme, creation of a network
- Letters of interest signed by the network
- Specific objectives to increase the network
- Recommendations for the collaboration framework within this network, terms of the share of the training contents and method of implementation, etc.

## 4.2 Short-term measures to recognize the AIIS programme

In the following we present the short term measures to recognize the AIIS programme.

### 4.2.1 Choosing Between Certificates and Microcredentials for Short-Term Recognition of the AIIS programme

One of the WP4 working group objectives was to decide if certificates or microcredentials will be used for recognition of the AIIS programme. A representative of University of Turku, with expertise in topic, presented the micro-credentials for WP4 working group in 2.11.2022 with his presentation "Developing micro-credentials with stakeholders. Open badges in Sustainable Tourism".

In his presentation the main three aspects were: presenting micro-credentials and open badges in nutshell, critical points in designing micro-credentials and he also presented a case in sustainable development. Micro-credentials are short episodes of learning, flexible and targeted ways to develop knowledge, skills, and competences. Micro-credentials are stackable, and they can be combined to make a coherent entity for the participant. Micro-credentials have an element of upskilling, reskilling and inclusion, employability. Open badges on the other hand are standardized digital credentials of short episodes of learning. Open badges contain metadata on the criteria, issuer, recipient, standards, expiration and evidence.



The WP4 working group took a position and decided to use certificates. The working group discussed about micro-credentials together after Halttunen's presentation. They will perhaps be seen as a good idea for the future. However, it was decided that in the WP3 pilot, students will receive 3 ECTS as agreed in most universities (UTU, USAL, UMONS and TUAS). In addition, students will receive a certificate for the studies they have completed. UTH issued only a certificate to the students.

## 4.2.2 The Certificate Issuance procedure

The faculty issues the student with a diploma for the degree he or she has completed. A certificate or transcript of records is issued for other education completed at the university, indicating the main content and scope of the education. The completion of an individual course may lead to the award of credits or a certificate. ECTS credits, a written certificate and/or a digital badge are granted as proof of completion.

The purpose of the evaluation of learning and competence is to give the student feedback on the progress of their studies and the obtained learning outcomes. The learning outcomes and evaluation methods are clearly defined in the curricula and based on public and clearly defined standards. If the course is completed with an examination or a corresponding method, it must be organized at least three times with the same requirements. The latter two examinations must be organized within one year of the first examination. The evaluation of study attainments is carried out with the following grading system, for example in University of Turku: 5=excellent (A), 4=very good (B), 3=good (C), 2=satisfactory (D), 1=sufficient (E), 0=fail (F), or alternatively on a pass/fail basis.

Collaborative degree education can result in either a single joint degree certificate, issued when multiple institutions confer one degree, or a double degree programme where the student earns certificates from each institution. These certificates specify the specialized education's name, core curriculum, and duration. Additionally, certificates or transcripts of records are granted for other university-provided education, outlining its core content and duration.

## 4.2.3 Certificates of participation for the students in WP3

For the short-term recognition of the AIIS educational programme, certificates were delivered to students who participated and completed the programme in WP3. Some preliminary measures had been taken to ease the process of integration of the learning programme. For instance, it was planned that the course should require 30 hours (axis 1) - 30 hours (axis 2) - 15 hours (collaborative learning) for a total of 75 hours, which would correspond, in case of integration in the curriculum, to 3 ECTS. (T4.2 Certification of participating students.)

Students who completed the whole AIIS course received 3 credits as agreed in most universities (University of Turku, University of Mons, University of Salamanca and Turku University of Applied Sciences). University of Thessaly issued only a certificate to the students. In addition, all students received a certificate for completing the AIIS course signed by all universities.



There were separate certificates for soft skills AI and challenges. All together from the pilot course 101 students received certificates. The certificate was signed electronically by all the five universities. (USAL, UMONS, UTH, TUAS and UTU). Each university distributed a certificate to its students who had completed the course.



