National profiles for Clinical Sciences



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Version history and amendments

| Action | Date | Notes |
|-----------|-----------|--|
| Rebrand | Nov 2023 | Profile suite has been transferred onto new template. No |
| | | changes to wording, scores or levels. |
| Profiles | July 2006 | Registered Clinical Scientist (Biochemist) 7 |
| withdrawn | | Registered Clinical Scientist (Medical Physics) 7 |
| | | Principal Clinical Scientist (Medical Physics) 8A |
| | | Consultant Clinical Scientist (Biochemistry) 8C |
| | | Consultant Clinical Scientist (Medical Physics) 8C/D |



National profiles for Clinical Sciences



| Profile Suite and Label | linical Sciences - Medical Physics Technician | |
|-------------------------|---|----|
| Job Statement | . Designs, develops and adapts/manufactures medical and other | |
| | devices to specifications agreed with users | |
| | . Undertakes preventative maintenance, inspection, testing, | |
| | calibration and repair of diagnostic, therapeutic equipment | |
| | . Advises, trains other staff e.g. radiography, radiotherapy staff in u | se |
| | of equipment | |

| Fac | tor | Level descriptor and example job information | JE Level | JE Score |
|-----|---|---|-------------|-------------|
| 1. | Communication & Relationship Skills | Communicates complex information: provides instruction, training to groups Communicates technical equipment-related information to staff, colleagues, suppliers; trains staff in use of equipment | 3(b)(c) | 21 |
| 2. | Knowledge, Training & Experience | Expertise within specialism, underpinned by theory Professional engineering knowledge acquired through HND/BEng or equivalent + short courses, & regular updating | 5 | 120 |
| 3. | Analytical & Judgemental Skills | Range of facts, requiring analysis Skills for analysing & diagnosing faults in complex equipment, designing prototypes | 3 | 27 |
| 4. | Planning & Organisational Skills | Plans & organises straightforward activities Plans own workload; organises projects allocated to self; prioritises breakdown requests, plans training | 2 | 15 |
| 5. | Physical Skills | Highly developed skills, manipulation of fine tools, materials Dexterity, co-ordination & sensory skills for use of precision tools, production of precision components, gas welding, disassembly & assembly of equipment | 3(b) | 27 |
| 6. | Patient/Client Care | Provides clinical technical services Calibrates and maintains diagnostic and/or therapeutic equipment for use in patient care | 4(b) | 22 |
| 7. | Policy/Service Development | Follows policies; proposes changes for own area Comments on proposed changes to departmental policies, procedures; proposes changes | 1–2 | 5-12 |
| 8. | Financial & Physical Resources | Responsible for safe use of expensive or highly complex equipment Responsible for safe use of diagnostic, therapeutic equipment | 2(e) | 12 |
| 9. | Human Resources | Provides practical training Trains, assesses radiography & other staff in use of equipment; trainees, less experienced technicians in use of workshop equipment | 2(c) | 12 |
| 10. | Information Resources | Records personally generated equipment test results; use of software Occasionally/regularly uses CADCAM software to develop designs | 1-3(b) | 4-16 |
| 11. | Research & Development | Regular equipment testing Evaluates medical equipment; acceptance testing | 2(c) | 12 |
| 12. | Freedom to Act | Clearly defined occupational policies Follows departmental procedures, quality system manual; work is managed rather than supervised | 3 | 21 |



| 13. | Physical Effort | Frequent moderate effort for short periods Works in awkward positions, lifting of heavy equipment | 3(a) | 12 |
|-----|-------------------------|---|-----------|-------|
| 14. | Mental Effort | Frequent concentration, unpredictable pattern Daily concentration on developmental work, fault finding; interruptions for emergency repairs | 3(a) | 12 |
| 15. | Emotional Effort | Exposure to distressing situations is rare/occasional Dealing with fault in equipment connected to patient | 1–2(a) | 5-11 |
| 16. | Working Conditions | Frequent exposure to unpleasant conditions/some exposure to hazards Dust, swarf, fumes, noise, vibration/unavoidable exposure to electrical hazards | 3(a)-4(a) | 12-18 |
| | JE Score 339-370 Band 5 | | d 5 | |



