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ERASMUS+ PROGRAMME

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MediTec:

Training for Medical Education via Innovative e-Technology

WP1: Preperation and State of Art

WP1 Leader: Lalit Garg



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Introduction

As a part of the project there will be several training courses to be organized by the EU-partner institutions:

1. University of Malta [UM], Malta;
2. Univerzita Pavla Jozefa Safarika v Kosiciach [UPJS], Slovakia; and
3. Masarykova Univerzita [MU], Czech Republic.

The audience of these training courses will be from the non-EU partner institutions:

1. Jordan University of Science and Technology [JUST], Jordan
2. The University of Jordan [UJ], Jordan
3. Hashemite University [HU], Jordan
4. Princess Sumaya University for Technology [PSUT], Jordan
5. University of Duhok [UoD], Iraq
6. University of Baghdad [UoB], Iraq
7. University of Basra [UOB], Iraq
8. Tehran University of Medical Sciences [TUMS], Iran
9. Iran University of Medical Sciences [IUMS], Iran
10. Yarmouk University [YU], Jordan

This report is summarizing the outcome of a survey carried out to understand the resources available at the EU-partner Institutions and feedback (needs and interests) of the non-EU partner institutions.

Proposed training courses

There are three training courses are proposed by UM, eleven training courses are proposed by UPJS and two training courses are proposed by MU. The proposed dates are during November, January and February. (UPJS initially proposed dates in August, and yet considering the new dates in November). These trainings need to be completed before April 15th, 2019. These can take place independently, preferably first at UPJS, then at UM and then at MU.

Topics for Academics

Malta	Learning Outcomes			Proposed Date
Advances in Medical Education	Design and deliver effective teaching sessions	Reflect on own teaching performance and provide feedback to others	Recognise when their students are/are not learning	Jan 30 th to Feb 02 nd , 2019 inclusive
Dental curriculum Review and Update	Observe the implementation of the UOM Faculty of Dentistry curriculum	Obtain feedback on specific aspects of the dental curriculum	Incorporate novel elements to update the dental curriculum	Jan 30 th to Feb 02 nd , 2019 inclusive
Health Systems Management, Leadership and Informatics	Explain the basic tools, methods of health systems management, leadership and informatics for optimal	Design training on the basic tools, methods of health systems management, leadership and	Update curriculum for medical students by including health systems	Jan 30 th to Feb 02 nd , 2019 inclusive



	performance and quality of healthcare delivery	informatics for optimal performance and quality of healthcare delivery	management, leadership and informatics for optimal performance and quality of healthcare delivery topics	
Slovakia				
Nursing Care	Observe main tools and simulations used in education of nursing care at UPJS.	Design trainings of practical skills in applying bandages, administration of parenteral medication etc.	Utilise communication skills. Identify, recognize and discern selected legal and ethical issues in nursing.	November 21 st to 24 th , 2019 inclusive.
Medical Physiology	Understand Human physiology and background of Sleep medicine, Sleep apnoea and Sleep laboratory.	Observe research in the field of ongoing research in sleep medicine, manage Sleep laboratory and prepare a		November 21 st to 24 th , 2019 inclusive.



		patient for sleep study.		
Medical Informatics	Explain basic concepts of Evidence-Based Medicine.	Understand background of online tools and platforms used in medical education at UPJS.		November 21 st to 24 th , 2019 inclusive.
Forensic Medicine	Methods in forensic medicine, medico-legal expertise, examination and autopsy, laboratory investigation and cooperation with external institutions.	Death certification. Autopsy protocol. Medico-legal statistics and individual cases.		November 21 st to 24 th , 2019 inclusive.
Experimental Medicine	Understand gut microbiota and gut barrier in health and disease. New findings on the effects of lactobacilli in experimentally induced colorectal carcinoma in rats.	Realize in vitro study of the human gut microbiota using SHIME® model.	Observe application of omega-3 PUFAs in prevention of chronic diseases.	November 21 st to 24 th , 2019 inclusive.

Human Anatomy	Cadavers and education movies based on real dissections.	Real dissections in dissecting rooms.	Our way of teaching human anatomy (lectures and practical lessons).	November 21 st to 24 th , 2019 inclusive.
First Aid in Health Care Disciplines	Simulations in anaesthesia and intensive care, first aid, critical decisions. Critical decisions and important steps in patients with loss of consciousness and circulatory arrest.	Airway management and ventilatory support during failure of respiration.	Defibrillation and cardioversion .	November 21 st to 24 th , 2019 inclusive.
Neonatology	New technologies in prenatal and neonatal care. Patient's repositories.	Serving all necessary interventions, noninvasive ventilation, conventional ventilation, HFO and iNO.		November 21 st to 24 th , 2019 inclusive.
Dental Medicine	Practical training of preclinical subject of Dental medicine -	Practical training of various clinical subject of Dental medicine.		November 21 st to 24 th , 2019 inclusive.



