



Job Description / Grading Form

Section 1 – For completion by Line Manager (please complete all boxes as appropriate so that your submission is not delayed. Guidance notes are available for support on writing Job Descriptions).

Position Name	Associate Professor in Applied Electromagnetics and Antennas	
College/Budget Centre	EPS/Engineering/Electronic Electrical and Systems Engineering	
Position Number (if Known)		
Proposed Grade	Grade 9	
Reason for grading request		New role: - If comparator role exists please give post title / number:
	X	Re-grade for existing post-holder
Background		
<p>This is an exciting time to be an engineer at the University of Birmingham. Following the creation of the School of Engineering in 2016, which brought together the disciplines of Civil Engineering, Mechanical Engineering and Electronic, Electrical & Systems Engineering, we are in Phase 2 of our renaissance. We are investing significantly in people and infrastructure – our new £65m signature building and our £28m UK Rail Research and Innovation Network (UKRRIN) Centre of Excellence for Digital Systems have recently opened their doors. In addition, our world-leading £26M National Buried Infrastructure Facility opened in 2020.</p> <p>The School has a history of undertaking world-class research and is proud of its strong and extensive links with industry, ensuring that our innovative research is rapidly translated into practice. As part of our investment, we are now seeking to appoint a motivated and highly research active engineer in Applied Electromagnetics and Antennas to join us and help us create the future. The posts will be associated with the Communications and Electromagnetics Research Group, part of the Department of Electronic, Electrical and Systems Engineering, in the School of Engineering. The group has a long and distinguished history in radio and microwave science and technology including the notable contributions of multiband mobile phone antennas, microwave automotive radar sensors, metamaterials-based antennas, terrestrial and body-centric propagation models and the first high temperature superconductor antennas and filters over six decades. We are looking for expertise in the areas of Antennas, Applied Electromagnetics, Propagation, Metamaterials and Microwave Engineering and focusing on applications in future wireless communications systems, including mobile, satellite and millimetre-wave/Terahertz communications. We are particularly interested in colleagues who demonstrate ambition, innovation, and leadership.</p> <p>The successful candidates will be expected to create and disseminate knowledge through initiating and conducting original research, through publication and through developing and delivering undergraduate, postgraduate and CPD programmes, as appropriate to the disciplinary area. In addition, to contribute to the department/school through management/leadership, and enterprise activities, as appropriate.</p>		

The successful candidates will have a PhD (or equivalent qualification) in one of the above areas. Industrial experience, either through working in or with industry would also be desirable.

The successful candidates will be expected to engage actively with external partners in academia, government and industry in the UK and internationally.

Summary of Role

Contribute at a senior level on a sustained basis to the whole range of research, teaching leadership and administration.

Research will involve an established national and developing international reputation through significant original research work and a clear record of impact, and/or designing and developing significant innovative underpinning technologies.

Teaching will include: (a) development and leadership of major teaching programmes or equivalent; and (b) enhancement of the student experience or employability that is of manifest benefit to the College and University.

Management and administration will include Departmental/School leadership and management activity with University wide involvement that may include sustained high value impact knowledge transfer, enterprise, business engagement, public engagement and similar activities that are of manifest benefit to the College and University.

Main Duties / Responsibilities

Research

To pursue sustained research activity through original research and scholarship, including other research-related contributions through conference papers and presentations and/or consultancy projects and advice. Where appropriate for the discipline, this may include some but not all of the responsibilities listed below:

- Make a major contribution to the management of research activities
- Lead successful funding bids which develop and sustain research support for the specialist area (in disciplines where this is possible)
- Publish leading research that results in a sustained, highly respected reputation of international quality in the subject area and/or designing and developing innovative underpinning technologies
- Provide expert advice internally and externally
- Provide leadership of research that contributes to the progression of the discipline (in disciplines where this is possible)
- Referee and peer review articles for peer reviewed academic journals and grant applications by research councils and/or other major funding bodies
- Lead sustained high value impact activity in knowledge transfer and enterprise (including business engagement, public engagement) that is of manifest benefit to the College and University, and: a) makes a significant contribution to policy development at a national and international level; and/or b) involves development of industrial links and comparable networks and initiatives.