Picture 1. Example of the certificate

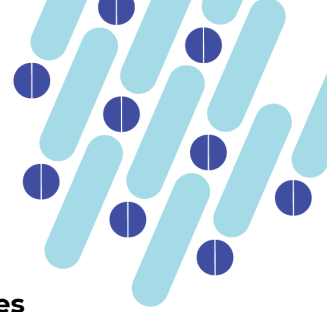
#### 4.2.4 The course descriptions

The AIIS course description can be found in the universities study system. Here is an example of UTU study system Peppi. The learning outcomes and the content of Artificial intelligence and Soft skills modules are described in table 1 and table 2.

##### The AIIS course description from UTU study system Peppi.

**Course name:** Artificial Intelligence, Innovation & Society, the Future of Medicine, 3 ECTS.





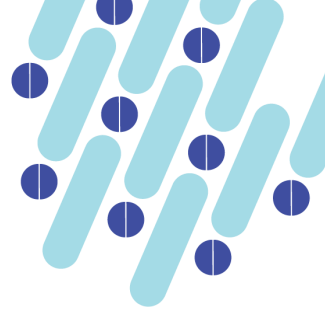
**Table 1. The learning outcomes of Artificial intelligence and Soft skills modules**

<b>Learning outcomes</b>	
<u>AI module</u>	<u>Soft Skills module</u>
This module intends to provide participants with a high-level understanding of the AI currently prevalent in the healthcare sector.	This module intends to provide participants with awareness of soft skills in their profession and to practice these skills through different tasks relevant to the topic.
Upon completing this module, participants will be able to: <ul style="list-style-type: none"> <li>● Critically assess the contribution various AI solutions make to their work environments</li> <li>● Have meaningful deliberation on AI propositions for the healthcare sector</li> <li>● Adapt their working practices to facilitate the integration of AI into their workplace</li> <li>● Propose new use cases within the healthcare sector for existing AI techniques</li> </ul>	After completing this module, students: <ul style="list-style-type: none"> <li>● Are aware of their thought patterns and have some internal self-regulation mechanisms.</li> <li>● Know techniques that allow them to better connect with people both verbally and in writing, in two-way interactions, in small work groups, and in large audiences.</li> <li>● Can apply some strategies to improve concentration at work, use of time and organizational planning.</li> <li>● Can reflect on medical ethics, especially in the field of artificial intelligence.</li> </ul>

Although this AI module does not teach the skill for developing and applying relevant AI techniques, some essential knowledge of underlying architecture, applied mathematics and programming algorithmics is introduced. This will give learners the foundational building blocks for a well-rounded understanding of the AI techniques used within the healthcare sector.

**Content:**

The online training programme consists of two modules: AI (artificial intelligence) and SS (soft skills), and development of collaborative challenges. Each module includes six different topics. (Table 2).



**Table 2. The content of Artificial intelligence and Soft skills modules**

<u>AI module:</u>	<u>SS module:</u>
<ol style="list-style-type: none"> <li>1. Introduction to Artificial Intelligence</li> <li>2. Introduction to machine learning</li> <li>3. Expert systems and their role in the healthcare sector</li> <li>4. Machine learning in the healthcare sector</li> <li>5. Introduction to machine vision</li> <li>6. Image recognition in the healthcare sector</li> </ol>	<ol style="list-style-type: none"> <li>1. Self- Knowledge and initiative</li> <li>2. Capacity to adapt to different situations</li> <li>3. Communication</li> <li>4. Teamwork</li> <li>5. Work Organization</li> <li>6. Work Ethics</li> </ol>

**Study methods:**

The course will be performed online, and it consists of online lectures 16 hours, specific tasks 30 hours and group work 35 hours. (The ratio of hours may still change, but the maximum is 81 hours of student work)

**Course unit methods:**

The course will be implemented in the AIIS Collaborative Learning Interface, which will run as a desktop or VR (virtual reality) application on the Windows environment.