	Propaedeutic of Dental Medicine.			
Cardiovascular Diseases	Advances in heart diseases management. Interventions and diagnostics in 21st century.			
Biomedical engineering	Advances in custom implants, materials and technologies.	Observe additive manufacturing procedures.	Discuss imaging systems including x- ray, CT, MRI, Ultrasound, gamma camera	November 21 st to 24 th , 2019 inclusive.
Czech Republic				
HC quality management concepts	defining quality, measuring quality, understanding existing quality approaches, implementing HC quality, understanding needs of HC stakeholders	ability to use simple tools and processes for evaluation and implementation of quality improvement, understanding and practical use of teams and teamworking		January 7th. through February 7th. 2019



<p>HC digital environment - Information society transformation of HC services</p>	<p>understanding the logics of societal change, get insight into oportunities, limitations and risks at the turnover of a society from one to another (industrial society into information society), reflect on the right habbits, instincts and reflexes (behavior) in th framework of a given society</p>	<p>ability to make decisions on when and how to use digital support in HC rather than just re-using what others have already done, ability to identify and propose "inventive digital solutions" for issues of everyday HC services</p>		<p>January 7th. through February 7th. 2019</p>
<p>Imaging methods in medicine, Electronic library university resources, EBM</p>	<p>Exploring possibilities of imaging methods in medicine as support in medical decision making, understanding the principles of existing imaging methods in order to minimize risks and maximize benefits from digital imaging, exploring existing</p>	<p>Better understanding of medialized (transformed - "secondhand") information</p>		<p>January 7th. through February 7th. 2019</p>



	online resources with respect to medical decision-making in the contextual shift from "eminence-based medicine/authorities based medicine" to evidence based medicine			
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Topics for Students

Malta	Learning Outcomes			Proposed Date
Students as Teachers (Peer Assisted Learning)	Design and deliver effective teaching sessions	Reflect on own teaching performance and provide feedback to others	Recognise when their students are/are not learning	Jan 30 th to Feb 02 nd , 2019 inclusive
Case Based Clinical Anatomy Revision Course	Apply regional anatomical knowledge to case-based clinical situations			Jan 30 th to Feb 02 nd , 2019 inclusive
Health care informatics	Explain the basic tools and methods of health care informatics and their applications			Jan 30 th to Feb 02 nd , 2019 inclusive
Slovakia				
Nursing Care	Use tools and simulation equipment in nursing care.	Gain practical skills in applying bandages, administration of parenteral medication etc. through trainings running in the	Utilize learned skills to communicate effectively with patient and team members.	November 21 st to 24 th , 2019 inclusive.

		simulation laboratories.		
Medical Informatics	Understand principles of Evidence-Based Medicine.	Describe medical data and perform their statistical analysis.	Use software tools and simulations integrated in education of medical students at UPJS.	November 21 st to 24 th , 2019 inclusive.
Human Anatomy	Cadavers and education movies based on real dissections.	Real dissections in dissecting rooms.	Our way of teaching human anatomy (lectures and practical lessons).	November 21 st to 24 th , 2019 inclusive.
First Aid in Health Care Disciplines	Simulations in anaesthesia and intensive care, first aid, critical decisions. Critical decisions and important steps in patients with loss of consciousness and circulatory arrest.	Airway management and ventilatory support during failure of respiration.	Defibrillation and cardioversion .	November 21 st to 24 th , 2019 inclusive.

Medical Physiology	Will learn about sleep medicine, difference between types of respiratory disorders during sleep. Polysomnography as diagnostic method in sleep medicine, how to diagnose obstructive sleep apnoea and how to treat it.	Interpretation of polysomnographic recordings and results of overnight polysomnography . How to prevent obstructive sleep apnoea. What to do recommendation for the patients.		November 21 st to 24 th , 2019 inclusive.
Dental Medicine	Practical skills of conservative medicine, prosthetics, dentoalveolar surgery on models, on trainers.	Practical skills of various department of Dentistry.		November 21 st to 24 th , 2019 inclusive.
Czech Republic				
Biophysics and instrumental techniques				January 7th. through