In addition, research responsibilities will include some but not necessarily all the indicative responsibilities from grade 8 listed below:

- Supervise and examine PhD students, both within the institution and externally
- Manage research activities and/or supervise other research staff
- Develop novel methodologies and techniques appropriate to the type of research being pursued

Learning and Teaching

To contribute at a senior level on a sustained basis in learning and teaching. Where appropriate for the discipline, this may include some but not all of the responsibilities listed below:

- Lead the development of new and appropriate approaches to learning and teaching. This may be underpinned by research and evaluation of teaching methods and systems.
- Act as adviser for teaching and learning methods through excellent practice and mentoring other colleagues
- Lead the design and/or co-ordination of programmes or equivalent activities across the School or Department
- Contribute to the development of teaching and learning policy, methods and standards, more widely than the School of Engineering
- Contribute to debate nationally about policy, methods and practices through publications, conference activity and roles that advance quality in the discipline
- Lead the development and management of assessment strategies within the School/Department
- Lead substantial and sustained high value impact activity in knowledge transfer and enterprise (including business engagement, public engagement) that enhances the student experience and/or employability and is of manifest benefit to learning and teaching in the College and the University. This may include the development of industrial links and comparable networks and initiatives.

In addition, the learning and teaching responsibilities will include some but not necessarily all the indicative responsibilities from grade 8 level listed below:

- Teach and examine courses at a range of levels
- Plan and review own teaching approaches and act as a mentor to encourage others to do the same
- Develop programme proposals and make substantial contributions to the design of teaching programmes more widely in the Department or School, as appropriate
- Undertake and develop the full range of responsibilities in relation to supervision, marking and examining
- Use appropriate approaches to learning and teaching in their field
- Disseminate appropriate practices through suitable media
- Develop and advise others on learning and teaching tasks and methods

Management/administration

To chair and/or lead activities in the Department/ School and representation on University committees or working groups. Where appropriate to the discipline, this is likely to include some but not all of the responsibilities listed below.

- Make an important contribution to the development and running of the Department or School, for example, leading activity on teaching assessment and/or on research
- Develop and manage staff and resources in support of major research and/or teaching activities
- Make important contributions to the development of the Department/School/PAU's research strategy and/or learning and teaching strategy
- Contribute significantly to the development and delivery of knowledge transfer, enterprise, business engagement and public engagement activities with a sustained high value impact of manifest benefit to the College and the University

In addition, the management/administration responsibilities will include some but not necessarily all the indicative responsibilities from grade 8 listed below:

- contribute to the administration/management of research and/or teaching across the Department/School
 - Lead/project manage a team to devise and implement a new and/or revised process (e.g., new programme or a recruitment drive)
 - Advise on personal development of staff and students
 - Make a sustained contribution to widening participation, schools' outreach and/or public understanding of the discipline
 - Contribute to administrative activities within the University (e.g., appeals panels, working groups)
- Develop and manage staff and resources in support of major research and/or teaching activities

Person Specification

General

- a first degree in engineering, physics or an allied subject to the field of applied electromagnetics and antennas.
- a relevant doctoral qualification
- demonstrated competence in Research; Learning and Teaching; and Management and Administration; and excellence in at least two of these areas.
- industrial experience, either through working in or with industry would be desirable

Research

An excellent national reputation and a developing international profile through significant original research work and a clear record of impact. Evidence of success under the following headings, as appropriate to the discipline:

- High level peer esteem as evidenced by
 - Excellent reputation in the UK and often internationally, reflected in sustained high-quality output, level of innovation, impact on subject and recognition
 - An excellent and sustained record of peer reviewed research publications
- Successful and sustained supervision of doctoral students to completion
- Substantial and sustained research income generation, e.g., through research grants, contracts, research consultancy or other external funding
- Sustained high value impact knowledge transfer and enterprise that is of manifest benefit to the College and University
- Prior research experience in one or more of the following: antennas (theory and testing), applied electromagnetics, electromagnetic metamaterials, microwave/millimetre-wave engineering.

