



Job Description & Person Specification

Post title: Professor of Digital Innovation (Engineering)	Post No: 009129
School or Department: Engineering	Date created: 21 Dec 2020
Grade: Professor Band 1/2/3	Hours per week: 37
Fixed term end date (if applicable):	
Other requirements of the role:	
Immediate line manager: Executive Dean	
Title & Grade of posts line managed by postholder: Designated research and/or lecturing staff	

Job purpose: To develop, lead and inspire research, scholarship and/or practice activity which enhances the profile and standing of the School and NTU, which in turn contributes to the furtherance of the School's operational plans and the University's strategic plan.

Principal duties and responsibilities:

Research/Scholarly/Practice activity

- Undertake sustained high quality research, scholarly and/or pedagogic practice activity, consistent with the priorities of the School, which creates demonstrable impact upon the university, the external academic and/or professional communities and/or wider society.
- Actively lead the development of quality research within a discipline field, including (where relevant to discipline) the development of a research group/centre/institute*. This may also involve the active leadership, management and mentoring of research students and staff and early career researchers.
- Maintain an international reputation for excellence within the discipline.
- Maintain a sustained level of high quality research outputs in prominent peer-reviewed academic journals, books or other relevant for a.
- Disseminate the results of research, practice and scholarly activity in academic and professional conferences, and contribute to the visibility of the University and School.
- Establish and maintain effective relationships with other academic institutions, relevant professional bodies, or commercial/industrial organisations to facilitate the development of research, teaching and/or pedagogic practice within the discipline.
- Active membership of significant organisations, expert committees, boards and other bodies related to the discipline.
- Provide expert opinion to external organisations and audiences.

- As PI or Co-I successfully apply for, negotiate, and manage, high quality bids to secure research/grant/other external income at a level commensurate with the discipline and the relevant Band level of Professor.
- Initiate, lead and collaborate in research, scholarship and/or practice activities with other Universities and relevant partners outside of HE.
- Successfully supervise and manage research, scholarship and/or practice projects within the School.
- Contribute significantly to the development and implementation of research/teaching and learning/practice strategy within the School, which results in demonstrable, measureable enhancements in capability, capacity and quality.
- Attract, recruit and supervise postgraduate students and/or postdoctoral researchers.

Teaching, Learning and Assessment

- Make a significant, sustained, contribution to the University as a teacher, tutor and facilitator of student learning.
- Develop and deliver inspirational, research-led or practice-led teaching that creates a stimulating environment for student learning.
- Contribute significantly to the development of the curriculum based on research, professional or consultancy expertise.
- Achieve consistently high student satisfaction, and a consistent number of successful research completions and Masters student dissertations/research projects.

Academic leadership and management

- To undertake full line management of all designated staff, including induction, mentoring, probation, absence management, teaching observation, PDCR appraisals, improving performance measures and disciplinary and grievance handling.
- To undertake academic leadership and management duties appropriate to the post across the subject area, providing support for colleagues as appropriate.
- To be responsible for ensuring that all University Policies and Procedures are appropriately applied and followed within the areas of responsibility of the post.

*In line with NTU Policy on the establishment of Research Centres and Institutes.

N.B. The post-holder may be required to undertake any other duties which may reasonably be required as within the nature of the duties and responsibilities of the post as defined, subject to the proviso that normally any changes of a permanent nature shall be incorporated into the job description in specific terms.

Personal Attributes		
Attributes	Essential	Desirable
Knowledge	Internationally recognised with expert knowledge of Engineering applied to Digital Innovation in one or more of the following areas:	

	<ul style="list-style-type: none"> * applications of artificial intelligence * industrial robotics * IoT/5G/LPWAN * industry 4.0 * real-time monitoring of systems and assets * resilient logistics and automation <p>Expert knowledge of research, academic and or pedagogic practice methods in Engineering.</p> <p>Advanced knowledge of national and international funding streams</p> <p>Substantial understanding of research applications and national and international impacts within the discipline.</p>	
<p>Skills</p>	<p>Proven ability to conduct, lead and manage internationally leading innovative and impactful research activity.</p> <p>Proven ability to develop, contribute to and implement a research strategy.</p> <p>Outstanding ability in teaching and facilitating student learning, with excellent undergraduate and postgraduate student/postdoctoral researcher supervision skills.</p> <p>Ability to develop sustained working relationships with external organisations including academic/professional centres of excellence and institutes, ideally both nationally and internationally</p> <p>Excellent interpersonal, communication and networking skills.</p> <p>Proven leadership skills and ability to inspire, motivate, manage, mentor and coach students and staff.</p> <p>Proven ability to produce at least 4 high quality outputs within a 5 year period equivalent to REF 3* (internationally excellent) or 4* (world leading) for the relevant Unit of Assessment.</p>	

<p>Experience</p>	<p>Experience of conducting research activity that makes an impact on the internal research environment of an institution and building academic capacity.</p> <p>Evidence of contribution to the development and/or implementation of a research strategy.</p> <p>Experience of developing sustained relationships and collaborative working partnerships with colleagues and external organisations.</p> <p>Sustained track record of securing significant research income and/or external funding from diverse sources.</p> <p>Demonstrable experience of making a significant contribution as a teacher, tutor or facilitator of student learning, commensurate with practice within discipline.</p> <p>Experience of leading, inspiring and motivating researchers and mentoring junior staff.</p> <p>Significant involvement in national and international conferences.</p> <p>Demonstrable experience of exceeding average individual income for the discipline and appropriate career pathway over a rolling 5 year period</p> <p>Sustained record of production of at least 4 high quality outputs within a 5 year period equivalent to REF 3* (internationally excellent) or 4* (world leading).</p>	
<p>Qualifications</p>	<p>A first/second degree/higher research degree in the relevant discipline</p> <p>A relevant postgraduate qualification (PhD).</p> <p>Membership of a recognised professional body</p>	<p>A relevant professional qualification</p> <p>Chartered status</p> <p>Fellowship of the Higher Education Academy (HEA)</p>

Competencies

Essential Competencies

Communication and Influencing (Level 3)

Communicates effectively with a wide range of diverse internal and external stakeholders, influencing and negotiating change. Networks internally to keep ahead of developments

Organisation and Delivery (Level 3)

Takes account of organisational priorities to ensure that operational and strategic plans are being implemented and achieved.

Leading and Coaching (Level 3)

Is visible and publicly champions initiatives to provide direction. Takes responsibility for an area of work and for its outputs. Makes time to get to know people and motivate them. Regularly reviews performance of self and others

Creativity and Innovation (Level 3)

Reviews, tests and implements new concepts, models and approaches to practice in support of service development and delivery

Entrepreneurial and Commercial focus (Level 4)

Keeps up to date with the factors influencing the commercial context of Higher Education and actively seeks out opportunities for income generation, commercial exploitation, and to ensure that NTU retains a competitive edge within the sector.

Customer Focus (Level 3)

Provides a quality service that is regularly reviewed. Anticipates customer needs. Actively seeks feedback on services from customers and makes appropriate changes to services and to underpinning policy/strategy

Team Working (Level 3)

Leads aspects of team work, seeking and implementing improvements to the team's outputs/services and developing colleagues within the team. Challenges colleagues

Making Informed Decisions (Level 3)

Uses a wide range of complex data to take controlled risks to achieve greater gain. Uses trends and data to establish controls and performance indicators.

Job Description and Person Specification created by (post title): Head of Engineering