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				February 7th. 2019
Practicals in biophysics				January 7th. through February 7th. 2019
Collaboratio n and teamworkin g in HC				January 7th. through February 7th. 2019



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Training interest survey

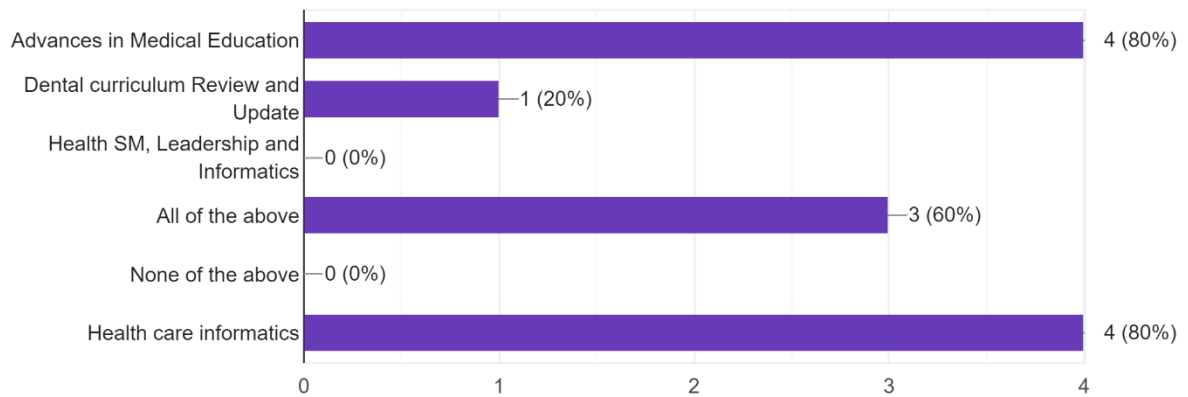
As a part of the project there will be several training courses to be organised by the EU-partner institutions (UM, UPJS, and MU). The audience of these training courses will be from the non-EU partner institutions (JUST, UJ, HU, PSUT, UoD, UoB, UOB, TUMS, IUMS and YU). Another survey is carried out to gather feedback and information about the potential attendees of these courses. The responses were provided by only 5 institutions:

1. Princess Sumaya University for Technology [PSUT], Jordan
2. University of Duhok [UoD], Iraq
3. Jordan University of Science and Technology [JUST], Jordan
4. The University of Jordan [UJ], Jordan
5. Hashemite University [HU], Jordan

The interest in the training courses at the University of Malta:

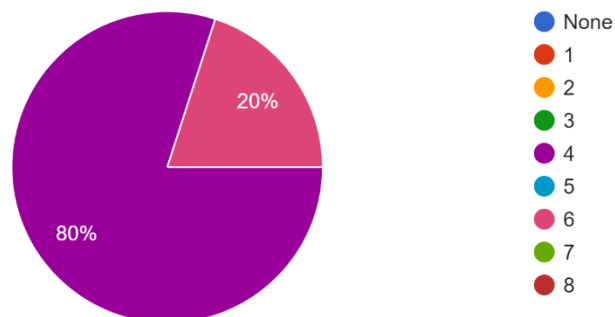
Which training courses at UM, Malta you would like to attend:

5 responses



How many participants from your institute will attend one of more training courses at UM, Malta:

5 responses



Here the Princess Sumaya University for Technology [PSUT], Jordan proposed 6 participants and all other would like to send only 4 participants.



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Name of the participants from your institute will attend one of more training courses at UM, Malta:3 responses

The University of Jordan [UJ], Jordan

1. Prof. Ahmed Al- Salaymeh
2. Prof. Nathir obiedat
3. Prof. Dia Abu alnadi
4. Dr. Yazan Hassouneh

Princess Sumaya University for Technology [PSUT], Jordan

1. Prof. Walid A. Salameh
2. Dr. Murad Ahmad Jallad
3. Dr. Fadi R. Shahroury
4. Eng. Omar Hisham Alasali
5. Mr. Yazan Abdallah AbuYaghi
6. Miss. Rosana Marar

