Technical Services Job Family

Job Families

A job family is a brief description of the main features of a group of roles that is similar in character, where the role holders are engaged in broadly similar work, or have broadly similar objectives. It describes career groups at a number of different levels, reflecting differences in grades. It can be used to articulate development routes, by setting out the career path and clarifying the criteria for advancement from one level to the next within the same family, or to a role within a different job family. All the families are underpinned by the same job evaluation methodology. Descriptions are general and may not explicitly describe a particular role. Staff will not necessarily carry out all of the activities described at a particular level and some staff may carry out additional duties. The objective of the job matching process is to make the best possible match of individual jobs against the job family levels. There are unlikely to be many perfect matches, but it should be possible to identify a best match in the majority of cases. Jobs can be matched to a higher level than is described here. This would be by read-across into the higher levels of the Management and Specialist family.

Technical Services Family

Outline Descriptions

Roles in this family provide a range of technical and/or scientific support for the University's research, teaching and commercial activities. They provide support particularly to academic staff and to students, for example by setting up and operating equipment, by running analyses and tests, by providing technical design and manufacturing services, and by giving technical advice. They also provide technical input to a range of teaching programmes. Working as part of a support team is a common feature, and at the higher levels, the roles involve the provision of highly specialised advice or services, and/or taking responsibility for a substantial technical service group.

Level 1

Not appropriate in this family.

Level 2

Jobs at this level will take the form of trainee roles. Role holders will be educated to GCSE or equivalent and will demonstrate numeracy and literacy and basic IT awareness and confidence. Role holders will be developing skills and knowledge as part of a scheduled programme of training, for example by attending college on a day release or evening class basis to obtain appropriate vocational qualifications undertaking a structured training programme within the School, or working under the supervision of a relevant educational institution on a work placement. No work experience will be needed. They will engage in very routine tasks under direct supervision, learning to use and apply equipment and processes. Knowledge and experience will develop through the course of the training programme, leading to exposure to an increasingly wider range of activities.

Level 3

Roles at this level work as part of a team carrying out routine technical or scientific tasks under regular, though not necessarily direct, supervision. Tasks will be mainly standardised and straightforward within well-established routines and procedures. As experience grows the role holder will be expected to take on more challenging aspects of the role and to take on progressively less routine tasks and responsibilities.

Level 4

Role holders at this level require specific technical or practical skills with a well-developed working knowledge of technical or scientific practices that will have been acquired through on the job or vocational training and qualification.. In addition work at this level indicates specialist training or knowledge, acquired through previous on the job training and experience showing a comprehensive knowledge of relevant processes. Work activities will tend to fall within an established working pattern, applying skills and knowledge to provide a range of technical support activities. Supervision received will be in the form of general guidance.

Level 5

Roles at this level require an in-depth knowledge of technical or scientific practices, methods and procedures gained through experience and/or formal qualification. The knowledge is applied to provide a range of technical support activities. Work may still have routine elements at times, but more advanced technical support is provided as this is the seasoned career level and, as such, supervision is not regular. Sound analytical and problem solving capabilities are required as the role holder must make use of their acquired knowledge of the discipline. Individuals support student learning through the development and demonstration of standard equipment and techniques. This may be on a one to one basis or supervising larger groups. Roleholders may oversee the day-to-day running of a work area or small team.

Level 6 (This level is equivalent to Level 6 in the Management and Specialist Job Family)

Technical staff entering at this level would be the seasoned specialist, well qualified and with significant practical experience. Role holders have recognised technical or managerial experience with responsibility for the delivery of a technical service or will operate as individual technical advisers providing specialist activity. Job holders will possess a thorough knowledge of the theories and principles of the discipline and may be considered the specialist in the field. This is the first level of supervision with line management responsibility for other technical staff (likely to be between five and twenty staff in the team).

For Technical jobs at level 7 and above, read across to the Management and Specialist Job Family.

► Levels

Level 2

Jobs at this level will take the form of trainee roles. Role holders will be educated to GCSE or equivalent and will demonstrate numeracy and literacy and basic IT awareness and confidence. Role holders will be developing skills and knowledge as part of a scheduled programme of training, for example by attending college on a day release or evening class basis to obtain appropriate vocational qualifications undertaking a structured training programme within the School, or working under the supervision of a relevant educational institution on a work placement. No work experience will be needed. They will engage in very routine tasks under direct supervision, learning to use and apply equipment and processes. Knowledge and experience will develop through the course of the training programme, leading to exposure to an increasingly wider range of activities.