**Learning material:** Online lectures and other material given by teachers.

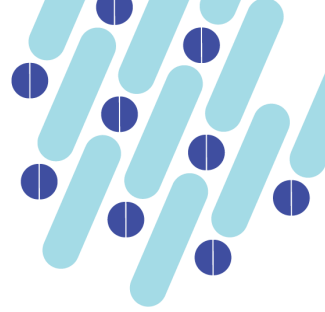
**Assessment scale** Pass/Fail

**Assessment criteria** Completed online tasks and active participation in group work.

**Languages** English

**Level** Advanced Studies

**Subject** Medicine: Optional Courses



## 4.3 Long-term value of the project results: integration of AIIS programme in official university degrees

### 4.3.1 The curriculum approval process

The WP4 working group worked together with the possibility to integrate AIIS in universities curriculum. Focusing on requirements from universities, ECTS equivalence, certification, EU level validation. (T4.4 Research on AIIS integration in university programmes.) This also included a learning mobility in Finland about ECTS. UTU hosted an online seminar on "Integration of learning programme in official learning pathway - Presentation of ECTS implementation" on 18.11.2022. This event has been reported previously in R6.3 Learning activities, events and meetings, Learning Mobility Event in Finland -report.

UTU provided an example of the curriculum approval process at the University of Turku, Faculty of Medicine. All the university partners, who are training medical students (USAL, UMONS, UTH) provided the curriculum approval process of their respective university concerning medical education. Later, the TUAS curriculum approval process was also included in the report. The curriculum processes of the different universities are similar, but some differences can be found.

First, we'll outline the design principles for an Open University course and the key factors to consider when creating a new course. Following that, we'll provide a comprehensive breakdown of the unique curricula for each medical school. Each university's own processes are described next.

#### **Open University studies**

Open University studies are degree modules, planned in alignment with faculty curricula and the Centre for Language and Communication Studies. They follow a curriculum cycle and can be tailored to adult students' needs. To initiate Open University studies, the faculty's Open University education coordinator must be contacted early. The study options are assessed with Open University education staff. Open University education coordinators propose study options each curriculum period, which faculties subsequently approve. Support for teaching and learning environments is provided by the Open University planning officers and Teacher Support team. The needed information is applied to Universities own study systems, for example in Turku, Finland the system is called Peppi Study System.



A needs assessment identifies education needs, primarily focusing on professional life. Leveraging forecasts and stakeholder partnerships is increasingly vital in continuous learning educational planning. First it needs to be considered for example: who is the main target audience for studies, what is the most suitable form to study, are there suitable courses available elsewhere or might other students from other institutions be interested in the studies.

When planning Open University courses, financial viability is assessed based on resources, projected income, and other gains, considering: student estimates and tuition revenue, workload for course completion, availability of required personnel and resources, and organizational costs like hourly-paid teaching, facilities, and marketing. Is it possible to run the course with your own teachers or do you need to hire additional staff?

### **The curriculum approval process of the University of Turku**

The University of Turku has used a two-year curriculum. The two-year curricula cycle continues until Spring 2024, starting from Autumn 2024 University of Turku uses a 3-year-curricula. The two-year curriculum period begins in August and ends in July of next year. The curricula are drafted according to the three-level degree structure: Bachelor, Master and doctoral.

The curricula have two parts. The part of the curriculum effective for two years contains the learning outcomes of education and study modules, contents of teaching, and descriptions of modes of study and evaluation of learning. Teaching schedule, the part concerning the realization of teaching, is in effect for a term or an academic year. It contains exact details of the realization and schedule of teaching.

The curriculum is based on competence, and it follows the formula of efficient education: in addition to learning outcomes, the curriculum includes the contents of teaching, teaching, and learning methods, and evaluation, and these sections have to be coherent.

Curricula planning is well organized and directed. Curricula are planned and realized in faculties and units as teamwork, also across different faculties. Curricula planning is conducted in a collaboration between teachers and students. Information gained through different kinds of feedback on teaching, students' progress, and education is used extensively in curricula planning.

The development prospects of the field as well as the analysis of the needs of the professional sector are taken into consideration in the curricula planning and the representatives of professional life are consulted.

The curriculum details both the overall objective of the education and the learning outcomes of the study modules and individual courses as well as their relation to the entire curriculum.

When planning curricula, it should be considered which parts of the degree will be offered as continuous learning opportunities (Open University education, MOOCs, micro-credentials).

In addition to subject competence, professional life skills and sustainable development are described in the curriculum.