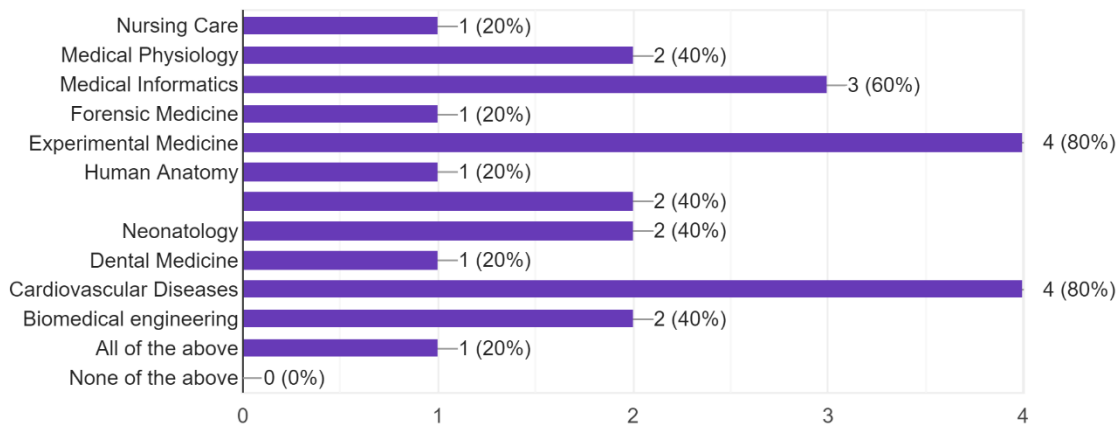
Hashemite University [HU], Jordan

1. Prof. Ahmad Al-Khasawneh
2. Dr. Aiman Al Sharei
3. Dr. Mohammad Al-Tamimi
4. Dr. Bashar Hammad

The interest in the training courses at the Univerzita Pavla Jozefa Safarika v Kosiciach [UPJS], Slovakia:

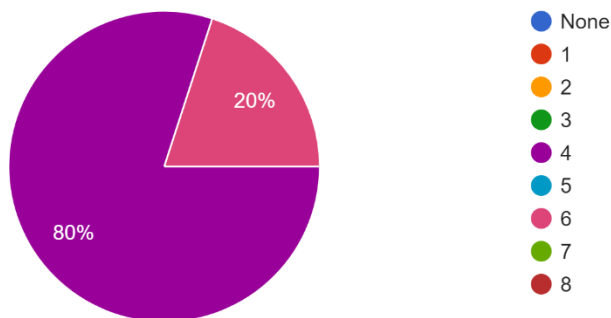
Which training courses at the UPJS, Slovakia you would like to attend:

5 responses



How many participants from your institute will attend one or more training courses at the UPJS, Slovakia:

5 responses



Here the Princess Sumaya University for Technology [PSUT], Jordan proposed 6 participants and all other would like to send only 4 participants.



Name of the participants from your institute will attend one or more training courses at the UPJS, Slovakia: 3 responses

The University of Jordan [UJ], Jordan

1. Prof. Ahmed Al- Salaymeh
2. Prof. Nathir obiedat
3. Prof. Dia Abu alnadi
4. Dr. Yazan Hassouneh

Princess Sumaya University for Technology [PSUT], Jordan

1. Prof. Walid A. Salameh
2. Dr. Murad Ahmad Jallad
3. Dr. Fadi R. Shahroury
4. Eng. Omar Hisham Alasali
5. Mr. Yazan Abdallah AbuYaghi
6. Miss. Rosana Marar

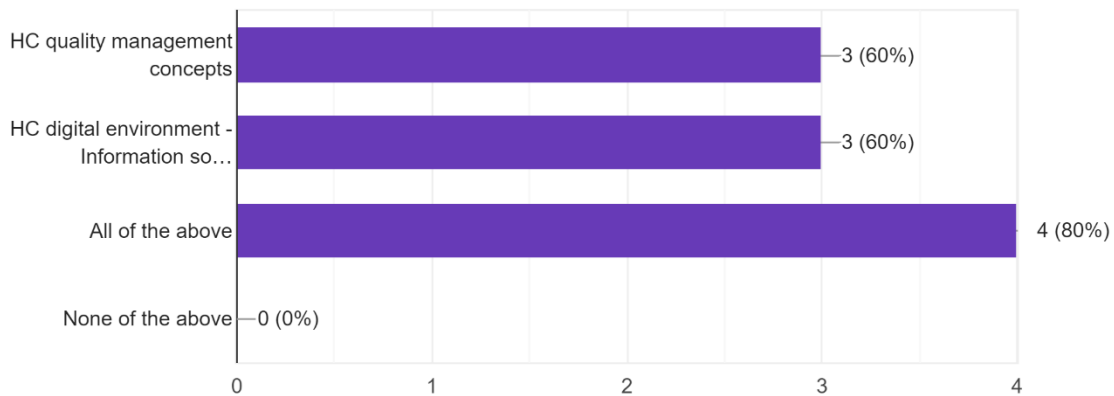
Hashemite University [HU], Jordan

1. Prof. Ahmad Al-Khasawneh
2. Dr. Aiman Al Sharei
3. Dr. Mohammad Al-Tamimi
4. Dr. Bashar Hammad

The interest in the training courses at the Masarykova Univerzita [MU], Czech Republic):