Core Knowledge, Skills and Experience

- A basic standard of education, up to GCSE or equivalent, is required demonstrating numeracy and literacy skills and IT awareness.
- The ability to undertake vocational, or on the job, training through a planned schedule of training in the work place, and/or attendance at college on a day release/evening class basis leading to the award of a recognised appropriate qualification.
- Without formal qualifications practical experience in a related or similar working environment would be desirable.
- Manual dexterity.
- Appreciation of basic principles of relevant scientific or technical discipline.
- Ability to use standard equipment.

Typical Work Activities

Planning and Organising

- Work activities have specific objectives and are characterised by regular or direct supervision, either by an individual, or by detailed procedures.
- Tasks will be varied and are allocated by others but there may be some scope for sequencing.
- Works to short timescales.

Initiative and Decision Making

- Work assignments are straightforward and often repetitive.
- Will make decisions in the course of their work such as the best way to transport goods or which piece of machinery to use for a particular task.
- More complex decisions will be referred to the supervisor.

Communication and Networking

- Effectively exchange basic information, both orally and in writing.
- Follow simple written or oral instructions with accuracy and reliability.
- Receive internal visitors and promote a positive image of the School or Service.
- May be an initial point of contact for staff, students or customers and, as such, will be required to refer people on, or to pass information on to colleagues.
- Awareness, understanding of and adherence to the University's Equal Opportunities Policy and IT Acceptable Use Policy.

Analysis, Reporting and Documentation

- Participate in field trials and studies as required.
- Carry out routine record keeping.
- Filing.
- Report to colleagues when stocks are low.
- Complete basic paperwork relevant to the School or Service.

Maintenance and Management of Work Environment

- Carry out basic equipment maintenance after receipt of clear instructions.
- Clean and tidy the workshop/laboratory/studio/work environment.
- Awareness, understanding of and adherence to basic health and safety procedures affecting self and others.
- Replenish stocks of consumables/stores of basic equipment and follow routine stock control procedures.
- Safekeeping of allocated work equipment.

Work Examples

- Operate simple, routine machinery and equipment.
- Use IT systems in a routine way in accordance with procedures.
- In time, familiarise self with more specialist equipment under direct supervision.
- Transport goods and equipment after receipt of clear instructions.
- Test and carry out basic maintenance on technical equipment, including computers and associated equipment.

Teamwork

- Works as part of a team in a supporting role, under direct or regular supervision.

Level 3

Roles at this level work as part of a team carrying out routine technical or scientific tasks under regular, though not necessarily direct, supervision. Tasks will be mainly standardised and straightforward within well-established routines and procedures. As experience grows the role holder will be expected to take on more challenging aspects of the role and to take on progressively less routine tasks and responsibilities.

Core Knowledge, Skills and Experience

- A basic standard of education, typically 4 GCSEs including Maths and English.
- Prior generalist relevant work experience normally in a technical or scientific role.
- Without qualification demonstration of a range of skills and abilities relevant to the role gained in a work environment
- May be required to hold NVQ level 2 or other relevant vocational qualification.
- Potential for (or already working towards) further study such as ONC, NVQ3 or City and Guilds where appropriate.
- Manual dexterity.
- Basic IT literacy, including Microsoft Windows, Microsoft Office, e-mail and the internet.
- Exposure to use of specialised equipment.

Typical Work Activities

Planning and Organising

- Will have an established workload with responsibility for ensuring that the work is carried out in a timely and accurate manner.
- Even if the work is very reactive or clearly planned, the post holder will have the responsibility for ensuring that all targets and deadlines are met.
- Works to a relatively short timescale.

Initiative and Decision Making

- Required to carry out routine technical or scientific tasks under regular, though not necessarily direct, supervision.
- Will decide the best way to solve a problem and will take appropriate action.
- Expected to engage in basic troubleshooting, but will refer difficult decisions or unusual problems.

