Industrial Internet of Things (IIOT)

Sector:	Manufacturing
Field:	Engineering
Provider:	Umm Al-Qura University
Program Code:	TBD
Approval Date:	TBD
Launch Date:	TBD

الجهة الإشرافية	الجهات الداعمة للبرنامج	الجهة المقدمة للبرنامج
National eLearning Center	Ministry of Industry and Mineral Resources	Umm Al-Qura University

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Program code	Level	sector	Field	Number of courses	Credit hours	Learning hours	Program duration	Language	Translation	fees	Launch Date	Learning start date	learning style
	Intermediate	Manufacturing		3	9	135 (45 hours per course)	12 weeks	English	TBD	TBD	TBD	TBD	Asynchronous

Program Description
The **Industrial Internet of Things (IIOT)** microprogram focuses on integrating IoT devices into industrial environments to optimize operations and improve efficiency. Learners will explore the technologies and protocols used in IIOT, along with real-world applications such as predictive maintenance, smart manufacturing, and asset management.

course1		course 2		course 3
course name	**Fundamentals of IIOT**	course name	**IIOT Tools and Platforms**	**IIOT Applications in Smart Manufacturing**
hours	3	hours	3	3

Admission requirements and conditions	Certification Requirements	Stackable micro-programs (Micro-Program codes) **Micro-programs that combined to form a degree**	Degree
• A bachelor's degree in engineering or information technology. • Basic knowledge of networking and data systems.	Successfully passing the final exam conducted by Pearson VUE. The passing grade is 70% and the following grading scale applies: 70-79: Good 80-89: Very Good 90-100: Excellent	TBD	Microprogram

Main Goal
To prepare learners to implement IIOT solutions that optimize industrial processes and improve operational efficiency in manufacturing and related industries.

Learning Outcomes
• Understand IIOT architecture and technologies. • Develop skills in configuring and managing IIOT systems. • Apply IIOT to enhance manufacturing processes and predictive maintenance.

Acquired Skills
• Sensor network design and management. • IIOT platform configuration and data analysis. • Implementation of IIOT for smart manufacturing and asset management.

Job Titles Related to the Micro-program
• IIOT Engineer
• Automation Engineer
• Systems Integration Specialist

Brief description of the Micro-program's courses	
Course Name 1	**Fundamentals of IIOT**
Course Description	This course introduces the core concepts of IIOT, including sensor networks, communication protocols, and the role of cloud computing in IIOT ecosystems.
Course Outcomes	• Understand IIOT architecture and its components. • Identify IIOT applications in various industries.

Course Name 2	**IIOT Tools and Platforms**
Course Description	This course provides hands-on training on IIOT platforms, sensor integration, and data analytics tools. Learners will explore protocols such as MQTT and OPC-UA for secure data transmission.
Course Outcomes	• Use IIOT platforms for data collection and analysis. • Configure and manage sensor networks in an industrial setting.

Course Name 3	IIOT Applications in Smart Manufacturing
Course Description	Learners will study real-world use cases where IIOT has transformed industrial processes, including predictive maintenance, supply chain management, and energy efficiency optimization.
Course Outcomes	● Analyze case studies on IIOT implementation in manufacturing. ● Develop an IIOT-enabled solution for an industrial challenge.

اعتماد وثيقة برنامج
Industrial Internet of Things (IIOT)

التاريخ	التوقيع	المنصب	الاسم
تقرّ جامعة أم القرى بمناسبة واعتماد خطة برنامج (**Industrial Internet of Things (IIOT)**) ليتم تطويره وتقديمه ضمن مبادرة البرامج الجامعية القصيرة تحت إشراف المركز الوطني للتعليم الإلكتروني.			

التاريخ	التوقيع	المنصب	الاسم
يقرّ المركز الوطني للتعليم الإلكتروني بمناسبة برنامج (**Industrial Internet of Things (IIOT)**) المقدم من جامعة أم القرى ليتم تطويره وترخيصه ضمن مبادرة البرامج الجامعية القصيرة.			