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Artificial Intelligence and Soft Skills in the Healthcare Sector

Organised by
University of Mons

1. IDENTIFYING DATA.																	
· Course Name.	Artificial Intelligence and Soft Skills in the Healthcare Sector																
· Coordinating University.	University of Mons																
· Partner Universities Involved.	-																
· Course Field(s).	Medical sciences																
· Related Study Programme.	Part of the bachelor program in medical sciences at the Faculty of Medicine and Pharmacy																
· ISCED Code.	ISCED 6																
· SDG.	3																
· Study Level.	B																
· EUNICE Key Competencies	<ul style="list-style-type: none"> • Green – strongly • Orange - moderately • Red – partially • Blank cell - not at all 																
	<table border="1"> <tr> <td>Problem solving</td> <td></td> </tr> <tr> <td>Teamworking</td> <td></td> </tr> <tr> <td>Communication</td> <td></td> </tr> <tr> <td>Self-management</td> <td></td> </tr> <tr> <td>Cognitive flexibility</td> <td></td> </tr> <tr> <td>Digital competence</td> <td></td> </tr> <tr> <td>Technical competence</td> <td></td> </tr> <tr> <td>Global intercultural competence</td> <td></td> </tr> </table>	Problem solving		Teamworking		Communication		Self-management		Cognitive flexibility		Digital competence		Technical competence		Global intercultural competence	
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· Number of ECTS credits allocated.	3 ECTS
· Mode of Delivery.	Online live with self-study activities
· Language of Instruction.	English
· Course Dates.	Winter Semester
· Precise Schedule of the Lectures.	Self-learning activities will open on 1 October and must be completed by 31 October. These activities must be completed before the group challenge begins and the live sessions start. The schedule for the live sessions will be communicated by the professor following student enrolment.
· Key Words.	Artificial Intelligence; healthcare sector; machine learning; problem solving; knowledge representation; machine vision, self-motivation; work attitude, work ethic, flexibility, teamwork, cooperation
· Catchy Phrase.	Through training in AI and soft skills based on real-world cases, and by working in multidisciplinary teams, students will develop into more effective professionals by incorporating AISS training materials into their medical education.

· Prerequisites and co-requisites.	<ul style="list-style-type: none"> - Good command of the English language - Basic knowledge in statistics
· Number of EUNICE students that can attend the Course.	Unlimited
· Number of EUNICE students that can attend the course per institution	Unlimited
· Course inscription procedure(s).	Through the EUNICE website

2. CONTACT DETAILS.

· Department.	Computational Medicine and Neuropsychiatry
· Name of Lecturer.	Giovanni Briganti
· E-mail.	Giovanni.briganti@umons.ac.be
· Other Lecturers.	Y. Dilara Parry

3. COURSE CONTENT.

The “Artificial Intelligence” learning activity will consist of:

- Introduction to AI
- Expert systems and their role in the healthcare sector
- Introduction to machine learning
- Applications of machine learning in healthcare
- Introduction to machine vision
- Image recognition in the healthcare sector

The “Soft Skills” learning activity will consist of:

- Self-awareness and initiative
- Adaptability to different situations
- Communication
- Teamwork
- Work organisation
- Professional ethics

The “Reality-Based Challenge” learning activity will consist of:

Work will be organised in international groups. Each group will be assigned a challenge in the form of an anonymised dataset derived from real-world practice. Groups will be required to analyse their data in order to extract clinically relevant insights and to present their work publicly.

All of these modules aim to stimulate learners’ creativity and entrepreneurial mindset, while fostering a thoughtful approach to AI and the development of effective and ethical working practices.

4. LEARNING OUTCOMES.

- Describe, organise, analyse, and prioritise phenomena observed in the medical field
- Master molecular, morphological, and functional approaches to both normal and pathological conditions
- Demonstrate interpersonal skills within a medical context
- Develop critical reasoning skills
- Manage resources effectively
- Manage their studies independently
- Act as responsible practitioners

5. OBJECTIVES.

This teaching unit aims to (i) provide participants with a high-level understanding of AI currently prevalent in the healthcare sector so that they can critically assess the contribution of various AI solutions to their work environments, reflect on AI proposals for the healthcare sector, adapt their

working practices to facilitate the integration of AI and propose new cases that can be developed by AI; and (ii) to develop soft skills useful for the training of the doctor, to give the student the tools for a better self-knowledge, an ability to adapt to different situations, to communicate, to work in a team, to organize his work and to apprehend ethical issues.

6. COURSE ORGANISATION.

UNITS

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|----|--|
| 1. | Artificial Intelligence (27 hours of theory) |
| 2. | Soft Skills (30 hours) |
| 3. | Reality-based Challenge (30 hours of practical work) |

LEARNING RESOURCES AND TOOLS.

Online videos on Moodle EUNICE

PLANNED LEARNING ACTIVITIES AND TEACHING METHODS.

Self-learning activities and group challenge

7. ASSESSMENT METHODS, CRITERIA AND PERIOD.

- Participation in the “Artificial Intelligence” and “Soft Skills” courses and webinars is compulsory and evaluated through graded exercises.
- Full (100%) participation is required.
- The final assessment will consist of a presentation covering the “Artificial Intelligence”, “Soft Skills”, and “Reality-Based Challenge” learning activities.
- **The final grade will be determined based on the oral presentation.**

OBSERVATIONS.

8. BIBLIOGRAPHY AND TEACHING MATERIALS.

All teaching materials are already available on the Moodle platform.