

1.	<b>Title of Programme(s):</b> (incl. Award Type and Specify Embedded Exit Awards)	BEng (Hons) in Biomedical Engineering BEng in Biomedical Engineering
2.	<b>NFQ Level(s)/</b> <b>No. ECTS:</b>	Levels 8 and 7 240, 180 ECTS
3.	<b>Duration:</b>	4, 3 years
4.	<b>ISCED Code:</b>	0715
5.	<b>School / Centre:</b>	School of Engineering
6.	<b>Department:</b>	Department of Mechanical and Industrial Engineering
7.	<b>Type of Review:</b>	Differential Validation
8.	<b>Date of Review:</b>	29 <sup>th</sup> March 2022
9.	<b>Delivery Mode:</b>	Full-time
10.	<b>Panel Members:</b>	Dr. David Tanner, Senior Lecturer, Manufacturing Process Technology, University of Limerick (Chair) Dr. Anthony Callanan, Snr Lecturer Mechanical Engineering, University of Edinburgh Mr. William Hickey, Research & Development Engineer, Boston Scientific Carmel Brennan, Assistant Registrar (Quality) (Secretary)
11.	<b>Proposing Staff:</b>	Dr Oliver Mulryan Dr. Aurora Dimache Mr. David McDonnell Dr. Fiona Malone Dr. Paul Fahy Dr. Cormac Flynn Dr. Liam Morris Mr. Pdraig Audley Dr. Eoin Parle
12.	<b>Rationale for Changes:</b>	When originally validated a Higher Certificate award was not proposed. Given the experience of delivering the programme the Programme Board now realise the importance of this award in providing enhanced flexibility in relation to entry and exit. This programme may be used as an entry point at some point in the future, but initially it will be used to allow students who have successfully completed the first two stages to leave with a qualification recognising their accomplishments. The programme

		<p>content prepares students to work at technician level, and there is employer demand for graduates at this level.</p> <p>The Higher Certificate (L6) in Biomedical Engineering is a two-year, 120 ECTS credits programme, designed to introduce the fundamental and underpinning principles of Biomedical Engineering to the enrolled learner. The primary aim of the higher Certificate programme is to produce Biomedical Engineering Technicians and Biomedical equipment specialists who can use mathematics, engineering, and science skills to assist professional Biomedical Engineers. The Higher Certificate programme is a subset of the L7 or L8 Biomedical Engineering degree programme, both of which provide graduates with the necessary engineering, knowledge, skills, management abilities and competencies coupled with biological understanding and perspective, to evaluate a wide range of possible approaches to medical based issues in the ever-growing Biomedical sector. The Higher Certificate programme consists of three traditional agricultural themes of learning, namely:</p> <ul style="list-style-type: none"><li>• Integration of Engineering with Human Physiology</li><li>• Biomedical equipment/product/systems design and automation</li><li>• Validation, Quality and Regulation Affairs</li></ul> <p>The secondary aim of the programme is to provide an educational experience which will equip graduates with knowledge and transferable skills. The tertiary aim of the programme is to inculcate an ethos of life-long learning by promoting and facilitating the use of collaborative and independent active learning pedagogical practices.</p> <p>Employment opportunities: There is a wide range of employers (e.g., Medtech sector, Hospitals and other Healthcare environments) who require Biomedical Engineering Technicians/Technologists to assist with the advancement of technologies, or who can ensure that existing medical equipment is properly configured and operating properly. The Biomedical Engineering Technicians will be able to:</p> <ul style="list-style-type: none"><li>• Aid professional engineers by being able to work autonomously and responsibility under direction and guidance.</li><li>• Assist professional engineers with the validation and design of future products.</li><li>• Test and calibrate components using a variety of manuals, troubleshooting techniques, and code requirements.</li><li>• Instal and adjust a variety of biomedical and research equipment</li><li>• Performing scheduled maintenance inspections and performance assurance inspections on equipment to ensure that the equipment is operating safely and properly.</li></ul>
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13.	<b>Overview of Changes:</b>	Approval was sought for a Higher Certificate in Engineering in Biomedical Engineering. This equates to the first two years of the level 7 and level 8 programme modules, and has its own Programme Learning Outcomes, entry requirements, APS, rationale, employment opportunities etc.						
14.	<b>Resource Implications:</b>	None.						
15.	<b>Findings and Recommendations:</b>	<p><b>General:</b></p> <p>The panel approve the proposed change with no conditions or recommendations.</p>						
16.	<b>FAO: Academic Council:</b>	<table border="1"> <tr> <td><b>Approved:</b></td> <td>X</td> </tr> <tr> <td><b>Approved subject to recommended changes:</b></td> <td></td> </tr> <tr> <td><b>Not approved at this time:</b></td> <td></td> </tr> </table>	<b>Approved:</b>	X	<b>Approved subject to recommended changes:</b>		<b>Not approved at this time:</b>	
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