The mode of teaching and evaluation methods are selected according to what best supports the students' learning.

### **The curriculum approval process of the University of Mons**

At UMONS, the courses and curricula are dynamic entities under continuous review by program directors and faculties. In addition to the routine course updating that is completed by conscientious instructors, there is also a regular need for adding courses to the programs.

Preliminaries:

Any faculty member can propose a new course to his/her program director.

As a first step, the faculty program committee responsible for the concerned cursus will discuss the new course while carefully considering the following points:

- Why is the course necessary? Does it update the curriculum, fill a gap in the academic program, or extend the skills and knowledge achieved in an existing program? It is especially important to note whether the impetus for a new course comes from an accreditation body.
- How does the new course fit into a curriculum? Will it be required or elective? What are the pre-requisites and who is the target audience?
- What is the potential impact? Faculties are discouraged from developing courses whose only motivation is their interest in a highly specific topic. Other scholarly venues such as writing a book, chapter or review article may be more appropriate for this goal.

#### Logistics:

A description of the nature of the course is needed to determine the type of resources that it will need to be executed. For example, a small seminar vs. a large lecture vs. a hands-on laboratory course each requires different classroom settings and support personnel or materials.

The faculty program committee, in conjunction with the department chair, will make recommendations about how the course should be scheduled (3 times a week for 1 hour, twice a week for 90 minutes, etc.) but undergraduate courses must conform to block scheduling as required by the organizing power, i.e. the Wallonia-Brussels Federation. The semester (first, second, and/or summer) should also be specified. A tentative course title, catalog description and proposed mnemonic must also be included. It is recommended that the faculty program committee contacts the Director of the Academic Affairs Department for advice and/or planning assistance in completing these requirements.

#### Academic Affairs Department and Dean's Office Discussion

After approval at the faculty program committee level, a discussion between the Chair and Dean's office will offer an opportunity for placing the proposed course within the context of the mission of the faculty.



Following this discussion, it is recommended that the Chair announces plans for a new course at an Academic Affairs Commission (AAC) meeting so that there is discussion of any potential overlap and synergies with existing courses in the different faculties.

Approval by the Dean's office will consider the Chair's recommendation with respect to departmental budget, faculty load and academic appropriateness, also considering additional factors in teaching needs across the faculties, Mons University budget planning procedures, and the AAC discussion, as applicable.

#### Council of Administration

Submission to the UMONS Council of Administration for approval is the final step in deciding the establishment of a new course.

#### Registrar and Committees

After Council of Administration approval, the Director of the Academic Affairs Department will work with the Registrar (secretariat of faculty) to schedule the initial offering of the proposed course, considering that classroom schedules are established for the next semester during the first 2-3 weeks of the current semester.

Where applicable, information about the new course should be made available to the Academic Services Center and program directors.

After the new course has been taught once, the concerned Faculty program committee (Grad, Undergrad or both for cross-listed courses) shall examine student feedback and review the syllabus and propose comments.

Whenever needed, the instructor will be invited to meet with the faculty program committee to discuss the course and future plans for it.

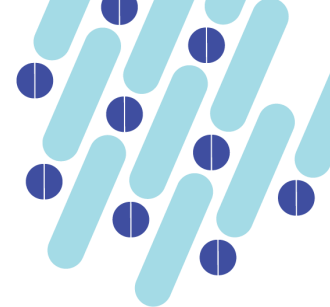
The committee will ask questions, offer comments, and make suggestions as appropriate. In unusual but well-justified cases, the committee may recommend that a course not be offered again without substantial revisions. In this case, the instructor, Chair and Dean will convene to discuss, resolve, and implement the identified issues.