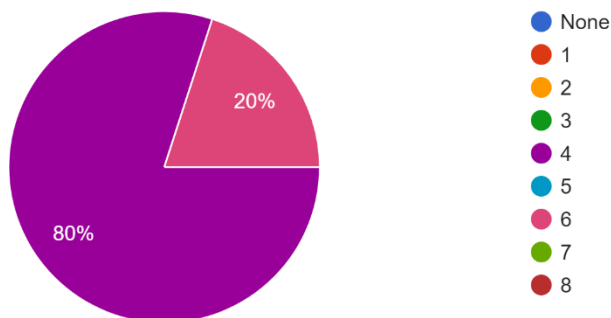
Which training courses at the MU, Czech Republic you would like to attend:

5 responses



How many participants from your institute will attend one or more training courses at the MU, Czeck:

5 responses



Here the Princess Sumaya University for Technology [PSUT], Jordan proposed 6 participants and all other would like to send only 4 participants.



Name of the participants from your institute will attend one or more training courses at the MU, Czeck:3 responses

The University of Jordan [UJ], Jordan

1. Prof. Ahmed Al- Salaymeh
2. Prof. Nathir obiedat
3. Prof. Dia Abu alnadi
4. Dr. Yazan Hassouneh

Princess Sumaya University for Technology [PSUT], Jordan

1. Prof. Walid A. Salameh
2. Dr. Murad Ahmad Jallad
3. Dr. Fadi R. Shahroury
4. Eng. Omar Hisham Alasali
5. Mr. Yazan Abdallah AbuYaghi
6. Miss. Rosana Marar

Hashemite University [HU], Jordan

1. Prof. Ahmad Al-Khasawneh
2. Dr. Aiman Al Sharei
3. Dr. Mohammad Al-Tamimi
4. Dr. Bashar Hammad

Feedback on the courses

The feedback we received from the non-EU partner institutions is as follows:

1. Wisam A. Shihadeh found that the Health informatics training course proposed by UM is quite similar to the Medical Informatics training course proposed by UPJS.
Response: Both courses are quite different and there is no or minimal overlap between them. Also, now the course has been changed to "Health Systems Management, Leadership and Informatics"
2. Wisam A. Shihadeh wondered if the Dental curriculum Review and Update training course proposed by UM is within the scope of MediTec.
Response: Yes the dental curriculum is a part of medicine education at UM and it is within the scope of MediTec.
3. Wisam A. Shihadeh also like to have real dissection of cadavers in legal cases included in the Experimental Medicine training course proposed by UPJS.
Response: A brilliant suggestion and will surely be considered.
4. Fahmi Rub asked if the Biophysics and instrumental techniques training course proposed by MU is related to medical education and if yes, at what level of the study.
5. kusai al-muqbel suggested to add sectional imaging (radiological anatomy) in the Human Anatomy training course proposed by UPJS.
6. kusai al-muqbel suggested to discuss imaging systems including x-ray, CT, MRI, Ultrasound, gamma camera as a part of the Biomedical engineering training course proposed by UPJS.
7. kusai al-muqbel expressed his interest toward the Practicals in biophysics training course proposed by MU, particularly for understanding physical background of radiology.
8. Mohamad Sadegh Ghasemi proposed to have all training courses together to help with the visa. He commented: "Please Note: Should



- not all training be at the same time for other institution. Here in Iran we have to get entry visa for those countries, which are running the programs. At least we need 8 weeks for applying for entry visa. Therefore you need to reconsider the training time and invitation letters for participation.”
9. Initially UM also proposed the training course on “An introduction to Traditional Chinese Medicine“. However, as commented by Mandana Shirazi, this topic is very specific and it is not the same in all medical curriculum in those countries which is available in those countries which are involved in Medical Technology Project.
Response: After considering the comments, the proposed training course is withdrawn.
 10. Mandana Shirazi liked the idea of including team work in the training course proposed by UPJS “HC quality management concepts“. He commented: “Team work is mostly soft skill and communication skill is the most important domain of it. Which effects on inter personal communication.”

In general, there are positive responses and interest among the potential attendees of these training courses.