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| 1. | Title of Programme(s): (incl. Award Type and Specify Embedded Exit Awards) | Certificate in Digital Mapping and Geographical Information Systems |
| 2. | NFQ Level(s)/ No. ECTS: | 8 25 ECTS |
| 3. | Duration: | 1 Year |
| 4. | ISCED Code: | 0610 |
| 5. | School / Centre: | Mayo Campus |
| 6. | Department: | Department of Business, Humanities and Technology |
| 7. | Type of Review: | New Programme |
| 8. | Date of Review: | 16 th November 2020 |
| 9. | Delivery Mode: | Blended |
| 10. | Panel Members: | Ms Cait Noone (Chair) Ms Mary Rogers Dr Mark McCarthy Dr Paul Naessens, Director of Western Aerial Survey and part-time lecturer NUIG Ms Carmel Brennan, Assistant Registrar (Quality) (Secretary) |
| 11. | Proposing Staff: | Mr Michael Gill Ms Emer Crean Dr Yvonne McDermott Mr Pearce McDonnell Ms Sinead Kilgannon Dr Deirdre Garvey |
| 12. | Programme Rationale: | According to the Ordnance Survey of Ireland (2014) commissioned report on the Assessment of the Economic Value of the Geospatial Information Industry in Ireland the geospatial information industry "... generated sales or output valued at €117.5m in 2012, and spent a total of €84.4m on wages/salaries. 1,677 full-time equivalent persons were directly employed by the industry, which also supported the employment of a further 3,000. The report estimates that the use of geospatial information accrues annual savings of €82m in the public sector, time savings with an economic value of €279m, and competition benefits of €104m. "This report further supports the need for educational offerings in the area of Digital Mapping and GIS. In addition, specific research |

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| | | <p>undertaken as part of the development of this programme has identified a need for training in GIS from various sectors in Ireland.</p> <p>The Expert Group on Future Skills report on Digital Transformation[i] refers to the onset of “ride-hailing apps, car-share platforms and the adoption of driverless vehicles” and the digital road mapping required for these technologies. The same report refers to the need for “Intelligent Transport Systems” – location-based data which is at the heart of the proposed programme. The Marine Skills Report[ii], from the same Future Skills group, refers to “specialised technical software and geographical information systems (GIS) to manage the integration, processing and presentation of data” as a key skill required in the hydrographic surveying industry”. The European Commission has put a market value of €966 million on the benefit of Open Data to the Irish Economy with an estimate of more than 1000 new jobs related to Open Data[iii]. Given that such a high proportion of open data has a geographic component, it is evident that skills in handling that data are vital to developing opportunities for the future. As a consequence, individuals in public and private bodies need to gain the skills required to realise the commitment built into this strategy. Skills in the understanding, use and delivery of spatial data are a cornerstone in this endeavour.</p> |
| 13. | Potential Demand for Entry: | 25 students |
| 14. | Stakeholder Engagement: | Specific consultations for the purposes of the development of this programme were conducted in which requirements for digital mapping and spatial data skills were identified. This involved input from county councils, the EPA, engineering, geophysical, archaeological and environmental consultancies, which are key target sectors for the proposed programme. These demonstrated a strong interest in and enthusiasm for the programme from both public and private sectors, in addition to highlighting a need for training in these skills areas. Feedback from a variety of contacts with industry and public bodies indicated a willingness to supply participants for the proposed programme. |
| 15. | Graduate Demand: | Desk and primary research provide evidence of the need for training in GIS by a range of sectors. In addition to targeting those that are unemployed, this programme is also aimed at people currently in employment who wish to upskill to meet the evolving digital demands of the workplace. |
| 16. | Entry Requirements, Access, Transfer & Progression: | <p><u>Minimum Entry Requirements</u></p> <p>The minimum entry requirement is a level 7 major award or equivalent in a cognate area; computing, geography, geology, engineering, ecology, environmental science, epidemiology, heritage, history, outdoor education, surveying or other related discipline.</p> |