Learning and Teaching

An excellent teaching profile and performance in terms of both impact and quality. The teaching quality demonstrated to be informed by an appropriate level of scholarship. Evidence of success under the following headings:

- High national reputation for the development of teaching and learning excellence within the discipline
- Successful and sustained use of a range of appropriate teaching methods, and assessment strategies that promote high quality learning, including learning that is flexible, distinctive, and current and stimulates learners' natural curiosity
- Significant and sustained contribution to one or more of the following: strategic development of new programmes; approaches to learning; the development of learning resources
- High quality and sustained contributions to fostering excellence in teaching activities more widely, i.e., in the Department/School or College and/or externally

- Track record of substantial and sustained high value impact on the enhancement of the student experience, and/or employability
- Mentoring and expert advice which develops the skills of colleagues in teaching and in fostering learning

Management and Administration

Demonstrated significant achievement in management and administration-related activities, which may include leadership of activities/initiatives. Evidence of success under the following headings

- Successful and sustained performance in significant administrative/managerial role (s) (e.g., exams officer)
- Significant and sustained high quality innovative contributions to the management/administration of the Department/School/College or University
- Successful and sustained contribution to the corporate life of the School/College/University, displaying willingness to contribute actively to committees, collaborative teaching, and administrative tasks

The above information will form the Further Particulars for the role. The following should all have been addressed under the various sections.

- Who, and in what ways the post-holder is required to communicate with others
- The type of problems the post-holder will face, and the ways they will deal with these
- The ways in which the employee will be expected to organise themselves and others.
- The responsibilities the post-holder will possess.

It is likely that these will be reflected in the above sections. If any of these 4 areas are not reflected fully above and you feel that this would not be appropriate for them to appear in the Further Particulars for the role, please detail them here.

Not applicable

Section 2 - For HR use only

Either a) Similar Post has already been graded

Post Title (& Number)	
I confirm I have reviewed this Job Description against the above role and that there are no material differences that would affect its grading.	
Name	
Date	

Or b) Post requires grading

Job Family Framework used		
	Proposed band/grade	Rationale for proposed band/grade
Knowledge		
Skills and experience		
Communications		
Dealing with problems		
Organisational skills		
Responsibilities		
Overall proposed band/grade and rationale		
Evaluation: I have ensured the quality of the job description, I propose the above band/grade, and I have evidence to demonstrate this grading to be consistent and fair		
Name		
Date		
Evaluation 2nd Check: I confirm that I have ensured the quality of the job description, propose the band/grade and have evidence to demonstrate this grading to be consistent and fair		
Name		
Date		

Guidance

What is the purpose of this form? This form is designed to provide us with the information that we require to advertise your vacancy. As this is our standard template, please always ensure that you use this when you have a role that needs to be filled. Be mindful that the information you provide will also form the basis for job evaluation purposes and establishing the salary for a post. You may also be using this form to request that the salary for an existing member of staff is re-graded.

What happens next? You can complete the form whilst you are waiting for the post to be approved. Once completed, please return the form to HR (Recruitment Team). The vacancy will be advertised once all the information and approvals have been received.

How do I complete the form? The form should be completed in one font and format throughout. Please see below guidance for each section of the form. Please note that further detailed guidance can be found on our intranet page – [Guidance on writing job descriptions](#).

Position Name – We wish to aim to keep position titles as simple, accurate and consistent as possible to facilitate a candidate’s job search. When deciding on a new position title, think about the words candidates are most likely to use to search for your vacancy.

Department – Please confirm the College/Budget Centre within which the position will sit.

Position Number - Your position will be assigned with a unique position number by HR. If this is a replacement, then the new incumbent will assume the current post holder’s position number, otherwise a new position number will be created.

Proposed Grade – For all new positions, HR will use the information provided to evaluate the role and establish the appropriate band/grade using the appropriate framework. For existing positions, HR will review the information provided and re-evaluate if required (if post graded more than 12 months ago).

Reason for grading request – For example, re-grade of an existing post-holder.

Background – Please provide an insight into the department and its relationship to the wider University and the reason for the vacancy.

Summary of Role – Use this section to summarise the main reasons for the position and the intentions of the role. You may find it easier to write the summary after you have completed the rest of the template including the main duties and required knowledge, skills and experience.

Main Duties/ Responsibilities - In this section you should illustrate the significant details and responsibilities of the job. This will provide an overview of the role but will not go into high level detail. You should clarify what the post holder will do and what/ who they are responsible for. Try to keep the language simple and avoid acronyms and abbreviations to appeal to a wider audience.

Person Specification - The person specification should be completed to show the key knowledge, skills, qualifications and experience required to perform the role effectively. In addition to facilitating the recruitment process, the information provided may also be used for other HR purposes such as job evaluation and re-organisations so it is essential to get this right.

Further detailed guidance can be found on our intranet page – [Guidance on writing job descriptions](#)