Communication and Networking

- Written and verbal communication skills.
- Communication will mainly be with other staff members and students to explain routine procedures, clarify facts or to seek additional information.
- Some communication with customers on routine matters, establishing facts and dealing with basic enquiries.
- Maintain a network of contacts knowing who to liaise with on key issues.
- Awareness, understanding of and adherence to the University’s Equal Opportunities Policy, IT Acceptable Use Policy and other relevant University policies.

Analysis, Reporting and Documentation

- Filing.
- Required to carry out routine record keeping and/or cataloguing.
- Input basic data and perform simple numerical calculations.
- Required to use simple databases and other standard IT packages.

Maintenance and Management of Work Environment

- Clean and tidy the workshop/laboratory/studio/work environment.
- Awareness, understanding of and adherence to basic health and safety procedures affecting self and others.
- Monitor and replenish levels of stock/stores and ensure equipment, consumables and work area are ready to use when required.
- Operate and maintain straightforward machinery and equipment.
- Understand the use of more specialised equipment.

Work Examples

- Construct or set up basic equipment by following a clear brief supplied by others.
- Operate and maintain standard machinery and equipment, including delivery, set up and demonstration.
- Transport goods and equipment across campus.
- Routine reprographic work.
- Provide basic technical support to staff, students and customers.
- Ensure cash is handled in accordance with appropriate procedures.

Teamwork

- Roles at this level work as part of a team, subject to regular supervision.
- Provide general support activities in own area by assisting senior colleagues.
- May be required to help with induction or training of new colleagues.

Level 4

Role holders at this level require specific technical or practical skills with a well-developed working knowledge of technical or scientific practices that will have been acquired through on the job or vocational training and qualification**.** In addition work at this level indicates specialist training or knowledge, acquired through previous on the job training and experience showing a comprehensive knowledge of relevant processes **.** Work activities will tend to fall within an established working pattern, applying skills and knowledge to provide a range of technical support activities. Supervision received will be in the form of general guidance.

Core Knowledge, Skills and Experience

- Prior relevant work experience
- In addition a relevant technical qualification such as ONC, NVQ3 or City and Guilds where appropriate may also be required.
- Good standard of secondary education, with particular competency with numeracy and literacy. A-level standard education would be a good indicator.
- Without qualification an in depth knowledge of the relevant work area gained through previous on the job experience and practice in the specified skill base.
- Familiarity with work priorities and those of colleagues.
- In-depth knowledge of standard IT applications.

- For specialised IT roles, requires a good working knowledge of computer software and systems, including the ability to set up and configure systems and troubleshoot problems.
- A basic understanding of computer networking technologies relevant to the University network.
- Basic knowledge of IT hardware.
- Thorough knowledge of departmental systems and procedures and working practices.
- Understanding of relevant policy and legislation.
- Experience of working independently and dealing with unforeseen problems and circumstances.
- Manual handling skills.

Typical Work Activities

Planning and Organising

- Responsible for planning, organising and prioritising own standard work within well established routines or procedures, should be able to determine own priorities and think ahead.
- Be responsive to requests for assistance with equipment, including IT hardware and software.
- Refer to more senior colleagues for prioritising and the scheduling of non-standard work.
- Should be competent in undertaking a range of activities with general guidance only

Initiative and Decision Making

- Ability to assess problems and use experience or consult procedures to determine the most appropriate action.
- Receives general guidance on complex, but routine work.
- Required to consider a range of aspects of work related problems and make sound judgements on their resolution, using their technical skills.
- The problems are likely to be multiple choice situations where the individual will have to analyse information, identify errors and problems and investigate and come to conclusions and follow the most appropriate course of action within procedural constraints.
- Greater discretion in developing solutions to non-standard problems.
- May be required to contribute to improving work practices etc.
- Will be able to seek help or technical advice from other specialists within the University.

Communication and Networking

- Maintain a network of contacts knowing who to liaise with on key issues and/or external contacts.
- Liaison with customers and suppliers.

- Will need to talk to students and staff on a regular basis dealing with routine and more complex queries, explaining procedures, demonstrating systems or services.
- Attend relevant meetings as requested by manager to support standard work activities or to represent School or Service at an appropriate level.
- Clear understanding of and adherence to the University's Equal Opportunities Policy, IT Acceptable Use Policy and other University policies and how they apply to own work.
- Specialist IT staff often have enhanced access to data, files and computer systems and will be required to respect the privacy of information.