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| | | <p><u>Recognition of Prior Learning</u></p> <p>GMIT is committed to the principles of transparency, equity and fairness in recognition of prior learning (RPL) and to the principle of valuing all learning regardless of the mode or place of its acquisition. Recognition of Prior Learning may be used to gain access to this programme in accordance with GMIT’s Recognition of Prior Learning policy. Applicants for RPL will be provided with application guidance.</p> <p><u>English Language Requirements</u></p> <p>English Language Requirements will be as determined by GMIT and as published in the Access, Transfer and Progression code.</p> |
| 17. | Programme Structure: | <p>The programme consists of five 5 ECTS modules delivered over two semesters.</p> <p>In the first semester the module Data Capture and Manipulation provides a foundation for the understanding of geospatial data and related concepts. The other first semester module Geographical Information Systems 1 introduces the student to the basic concepts and skills.</p> <p>In the second semester the module Geographical Information Systems 2 dives deeper into digital mapping and geospatial concepts and practices. The module Web Mapping in the second semester introduces the student to the methodologies and delivery of geospatial data maps, and services on the web. The module The Next Step: Transitioning to Work is for those students who require assistance in transitioning from unemployment back into the workforce</p> |
| 18. | Learning, Teaching & Assessment Strategies: | <p>The programme development team propose a blended delivery approach for this programme, encompassing face-to-face delivery in addition to online delivery (both synchronous and asynchronous). This is, of course, contingent on the public health situation at the time of delivery. The programme can be adapted to be fully online if government restrictions necessitate. The teaching and learning strategy in this programme places learners at the centre of all interactions and engagement. The lecturing team facilitate innovative learning practices which will focus the learner's ability to explore, research, interact with peers and the lecturing team and reflect on the outcome of these engagements. Online/blended delivery requires more facilitation for student engagement and collaboration than traditional face-to-face course delivery. Consequently, an initial get-to-know-you webinar will be scheduled at the start of the programme to promote and encourage participation and collaboration. Forum discussions will ensure that all students share a little about themselves. Students in the same geographical area will be encouraged to collaborate. Students will also be encouraged to use their own social</p> |

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| | | <p>networking groups whereby they can get instant notifications of comments and can contribute to discussions.</p> <p>The objective of the assessment strategy is to ensure the effective transfer of learning to the workplace. Assessment will be both formative and summative in nature. Information concerning the nature of continuous assessment in each module will be discussed and agreed with learners and external examiners at the start of the academic year. To ensure an even assessment load for learners, a schedule will be established by the Programme Board at the commencement of the year and will be discussed and agreed with learners.</p> |
| 19. | Resource Implications: | <p>This programme will be self-funding. This programme was awarded funding under the Springboard+ upskilling initiative in higher education. No additional resources will be required to deliver this programme.</p> <p>Ongoing CPD will be required due to the fast-changing nature of this discipline.</p> |
| 20. | Synergies with Existing Programmes: | None. |
| 21. | Findings and Recommendations: | <p>General:</p> <p>The panel approve the programme with the commendations (2) listed below and subject to the following condition(s) (1) and recommendation(s) (9):</p> <p>Commendations:</p> <ol style="list-style-type: none"> 1. The staff demonstrated strong knowledge and skills in the discipline area in the structure and content of the programme. 2. The programme is responsive to an identified market need as evidenced by the strong industry endorsements. <p>Special conditions attaching to approval (if any):</p> <ol style="list-style-type: none"> 1. Review the Programme Learning Outcomes to ensure that in all instances they are appropriate to a level 8 programme and that the number of outcomes is appropriate to the narrow focus of the award. |

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| | | Recommendations of the panel in relation to award sought: | |
| | | <ol style="list-style-type: none"> 1. Provide further detail on the research undertaken in devising this programme and outline the findings from same. 2. The demand for graduates and the profile of learners should be expanded to reflect the wide range of industries that benefit from geospatial information, e.g. retail, hospitality, banking, insurance, and the wider public sector. 3. Clarify within the documentation the frequency and nature of onsite activities which are part of the blended delivery. Ensure the document makes clear that approval was sought for blended, online and full-time delivery modes. 4. Conduct research with the first cohort and with potential students as to the optimal mode of delivery i.e. blended or online. 5. Include field work as a teaching tool within the programme. 6. Articulate clearly the assessment strategy for the programme. 7. Consider including the issue of interoperability between GIS and AutoCAD or other platforms i.e. ensure students are equipped with the knowledge and skills necessary to be able to convert data into different formats and export and save it in formats which can be easily exchanged. 8. Review each module to ensure that the learning outcomes are expressed at an appropriate level, that the teaching strategy and delivery hours correctly reflect the planned delivery of the modules and that the assessment strategy is appropriately articulated. 9. Consider whether Cartography: Principles and Production should have a heavier weighting within the GIS 1 module. | |
| 22. | FAO: Academic Council: | Approved: | |
| | | Approved subject to recommended changes: | X |
| | | Not approved at this time: | |
| | Signed: | | |
| | | Chair | Secretary |