### **The curriculum approval process of the University of Salamanca**

#### PROCEDURE FOR THE APPROVAL OF THE DEGREE IN MEDICINE AT THE UNIVERSITY OF SALAMANCA

Currently the curriculum of the Faculty of Medicine was updated and renewed in 2021. The curriculum is currently valid and will be subject to renewal and potential course additions as deemed necessary. Starting with the new curriculum in the academic year 2022 / 2023. Once the Project has been prepared by the Study Plans Commission of the Faculty of Medicine, it has gone through the following procedures:

- Evaluation by the Teaching Commission of the Faculty of Medicine of the University of Salamanca
- Obtaining the endorsements of the Departments involved in the teaching
- Approval by the Faculty of Medicine Board
- Presentation of the report to the Vice-Rector's Office for Teaching and Innovation in Education
- Evaluation by the Teaching Council of USAL
- Public exhibition to the University Community



- Report of the Teaching Commission
- Report of the Committee on Economic Affairs
- Report of the Teaching Staff Committee
- Favourable report of the Social Council
- Favourable Report of the Governing Council
- Dumping in RUCT
- Application to ACSUCYL and Junta de Castilla y León

### **The curriculum approval process of the University of Thessaly**

The curriculum of the Medical School in University of Thessaly uses a two-year curriculum and it was last updated in 2022.

To add a new course to the teaching material, lectures or laboratories / departments with a related scientific subject, the professor responsible proposes the course along with the corresponding curriculum to the Medical School Educational Committee, which have to contain: contents of the course, hours, lecturers, necessity, ECTS, Semester and relation to the general scientific field of the School.

The Educational Committee, if agrees, proposes the course to the Medical School General Assembly. If the General Assembly votes positively, then the course is included in the School curriculum and will be offered to the medical students in the following academic year.

### **The curriculum approval process of the Turku University of Applied Sciences**

TUAS curriculum process is a continuous review of courses and contents. Curriculum year starts in August and ends in July next year. There is a certain timeline and procedure that must be followed if curriculum were to be changed. Any changes that are to be implemented to the upcoming curriculum year must be done prior to 1st of February of that year.

Curriculum changes can be initiated by staff responsible for respective competence track studies. These changes are then introduced to the respective degree program leader who in collaboration with other degree program leaders approves the change and proposes it to the head of education and research. After approval from the head of education and research curriculum changes are proposed to the dean for final approval. This must be by latest 31.1. All necessary information regarding course contents, workload, learning objectives, pre-requisites, target audience and approval methods must be added to Peppi information system prior to the deadline.

## **4.3.2 AIIS course validation**

Course validation can be defined as the process of assessing and verifying the quality, content, and effectiveness of an educational course or program. This process is often carried out by educational institutions, accrediting bodies, or regulatory agencies to ensure that a course or program meets certain standards and objectives. Course validation



plays a pivotal role in maintaining educational quality and ensuring that students receive a valuable and meaningful learning experience. (Church 1988, Ellis 1995.)

The validation of the AIIS course was carried out as a post-development evaluation. At the outset, our intention was to incorporate the System Usability Scale (SUS) (Brooke J 1996) and Community of Inquiry (CoI) (Garrison 2007) assessments. However, it was determined that WP7 would employ these assessments for quality evaluation, which occurred after the activities in WP3. Consequently, these assessment measures were excluded from the course validation conducted in WP4.

Validation for the AIIS course was performed using an electronic, multiple-choice questionnaire at the transnational meeting held in Turku on April 20, 2023. The questionnaire consisted of 114 questions categorized into 14 different sections. Attendees of the transnational meeting participated in responding to the validation questionnaire [Qvalio](#) © (University of Turku, Department of Nursing Science). The demographics of the respondents can be seen in table 3.

**Table3: Demographics of the respondents**

Respondents (n=14)	n	%
<b>Position</b>		
Teaching staff	6	43
Other HEI staff	4	29
Company representative	4	29
<b>Number of respondents per institution</b>		
University of Salamanca	1	7
University of Mons	2	14
Turku University of Applied Sciences	2	14
University of Turku	5	36
MEUS	1	7
CIBER	1	7
Xebia	1	7
SciFY	1	7
<b>Participation in the design and implementation of the AIIS course</b>		
Yes	10	71
No	4	29
<b>Familiar with the AIIS course curriculum</b>		
Very familiar	8	57
Somewhat familiar	5	36
Slightly familiar	1	7
Not at all familiar	0	0