| Profile Suite and Label | Clinical Sciences – Specialist Medical Physics Technician |
|-------------------------|---|
| Job Statement | Undertakes specialist diagnostic testing, calibration and record keeping within specific field e.g. radio-isotopes |
| | 2. Designs, develops and adapts/manufactures specialised medical and other devices to specifications agreed with users |
| | 3. Undertakes preventative maintenance, inspection, testing, calibration and repair of patient critical diagnostic, therapeutic equipment |

| Fac | tor | Level descriptor and example job information | JE Level | JE Score |
|-----|---|---|-------------|-------------|
| 1. | Communication & Relationship Skills | Communicates complex information: provides instruction, training to groups Communicates technical equipment-related information to staff, colleagues, suppliers; trains staff in use of equipment | 3(b)(c) | 21 |
| 2. | Knowledge, Training & Experience | Specialist knowledge across range of procedures underpinned by theory Professional engineering knowledge acquired through HND/BEng or equivalent; specialist knowledge through postgraduate diploma, short courses & regular updating | 6 | 156 |
| 3. | Analytical & Judgemental Skills | Complex facts, requiring analysis, interpretation, comparison of range of options Skills for analysing & diagnosing faults in complex patient critical equipment, designing innovative prototypes, devices | 4 | 42 |
| 4. | Planning & Organisational Skills | Plans & organises straightforward activities Plans own workload; organises projects allocated to self; prioritises breakdown requests, plans daily work schedule for others, PPM activities | 2 | 15 |
| 5. | Physical Skills | Highly developed skills, manipulation of fine tools, materials Dexterity, co-ordination & sensory skills for use of precision tools, production of precision components, gas welding, disassembly & assembly of machinery | 3(b) | 27 |
| 6. | Patient/Client Care | Provides clinical technical services Calibrates and maintains diagnostic and/or therapeutic medical equipment for use in patient care | 4(b) | 22 |
| 7. | Policy/Service Development | Proposes changes for own area; impact on others Comments on proposed changes to departmental policies, procedures; proposes changes, impact on users of equipment | 2–3 | 12-21 |
| 8. | Financial & Physical Resources | Responsible for safe use of expensive or highly expensive equipment Responsible for safe use of diagnostic, therapeutic equipment | 2(e) | 12 |
| 9. | Human Resources | Day to day, professional supervision, practical training Supervises other technicians, trainees, trains, assesses radiography & other staff in use of equipment; trainees, less experienced technicians in use of workshop equipment | 2(a)(b)(c) | 12 |
| 10. | Information Resources | Occasionally/regularly uses software Uses CADCAM software to develop designs; maintains specialist equipment records for department | 2(b)-3(b) | 9-16 |
| 11. | Research & Development | Regular research, equipment testing Evaluates medical equipment; acceptance testing; R&D projects | 2(a)(c) | 12 |



| 12. | Freedom to Act | Broad occupational policies Follows departmental procedures, quality system manual; works on own in specialist area; lead professional for specialist equipment | 4 | 32 |
|-----|-----------------------|---|-----------|-------|
| 13. | Physical Effort | Occasional, frequent moderate effort for short periods Works in awkward positions, some lifting of heavy equipment | 2(d)-3(a) | 7-12 |
| 14. | Mental Effort | Frequent concentration, unpredictable pattern Daily concentration on developmental work, fault finding; interruptions for emergency repairs | 3(a) | 12 |
| 15. | Emotional Effort | Exposure to distressing situations is rare/occasional Dealing with fault on equipment connected to patient | 1–2(a) | 5-11 |
| 16. | Working Conditions | Frequent exposure to unpleasant conditions/some exposure to hazards Dust, swarf, fumes, noise, vibration, contained radioactive sources/unavoidable exposure to electrical hazards | 3(a)-4(a) | 12-18 |
| | | JE Score 408-441 | Band | d 6 |