Analysis, Reporting and Documentation

- Carry out complex but routine analytical tests involving more than one process stage.
- Perform and understand logic of numerical calculations using standardised formulae, graphs or tables.
- Understand test reliability and margins of error.
- Record requested results and observed anomalies.
- Basic interpretation and presentation of results may be required.
- Select, prepare and carry out tests/experiments/ technical procedures of moderate complexity following clear guidelines, standard or established procedures.
- Apply a detailed understanding of a specialised but established University system, process or procedure, to analyse and resolve related problems.
- Perform precise calibrations and readings.
- Keep accurate stock records and process purchase orders and invoices as appropriate.
- May be required to assist with the production of accurate reports for external agencies or government bodies.

Maintenance and Management of Work Environment

- Possess skills to repair own equipment and/or diagnose more complicated faults.
- Work with precision and accuracy.
- Sound understanding and application of health and safety procedures affecting self and others.

Work Examples

- Contribute to projects involving costing material estimates, scheduling etc.
- May perform assignments that are part of an ongoing work programme supporting design, testing, production and operation of materials, equipment or artefacts.
- Prepare routine engineering drawings and specifications.
- Test electronic functions using standard equipment and procedures.
- May demonstrate equipment, processes and techniques to students and staff within own area of work.
- Administration of a large stores area, maintaining stocks and records of equipment and the tracking of items ensuring that they are available and forwarded to appropriate places in a timely manner.
- Diagnose and rectify faults.
- Conduct straightforward experiments and record test results and present findings.

- Test electrical appliances.
- Ensure cash is handled in accordance with appropriate procedures.
- Set up and support computers used by staff and students, adhering to standard procedures devised for this purpose by the School or Service or by IT Services and advice staff and students on use of IT systems.

Teamwork

- Works as part of or in support of a team, but must be able to take independent action.
- May allocate routine work to others.
- Assist in induction of other technical staff.
- May be recognised as the main point of contact for a particular specialised process, system or procedure, or for a senior member of staff at the University.

Level 5

Roles at this level require an in-depth knowledge of technical or scientific practices, methods and procedures gained through experience and/or formal qualification. The knowledge is applied to provide a range of technical support activities. Work may still have routine elements at times, but more advanced technical support is provided as this is the seasoned career level and, as such, supervision is not regular. Sound analytical and problem solving capabilities are required as the role holder must make use of their acquired knowledge of the discipline. Supports student learning through the development and demonstration of standard equipment and techniques, with technical input into teaching programmes. This may be on a one to one basis or supervising larger groups. May oversee the day to day running of a work area or small team.

Core Knowledge, Skills and Experience

- Roles at this level usually require a relevant technical qualification such as HNC or equivalent, plus work experience in a related area.
- Alternatively roles at this level may require a relevant technical qualification such as ONC plus significant work experience and practice in a related area, demonstrating development through the acquisition of the appropriate skills.
- Without a formal qualification, the post holder must have an in-depth knowledge of the subject area and from previous experience must be able to demonstrate a broad range of expertise in their field and be classed as a technical expert in the field
- Comprehensive knowledge of operational and technical process in own area of responsibility.
- In some cases, this role may be the first post-graduation work for a graduate who is qualified in an appropriate discipline.
- Basic supervisory skills such as day to day allocating and co-ordination of work.
- Analytical, technical or creative problem-solving skills.
- Understanding of the fundamental theories and principles of the discipline.
- Comprehensive technical knowledge in own scientific or technical specialism.
- Skilled in use of relevant IT packages.
- Working knowledge of the broader activities of the School or Service.

- For IT roles, requires an in-depth knowledge, at the support rather than user level, of one or more operating systems.
- In-depth knowledge of IT technologies relevant to the particular role – e.g. PC hardware, server management, networking, cabling, programming, specialist IT hardware or software.

Typical Work Activities

Planning and Organising

- Will have an established workload and will have the responsibility for ensuring that the work is carried out in a timely and accurate manner.
- Works independently, but can refer to a more senior technician for advice and guidance where necessary.
- Plans ahead on a daily or weekly basis with some consideration for the longer term.
- Co-ordinate, arrange and allocate tasks for other staff, ensuring that there are sufficient resources available for events/activities.
- May oversee the day to day running of a work area or small team.
- May lead assigned project teams, usually of a short term nature or contribute to larger projects as part of a project team.
- May assist in developing services (e.g. IT infrastructure).