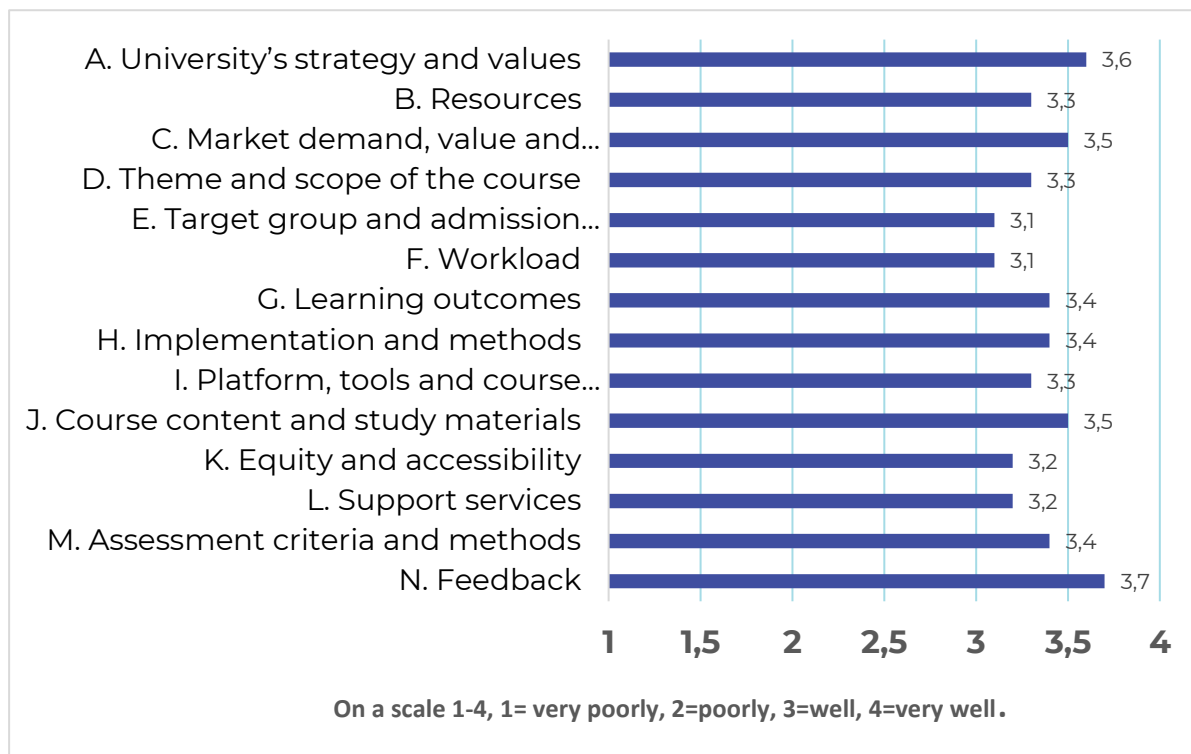




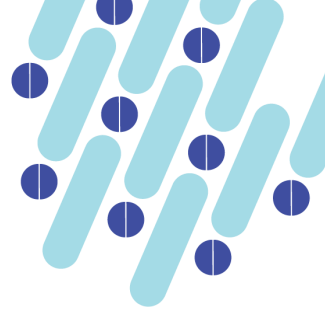
The respondents were asked to rate how well each statement was implemented in the design and implementation of the AIIS course, on a scale from 1 to 4. If a statement wasn't relevant or it couldn't be evaluated, it was also possible to choose "not applicable". On a scale 1-4, 1= very poorly, 2=poorly, 3=well, 4=very well.

The overall results indicated that the topics assessed in the validation were well implemented in the AIIS course with the total score of 3.4.

**Table 4. The design and implementation of AIIS course**



However, some topics for improvement were identified in the following themes: course planning and organizing, communication and transparency, and student-centricity. These items were rated under 3 or on a scale 1-4 (1=very poorly, 4=very well). In a theme of course planning and organizing financial resources, technical support, skills and knowledge of staff (previous experience of AI) and clearer roles and responsibilities in course preparations, needed to be improved. In a theme of communication and transparency improvements identified as follows: clearer information about target group and previous skills/knowledge requirements, workload should be more realistically calculated and indicated to students. Also, information about platforms and applications prior to the course, and also more attention should be paid to copyright information of the learning materials. As in terms to student-centricity: summaries should be made; equity and accessibility should be improved upon (e.g. use of different devices, individual choices and needs, access to platform); support should be available quicker; diversity and inclusiveness of assessment methods. Also, learners could be more involved in developing the course (learning outcomes).