| Profile Suite and Label | Clinical Sciences – Clinical Scientist (Molecular Genetics/ Cytogenetics) | |
|-------------------------|--|--|
| Job Statement | Analysis, interpretation & reporting of molecular genetic/cytogenetic tests; provides advice to clinicians Supervision of technical and junior staff in section Practical & theoretical training of scientific & technical staff | |

| Fac | tor | Level descriptor and example job information | JE Level | JE Score |
|-----|---|--|-------------|-------------|
| 1. | Communication & Relationship Skills | Providing & receiving highly complex & sensitive information/presenting complex information to large groups Communicates highly complex scientific issues to other scientists, technical staff, clinicians/presents scientific papers at large scientific meetings | 4(b)-5(b) | 32-45 |
| 2. | Knowledge, Training & Experience | Highly specialist knowledge underpinned by theoretical knowledge Science degree, post-graduate certificate in specialised scientific field and experience to master's level equivalent | 7 | 196 |
| 3. | Analytical & Judgemental Skills | Range of complex facts requiring analysis, interpretation Analysis of scientific tests & their interpretation, monitoring of quality outcomes | 4 | 42 |
| 4. | Planning & Organisational Skills | Planning of straightforward tasks & activities Co-ordination of laboratory work and prioritisation of workload, planning of training programmes | 2 | 15 |
| 5. | Physical Skills | Highly developed physical skills where accuracy is important Use of scientific equipment, microscope work, manipulation of materials on slide | 3(b) | 27 |
| 6. | Patient/Client Care | Provides highly specialist clinical technical services Provides analysis & interpretation of highly complex diagnostic tests, reports findings to clinical staff | 6(b) | 39 |
| 7. | Policy/Service Development | Implements policies, proposes changes to practices & procedures own work area Participates in departmental policy formulation, implements laboratory and Trust policies | 2 | 12 |
| 8. | Financial & Physical Resources | Maintain stock control; safe use of expensive or highly complex equipment Checks and orders reagents for laboratory; use of fluorescent microscopes or complex scientific equipment | 2(c)(e) | 12 |
| 9. | Human Resources | Professional/clinical supervision; practical training Supervises & monitors outputs of scientific & technical staff & students; identifying training needs; planning & delivering training programmes | 2(a)(b)(c) | 12 |
| 10. | Information Resources | Records personally generated test results/storage of data Recording & documentation of tests performed in the laboratory/responsible for maintaining document control system within laboratory | 1–2(a) | 4-9 |
| 11. | Research & Development | Regularly undertakes R&D activity Develops new protocols, design of pilot studies for new services | 2(a) | 12 |





| | | molecular genetic/cytogenetic analysis includes tumour biopsies & body fluids | | |
|-----|-----------------------|---|-----------|-------|
| 16. | Working Conditions | Occasional/frequent exposure to highly unpleasant working conditions Reception & processing of range of biological samples for | 3(b)-4(b) | 12-18 |
| 15. | Emotional Effort | Occasional exposure to distressing or emotional circumstances/occasional highly distressing circumstances Diagnoses terminal conditions, abnormalities, genetic diseases/deals with recognisable foetal parts | 2–3(b) | 11-18 |
| 14. | Mental Effort | Frequent requirement for prolonged concentration Detailed analysis of chromosomes, genes, DNA sequence data using microscopes or other methods for greater part of shift | 4(a) | 18 |
| 13. | Physical Effort | Restricted position for substantial proportion of working time Sits at microscope for long periods | 2(a) | 7 |
| 12. | Freedom to Act | Guided by precedent & occupational policies & protocols, work is managed Not directly supervised but guidance received from head of section when required | 3 | 21 |