Initiative and Decision Making

- Will apply well-developed problem solving skills through the application of initiative and judgement when solutions are not obvious.
- Contribute ideas and innovative solutions.
- Make recommendations on managing/resolving more complex situations.
- Implement changes in service provision as requested by senior management.
- May be a point of contact for their particular area of expertise.

Communication and Networking

- Give advice on design, build, set up and running of experiments or manufacture or production.
- Liaise with wider University bodies.
- May attend relevant meetings to ensure that issues relevant to their School/Service are appropriately represented and reported.
- May be a point of contact for specialist queries or operational problems.
- Maintain and develop a network of contacts which may be both internal and external to the University.
- Will need to talk to staff and students to interpret their needs, discuss work requirements, establish facts, provide explanations sometimes of a complex nature, explain procedures etc.
- May be responsible for the supervision of staff and monitoring the quality of their output.

- Sound understanding of and adherence to the University's Equal Opportunities Policy, IT Acceptable Use Policy and other University policies and how they apply to own work area.

Analysis, Reporting and Documentation

- Monitor budgets with reference to a senior member of staff.
- Required to be more involved in more complex analysis and interpretation of results providing quantitative and qualitative analysis. This could be produced in a variety of formats including written reports, spreadsheets and databases.
- Tests own work to assure desired results and monitor technical standards in own area of work.
- Be proactive in information gathering and management.

Maintenance and Management of Work Environment

- Thorough understanding of health and safety regulations and procedures, ensuring compliance with appropriate legal standards.
- May be responsible for ensuring that others comply with health and safety regulations.
- Ensure security of buildings, machinery, plant and equipment in own area.
- Maintain and quality check stocks of equipment and consumables in own are with pre-set levels of expenditure.
- Ensure equipment and machinery in own area is maintained, serviced and repaired as required.

Work Activities

- Carry out health and safety audits.
- Produce working designs from specifications where only conceptual features have been identified.
- Advise on future physical resource requirements.
- Advise and assist staff and students on all aspects of technical service based on an in-depth knowledge and/or technical expertise such as development, design, preparation, construction, assembly, and application of equipment, setting up experiments or deployment of particular techniques.
- Be responsible for technical organisation and/or operation of advanced technical work.
- Exposed to novel techniques and procedures.
- Contribute to development of teaching and research and course content in the designing of apparatus/equipment or usage of new techniques/equipment.
- Provide regular timetabled or one to one instruction to students and, on occasion, others, within own area of specialism.
- Assist in design, operation and maintenance of equipment, tools, methods and services and in diagnosing and correcting technical problems.
- Full range of tool and die work with high degree of skill and accuracy.
- May contribute to publications.
- Electronic, mechanical and electromechanical testing.
- Carry out complex or specialised test/ procedures or method of production.
- Operate more specialised complex equipment.

- Oversee daily running of work area or small team.
- Contribute to the development of new ideas and improved methods.
- Responsible for ensuring that cash is handled in accordance with appropriate procedures.
- Diagnose and solve varied and/or complex IT faults and problems.
- Provide an IT support service by phone, e-mail or in person.
- Demonstrate the use of computer software, University IT systems and IT equipment to staff and students in the School/Service.
- Maintain technical equipment ensuring that it is fit for purpose and updating (e.g. new software) when required.
- Support specialist IT needs where additional help is not readily available elsewhere.
- Contribute to the planning of IT deployment for a School/Service.

Teamwork

- Work as part of or in support of a team through independent action.
- Supervise teams of staff carrying out very similar or identical work.
- Contribute to recruitment training and development of others.

Level 6 (This level is equivalent to Level 6 of the Management and Specialist Job Family)

Technical staff entering at this level would be the seasoned specialist, well qualified and with significant practical experience. Role holders have recognised technical or managerial experience with responsibility for the delivery of a technical service and/or will operate as individual technical advisers providing specialist activity. Job holders will possess a thorough knowledge of the theories and principles of the discipline and may be considered the specialist in the field. This is the first level of supervision with line management responsibility for other technical staff (likely to be between five and twenty staff in the team).

