

Consultation with Industry Partners: Views of Respondents to Individual Courses on the MUBS Revised Programme

	Reviewer	Course name	Its importance and if you think it is valuable to add/change	Its appropriateness for Lebanon market/ and other	Any specific objective the course needs to meet not mentioned	General comment
	Rodolph issa	Introduction to Cybersecurity	Extremely important and valuable	Yes of course. It is appropriate across the globe and especially in countries adopting digital vision, such as the GCC countries	No	This is a very important course and talents with such skills are in high demand with high pay especially in KSA, where i am currently working
	Roger Kahwagi		Important	In typical development teams, security tools, libraries and standards are already defined and only need to be respected and integrated with new developments.	For specialization in cyber security	While these topics are important, I find it hard to imagine a fresh graduate joining a cybersecurity team, unless he's already into the hacking and cyber security scene. So I'm not sure what to recommend without having access to more details.
	Mohamad Moussawi		Extremely important and valuable	Cybersecurity is a very important topic	The goal is to establish a basis for further study in cybersecurity.	
	Salah Malaeb		important	it is needed for all systems	part of every course	Cybersecurity should not be a separate course but an integral part of every other course. It's not enough to give an introduction course, but it is a good practice to include such concepts in all courses.
	Rodolph issa	Introduction to Data Science and AI	Important and valuable	Not sure if it applies a lot in the Lebanese market, but surely it is applicable for the GCC countries	No	
	Roger Kahwagi		This topic is increasingly in demand.	Keeping in mind that Data Science/BI teams or AI teams don't interact daily with traditional developers, in the sense that you are either an application developer or a BI developer but very rarely both.	Needed for specific context	The course mentions data visualization tools, does this mean tools such as powerBI/Tableau?
	Mohamad Moussawi		optional	it is not helpful to find job in our area , could be Europe or US .	it is good to make it part of the curriculum	
	Salah Malaeb		optional			needed tools are only: Python, and R. (Matlab)

	Rodolph issa	Cloud Computing and Big Data	Very important and valuable	Same comment as above. This have a huge demand in the GCC in general and KSA in specific as there is a vision to bring most of the hyperscalers to KSA (Google cloud, Oracle OCI, Alibaba ...)	Not sure if Edge Computing can be considered part of it as it's becoming a requirement and many projects such as CCTV projects	
	Roger Kahwagi		Very important		many tools can be introduced for hands-one activities	I would make sure to include infrastructure as code and virtualization/containerization tools and techniques
	Mohamad Moussawi		mandatory	good for jobs .		
	Salah Malaeb		optional	Such databases are not relevant to our region.	used for project and software development	We should include github instead, as every programmer must be able to professionally use github
	Rodolph issa	Sustainable employability skills	Important and might be changed with something else	Yes, it is appropriate for Lebanon and across the globe	It might be a good idea to add to it change management and how to deal with it, especially in a world where most of the IT departments in the companies are being disrupted from normal business because of digitization and digitalization. Changes in the structure and organization is becoming more often and some cases, employees need to be coached on how to work in a matrix environment.	This is a course applicable to most of the careers and not something tailored for the ICT field.
	Roger Kahwagi		Very important			
	Mohamad Moussawi		very important	great to be taken for JOB .		
	Salah Malaeb		not relevant			We could teach students how to deal with emails, writing, replying, who to CC/BCC, what to write in the subject, body, and how to ask for an action. How to schedule their time and day (time management)
	Rodolph issa		Important and valuable	Yes	No	Basic course which was and remain a must for the developers

	Roger Kahwagi	Programming I	important	Given that most development is web based using one form of a client server architecture or another, it's important to include such aspects at a point in time in the curriculum.		I would also include under programming an introduction to micro services architecture and server to server communication models REST/RPC...
	Mohamad Moussawi		mandatory			Java is better
	Salah Malaeb		important, decide on a programming language C#			C# is an object oriented programming language available on all platforms, and it's much more used in business environments than Java. This course should replace Java.
	Rodolph issa	Database systems	Important and valuable	Yes	No	Basic course which was and remain a must for the developers
	Roger Kahwagi		No comment			
	Mohamad Moussawi		Mandatory	should be changed to be useful (see comments)	should highlight on new features	it should contain description on cluster . second course should be on oracle . database I database II .
	Salah Malaeb		Mandatory			SQL is a language that must be taught to every student, as it's one of the most used programming and data languages
	Rodolph issa	Mobile Application Development	important	good for jobs .	Interesting addition	
	Roger Kahwagi		Very important		many tools can be introduced for hands-one activities	I would make sure to include infrastructure as code and virtualization/containerization tools and techniques
	Mohamad Moussawi		Mandatory .	all mobile aspects should be covered		
	Salah Malaeb		Mandatory	highly used		
	Rodolph issa	Web Client Programming	Very Important and very valuable	Yes. This is applicable across the globe	No	
	Roger Kahwagi		Very important	Could be an impportunity to link web programming (client side programming) to server side programming while interfacing with a DB thus closing the end to end development cycle	Would not hurt to introduce at least one of the popular current frameworks such as angular or react	Big focus should be on CSS and responsive design
	Mohamad Moussawi		Mandatory .			
	Salah Malaeb		Mandatory	highly used		(HTML5, XHTML, CSS, JavaScript, multimedia).
	Rodolph issa	Advanced Java Programming	Important and valuable	Yes	No	Basic course which was and remain a must for the developers

	Roger Kahwagi	Python for Data Science	needs changes	I don't remember meeting anyone	Java is typically used as a	I cannot deny that java applications
	Mohamad Moussawi		Mandatory			
	Salah Malaeb		optional	Not relevant in business environments		
	Rodolph issa		Minor important and might be changed with a more relative/complex course	Yes	No	
	Roger Kahwagi		already covered	Regardless, I don't see Python as an in demand language outside of the BI realm	repeated content!!	Same description as the Object Oriented Programming course
	Mohamad Moussawi	optional				
	Salah Malaeb	optional			Python has a great library of GUI not Java based.	
Recommendations: <ol style="list-style-type: none"> 1. Agile development (not necessarily Scrum) and it's impact on the development processes and emergent architecture 2. Test Driven Development, Trunk Development and automated testing 3. CI/CD Continuous Integration and Continuous Deployment 4. OS courses specially for mobile OS (Android). 						