| Profile Suite and Label | Clinical Sciences – Medical Physics Section Manager |
|-------------------------|--|
| Job Statement | Designs, develops and adapts/manufactures specialist medical and other devices to specifications agreed with users |
| | Undertakes preventative maintenance, inspection, testing, calibration and repair of patient critical diagnostic, therapeutic equipment |
| | Provides specialist knowledge for commissioning of equipment |
| | Manages work; medical physics technicians and equipment for mechanical workshops section. |

| Fac | tor | Level descriptor and example job information | | JE Score |
|-----|---|--|-----------|-------------|
| 1. | Communication & Relationship Skills | Communicates complex information: negotiating skills required to secure co-operation Communicates technical equipment-related information to staff, colleagues, suppliers; negotiates equipment specifications with users, suppliers | 4 | 32 |
| 2. | Knowledge, Training & Experience | Highly developed specialist knowledge underpinned by theory, experience Professional engineering knowledge acquired through HND/BEng or equivalent; specialist knowledge through postgraduate diploma, short courses & regular updating, significant experience to master's equivalent level | 7 | 196 |
| 3. | Analytical & Judgemental Skills | Complex facts, requiring analysis, interpretation, comparison of range of options Skills for analysing & diagnosing faults in complex patient critical equipment, designing innovative prototypes, devices; evaluates procedures and equipment | 4 | 42 |
| 4. | Planning & Organisational Skills | Plans & organises complex activities requiring adjustments Plans section workload; PPM programme; prioritises breakdown requests, readjusts routine work as necessary | 3 | 27 |
| 5. | Physical Skills | Highly developed skills, manipulation of fine tools, materials Dexterity, co-ordination & sensory skills for use of precision tools, production of precision components, gas welding, disassembly & assembly of machinery | 3(b) | 27 |
| 6. | Patient/Client Care | Provides clinical technical services/provides specialised advice Calibrates and maintains diagnostic and/or therapeutic equipment for use in patient care/responsible for providing specialist advice to other professionals on the purchase, commissioning of medical equipment & devices | 4(b)-5(c) | 22-30 |
| 7. | Policy/Service Development | Proposes changes for own area; impact on others Comments on proposed changes to departmental policies, procedures; proposes changes, impact on users of equipment | 3 | 21 |
| 8. | Financial & Physical Resources | Authorised signatory/holds delegated budget Authorises spending on equipment, supplies/holds non-pay budget for equipment etc. | 3(a)(d) | 21 |
| 9. | Human Resources | Day to day management Manages workshop technicians, trainees, including work allocation, appraisal, grievances | 3(a) | 21 |



| 10. | Information Resources | Occasionally/regularly uses software Uses CADCAM software to develop designs; maintains specialist equipment records for department | 2(b)-3(b) | 9-16 | |
|-----|--------------------------|--|-----------|--------|--|
| 11. | Research & Development | Regular research, equipment testing Evaluates medical equipment; acceptance testing; R&D projects | 2(a)(c) | 12 | |
| 12. | Freedom to Act | Broad occupational policies Follows departmental procedures, quality system manual; manages section | 4 | 32 | |
| 13. | Physical Effort | Occasional, frequent moderate effort for short periods Works in awkward positions, some lifting of heavy equipment | 2(d)-3(a) | 7-12 | |
| 14. | Mental Effort | Frequent concentration, unpredictable pattern Daily concentration on developmental work, fault finding; meetings; interruptions for emergency repairs, management issues | 3(a) | 12 | |
| 15. | Emotional Effort | Exposure to distressing situations is rare/occasional Dealing with fault on equipment connected to patient | 1–2(a) | 5-11 | |
| 16. | Working Conditions | Frequent exposure to unpleasant conditions/some exposure to hazards Dust, swarf, fumes, noise, vibration, contained radioactive sources/unavoidable exposure to electrical hazards | 3(a)-4(a) | 12-18 | |
| | JE Score 498-530 | | | Band 7 | |