## 4.4 A strategy to increase the visibility of the programme, creation of a network

The AIIS course was tested and piloted in autumn 2022 with the students of five consortium universities. The course was offered as an optional course. 101 students participated and completed the course. The consortium goal is to extend the network to our target audience universities and companies working on healthcare.

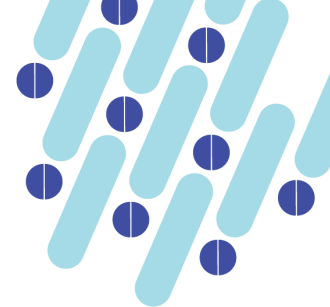
Partners started to implement their strategy of recruitment of new universities and companies for the creation of a network of interested entities which will foster the recognition of the training. Partners will identify HEIs and companies of interest for the creation of an AIIS network and will organize dissemination meetings (T6.4 Organization of dissemination meetings) with representatives of these target groups to present them with the results achieved with the project and raise their interest. When possible, these dissemination meetings will lead to the signature of letters of interest and concrete involvement in the exploitation of the project products. (T4.5 Involvement of new universities in AIIS projects & T4.6 Involvement of AI and IT companies working on healthcare in mobility programmes.)

The medical curriculum is reasonably full at every university. In the pilot phase, the course was offered as an optional course, but the working group and the consortium agreed that it would be useful to extend the course beyond medical students and engineers. It would be useful to offer the course to other health-related disciplines in addition to medical and engineering students. Polytechnics could also be a good option in addition to universities.

Several issues were discussed with the working group and the consortium, which should be clear before the AIIS course is taken to other universities or companies. Issues for example:

- What are we offering? Is it the whole Platform or only the content?
- Who is responsible for updating the platform?
- Does the platform cost?
- What is expected from teachers?
- Who instructs the teachers, tutors?
- What material do teachers need?
- What is the companies` role?

Our aim was to present the course content and platform. We were reaching out to universities and companies, inquiring about their interest, and encouraging their involvement in this project.



#### 4.4.1 Specific objectives to increase the network

To ensure AIIIS long-term sustainability our aim was to increase the network. Dissemination meetings were and will be organized with identified organizations having potential interest in the project. After presenting our results these dissemination meetings will culminate in the signing of letters of interest and active participation in the utilization of project outputs. A template for the letter of interest was designed by the WP4 working group. There were different letters of interest for universities and for companies.

##### **Guidelines for recruitment**

We were aiming for support letters from 5 European universities and 10 companies.

- Universities that teach medical students or other health related disciplines and engineering students
- Companies of AI and IT companies working on healthcare
- All partners have to recruit letters of interest
- The primary focus for our efforts is within Europe, but we are also considering the possibility of involvement from third countries.

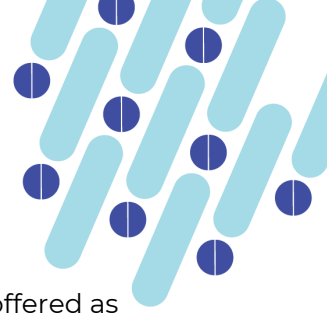
The companies show with the letter of interest that they are interested in sharing their ideas and experiences with students.

A comprehensive list of stakeholders and organizations interested in our project was created. Dissemination meetings were organized, both online and onsite. Potentially interested universities and company representatives were invited to the dissemination meetings. The results of the AIIIS project were presented to them. Then the university and company representatives had the opportunity to sign the letter of interest. The final event was organized in Salamanca in September 2023. The aim was to present the project outcomes, to disseminate project results and networking with other Universities from Europe.