Core Knowledge, Skills and Experience

- At least HNC level with relevant practical experience and ability, this could, for example, be demonstrated through a series of progressively more demanding roles
- Thorough knowledge of the theories and principles of the discipline, as well as sound understanding of design concepts.
- For management roles will require supervisory experience and people management skills.
- Experienced technical professional with substantial technical expertise in own scientific or technical specialism.
- Skilled in use of relevant specialist and/or complex IT packages.
- Thorough knowledge of the broader activities of the School/Service.
- For IT roles, expert level skills will be required in the relevant specialist area.

Typical Work Activities

Planning and Organising

- Plans and organises own work on a more long-term basis.

- Determines priorities and allocates appropriate resources.
- May contribute to planning for future innovative or strategic developments in own work area or School/Service(e.g. new or extensively redeveloped).

Management Focus:

- Responsible for directing work of others.
- Responsible for the organisation or operation of advanced technical or scientific work.

Specialist Focus:

- May work alone to support the work of the School/Service, may receive overall direction from departmental chief technician or equivalent.
- Can refer to academic staff or external professionals when complex specialist problems occur.

Initiative and Decision Making

- Conceives and generates original ideas and innovative solutions, approaches and techniques.
- Provides specialist knowledge and advice.

Communication and Networking

- Communicate clearly on a variety of technical issues to a range of audiences.
- Engage in external consultancy giving advice to customers on application of specialist techniques and analysis of results.
- May lead and manage a significant sized team giving work direction and supervision to more junior staff.
- Complex interactions with staff and research students.
- Substantial technical instruction of students.
- Communication and liaison with other University or external bodies.
- Make regular contact with external bodies and internal colleagues to keep abreast of technical/scientific developments relevant to own area of responsibility.
- Detailed understanding of and adherence to the University's Equal Opportunities Policy, IT Acceptable Use Policy and other University policies and how they apply to own work area.

Analysis, Reporting and Documentation

- Diagnose causes of system, equipment or material failure.
- Prepare project schedules, reports, contracts or tender documents.
- Maintain and monitor accurate financial records with well-developed understanding of funding and financial management procedures.
- Ensure work area operates effectively within budgetary constraints, including where appropriate grant management.
- May present research methodologies and findings and contribute to publications.

- Play a lead role in analysing research problems and designing novel technical and/or scientific solutions to enable outcomes to be achieved.

Work Activities
Management Focus:

- Will lead and manage a technical team for a large and complex area to deliver specific goals.
- Contribute to the development of policies and procedures affecting the work of the team.

Specialist Focus:

- Work with professional staff to define technical approaches and undertake complex technical assignments that form a significant part of a research teaching or commercial programme.
- Undertake field inspections and surveys.
- Operate specialist and complex equipment.
- Design test procedures and standards or equipment.
- Prepare project specifications, cost and material estimates from preliminary specifications.
- Recommend product/ process change to improve system performance to meet user needs.
- Provide technical instruction, guidance and assistance to students to meet curriculum requirements in order to facilitate practical experience and the production of articles for projects or research activity.
- Will make significant contribution to the delivery and development of teaching including course design, and/or research, operating at the very highest specialist level.
- Work with novel techniques and procedures in support of research, teaching and/or commercial activity.
- Take a lead or specialist role in developing IT infrastructures.

Maintenance and Management of Work Environment

- Monitor schedules, assign work and review progress.
- With the Head of Department or Service may have some responsibility for budget control of a section.
- Ensure general maintenance and security of buildings, and equipment.
- Contribute to discussion on future requirements for the area in terms of equipment, space, staffing etc.
- Thorough understanding of health and safety regulations and procedures, ensuring compliance with appropriate legal standards.
- May be responsible for ensuring that others comply with health and safety regulations.

Teamwork

Management Focus:

- May allocate work and responsibilities.
- Maintain a trained and motivated work group.
- Ensure effective performance of more junior staff.
- Recruit, train, develop and appraise staff.

Specialist Focus:

- Provide specialist technical activity in support of a Department, in conjunction with other colleagues.

FOR TECHNICAL JOBS AT LEVEL 7 AND ABOVE READ ACROSS TO THE MANAGEMENT AND SPECIALIST JOB FAMILY.