POSTGRADUATE DIPLOMA IN MEDICAL DEVICE DEVELOPMENT

Programme Learning Outcomes

Programme Learning Outcomes for Postgraduate Diploma in Medical Device Development (NFQ Level 9, Major Award)
On successful completion of this programme, students should be able to:

- A systematic understanding of the design and engineering principles required to develop a medical device to meet a clinical need based on an understanding of the anatomy of the human body, including changes associated with pathologies and aging.
- A critical awareness of the clinical needs and a knowledge of the application of tools for developing ideas and concepts, whilst considering the engineering and material science-based principles to select appropriate technologies required to manufacture the solutions.
- Mastery of a range of design tools and methods of analysis in the field of clinical anatomy, material science and medical device development.
- The ability to select and apply appropriate advanced skills and analytical techniques including the ability to develop new skills in emerging techniques, as required in medical device development. The ability to undertake analysis of a design, receive feedback, analyse and iterate, while ensuring strong rationales for decisions throughout a particular design process.
- The ability to act at a variety of professional levels; to empathise with users, to act with curiosity and to seek new perspectives; ability communicate key concepts to a multidisciplinary audience to promote design solutions and request feedback.
- The technical competence necessary to take significant responsibility for the own work and group deliverables; lead and initiate activity in the development of a medical device.
- The ability to evaluate their own learning, to reflect, identify knowledge gaps, learn from observing others, and take responsibility for the pursuit of academic professional development pathways.
- The ability to assume personal responsibility for fostering a collaborative and innovative culture within a multidisciplinary project environment. And demonstrate the ability to technically evaluate the societal, environmental and technical impact of the life cycle of a design solution.