Following several dissemination meetings, signed letters of interest were secured from both university and corporate representatives. In total, 16 distinct universities participated, with six individual letters of interest from separate universities, as well as one letter of interest from a consortium of ten universities. Additionally, letters of interest were endorsed by representatives from six diverse companies.

#### 4.4.2 Recommendations for the collaboration framework within this network, terms of the share of the training contents and method of implementation, etc.

As a result of this project the AIIIS programme was developed and piloted in 5 universities. For the AIIIS program to attain official recognition from the university, the course must be incorporated into the official curriculum, taking into consideration the distinct procedures



of various universities, which may exhibit slight variations. The pilot course was offered as elective course.

The target audiences are Universities and companies of AI and IT companies working on healthcare. The AIIS programme was designed to medical students and engineers. We aspired to ensure its future dissemination to a broader audience of other health students. The Dissemination of the project results was done by presenting the results for the target audiences by several different forms as in the final event, different conferences, news in social media etc. and smaller dissemination meetings. Additional project updates will be accessible through our social media channels and on the dedicated project website. Preserving the valuable knowledge generated is of paramount significance.

#### Intellectual Property Management

The course content developed in the project will be available to all consortium members and later also to other universities that will include the course in their curricula. The AIIS course was offered on a virtual reality platform.

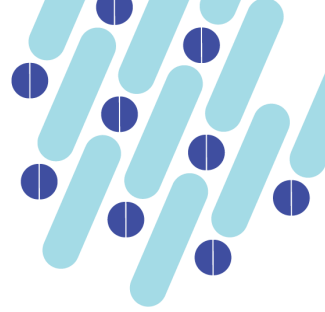
UMONS has implemented the course. UMONS is currently offering to course to students. UTH has started the procedures for the integration of the AIIS program in the University of Thessaly curriculum. USAL has the intention of including the course as an optional course for medical students next academic year. UTU intends to introduce this course as an optional study for medical students. UTU is interested in using the produced course materials with the aim of customizing them for the benefit of other students in health sciences (e.g. the biomedical and nursing sciences).

Several universities and companies have expressed keen interest in the project. Notably, ten European universities have expressed their intent to incorporate the program into their curricula, and some of the pilot universities continue to actively offer the course. This ongoing commitment is of paramount importance for ensuring the program's long-term sustainability and underscores the substantial impact the project has achieved.

#### **Collaboration Framework for the AIIS network**

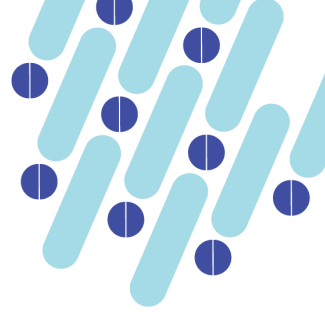
The project that created a medical course for medical students has garnered interest from several universities and companies. Our aim was to expand and deepen collaboration with interested universities and companies to facilitate the integration of the course into their curricula and to provide benefits to all stakeholders.

Universities interested in offering the course and integrating it into their academic programs can do so. They can use the teaching materials and resources developed by the consortium. The consortium will provide support during the course integration process and assist universities as needed. In the future, the course will be available on the Moodle platform, making it easier for universities to adopt it. As for communication: We will provide updates, news, and resources through our social media channels. The project's website will offer up-to-date information about the course and its development. This collaboration enables wider utilization of the course and offers valuable learning opportunities for students. It also enhances the visibility and impact of the project.



**Table 5. The Exploitation roadmap**

Actions	<ul style="list-style-type: none"> <li>• The AIIS programme is integrated in universities curricula.</li> <li>• Expanding the network for new universities and companies</li> </ul>
Roles	The AIIS Consortium provides support to new universities seeking to integrate the course into their curricula. This support includes sharing course content and offering assistance. The AIIS network promotes the addition of the AIIS course to curriculum and launches the course. The companies of AI and IT companies working on healthcare in collaboration with universities.
Milestones	New universities, new students participating the course, new companies. Expanding to new health areas.
Financial costs	Recourses, personnel, platform, technical
Revenues	Projected revenues and eventual profits
Other sources of coverage	Project grants, national incentives
Impact in 3-year time	The AIIS course is expanding outside Europe



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