

Project no.	ESGS/2223/APP-02
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Enhancement and Start-up Grant Scheme for Self-financing Post-secondary Education (ESGS)

Summary of Approved Project

Part A – Basic Information	
Project Title:	Establishment of an Industrial Centre for New Industrialization - Development of a New Programme and Enhancement of Existing Programmes
Institution:	Hong Kong Metropolitan University
Approved Grant (in million):	37.2
Round of Applications:	2022/23
Designated Project Period:	January 2024 to December 2027
Title of Programme(s) to be launched/ enhanced:	<p>Development of new programme:</p> <ol style="list-style-type: none"> 1. Bachelor of Engineering with Honours in Building Engineering <p>Enhancement of existing programmes:</p> <ol style="list-style-type: none"> 2. Bachelor of Engineering with Honours in Building Services Engineering and Sustainable Development 3. Bachelor of Engineering with Honours in Civil Engineering 4. Bachelor of Engineering with Honours in Electronic and Computer Engineering 5. Bachelor of Science with Honours in Cyber and Computer Security 6. Bachelor of Science with Honours in Data Science and Artificial Intelligence
Part B – Project Summary	
<p>Hong Kong Metropolitan University (HKMU) supports the HKSAR Government’s “New Industrialisation” initiative, which aims to use emerging and smart technologies to rejuvenate traditional industries and develop new ones. Despite being self-financed, HKMU’s School of Science and Technology offers various engineering and IT programmes. Since these programmes require industrial training while the existing partner cannot provide support, HKMU proposes establishing its industrial centre.</p>	

In response to the development of new industrialisation, HKMU has decided to develop one new programme and enhance several existing programmes to nurture more talents.

- HKMU will launch a ***BEng (Hons) in Building Engineering*** programme to train building engineers. Intelligent construction technologies will be the focus of this new programme. HKMU aims to encourage professionals to adopt innovative and advanced construction technologies in construction projects.
- HKMU will set up the **Intelligent Construction Technologies Facility** to provide hands-on experience to students. The ***BEng (Hons) in Building Services Engineering and Sustainable Development*** and ***BEng (Hons) in Civil Engineering*** programmes will also be enhanced to equip students with knowledge of intelligent construction technologies.
- Sustainability is a key issue in new industrialisation, and many smart technologies are currently used in modern buildings. HKMU will set up the **Smart Building Facility** to provide students with the relevant training. Emerging technologies will be adopted to enhance sustainability, and it will be an example of how traditional industry can be revitalised.
- New industrialisation involves the integration of the Internet of Things (IoT), wireless sensor networks, high-speed connectivity, cyber security, artificial intelligence (AI), and data analytics. HKMU will set up the **IoT and Web3 Facility**, which will enhance the ***BEng (Hons) in Electronic and Computer Engineering***, ***BSc (Hons) in Cyber and Computer Security***, and ***BSc (Hons) in Data Science and Artificial Intelligence*** programmes. These programmes are highly relevant to the key technologies for new industrialisation. The IoT facility will also support construction-related programmes.
- Robotics is a crucial element of new industrialisation. HKMU will establish the **Robotics and Automation Facility** to further enhance the existing programmes. In particular, the ***BEng (Hons) in Electronic and Computer Engineering*** programme will benefit from a new robotics course and training modules. The ***BSc (Hons) in Cyber and Computer Security*** programme will be enhanced by introducing Internet-of-Robot-Things (IoRT). The real-world data collected by the robots from smart city scenarios will enhance teaching and learning in the ***BSc (Hons) in Data Science and Artificial Intelligence*** programme.
- HKMU will establish a **makerspace** to provide an open environment for students to (i) work on projects that address practical real-world problems, (ii) transform their creative ideas into physical prototype products, (iii) collaborate with industry in fabricating and evaluating prototypes, and (iv) develop problem-solving skills and an entrepreneurship mindset. The

makerspace will focus on projects related to smart solutions for new industrialisation.

Finally, HKMU will establish market-standard facilities in the Industrial Centre to meet industry needs and provide industry training to students from the above programmes and other self-financing post-secondary colleges.

Part C – Contact Details

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Note: The details of the approved project are provided by the institution. The operation of the relevant programme(s) is(are) subject to the applicable legal and accreditation requirement(s).