| Profile Suite and Label | Clinical Sciences – Principal Clinical Scientist (Molecular Genetics/Cytogenetics) | | |
|-------------------------|---|--|--|
| Job Statement | Analysis, interpretation & reporting of abnormal molecular genetic/cytogenetic tests Manages scientists & technical staff in section Oversees the quality of service from the laboratory section Training of trainees to ensure compliance with professional standards | | |

| Factor | | Level descriptor and example job information | | JE Score |
|--------|---|--|---------|-------------|
| 1. | Communication & Relationship Skills | Communicates highly complex, sensitive information, cooperation or agreement required/presenting complex information to large groups Communicates results of highly complex scientific tests & explains the implications of abnormal test results, agreement & co-operation of other professionals required/presents papers to large scientific meetings | 5(a)(b) | 45 |
| 2. | Knowledge, Training & Experience | Highly developed specialist knowledge underpinned by theoretical knowledge & experience Science degree, post-graduate certificate in specialised scientific field, experience, to master's level equivalent | 7 | 196 |
| 3. | Analytical & Judgemental Skills | Complex facts requiring analysis & interpretation Analysis of abnormal scientific test results & their implication | 4 | 42 |
| 4. | Planning & Organisational Skills | Planning of complex tasks & activities, makes adjustments Co-ordination of section workload as necessary, implementation of skills mix changes | 3 | 27 |
| 5. | Physical Skills | Highly developed physical skills where accuracy is important Use of scientific equipment, microscope work | 3(b) | 27 |
| 6. | Patient/Client Care | Provides highly specialist clinical technical services Responsible for the provision of a highly specialist/complex molecular/cytogenetic service, maintains the quality of the service; authorises all section reports | 6(b) | 39 |
| 7. | Policy/Service Development | Implements policies, proposes changes to practices & procedures, impact beyond own area Develops policies for section & participates in laboratory policy formulation & implementation, impact on other sections | 3 | 21 |
| 8. | Financial & Physical Resources | Purchase of some physical assets Responsible for procurement of equipment & supplies for section | 3(b) | 21 |
| 9. | Human Resources | Responsible for day to day management of a group of staff Manages staff in section, supervises and monitors outputs of scientific & technical staff & students | 3(a) | 21 |
| 10. | Information Resources | Records personally generated test results/data storage Recording & documentation of patient results for audit and analysis of patient referrals/ laboratory database management | 1–2(a) | 4-9 |
| 11. | Research & Development | R&D as major job requirement Undertakes R&D, e.g. develops new molecular/cytogenetic techniques | 3 | 21 |



| 12. | Freedom to Act | Broad occupational policies & protocols Manages work of section | 4 | 32 |
|-----|-----------------------|---|-----------|-------|
| 13. | Physical Effort | Sitting or standing in a restricted position Microscope work | 2(a) | 7 |
| 14. | Mental Effort | Frequent requirement for prolonged concentration Detailed analysis of chromosomes, genes, DNA sequence data using microscopes or other methods for greater part of shift | 4(a) | 18 |
| 15. | Emotional Effort | Occasional exposure to distressing or emotional circumstances/occasional highly distressing circumstances Diagnoses terminal conditions, abnormalities, genetic diseases/deals with recognisable foetal parts | 2-3(b) | 11-18 |
| 16. | Working Conditions | Occasional/frequent exposure to highly unpleasant working conditions Reception & processing of range of biological samples for molecular genetic/cytogenetic analysis includes tumour biopsies & body fluids | 3(b)-4(b) | 12-18 |
| | JE Score 544-564 | | | a |



| Profile Suite and Label | Consultant Clinical Scientist – Head of Service (Molecular Genetics/Cytogenetics) | | |
|-------------------------|--|--|--|
| Job Statement | Manages regional or equivalent molecular genetic/cytogenetic department & service, including quality management and managing scientists, technical & support staff in the department | | |
| | Carries out molecular genetic/cytogenetic analysis, interpretation & reporting of abnormal results | | |
| | Oversees professional development of all staff to ensure compliance with professional standards | | |

| Fac | tor | Level descriptor and example job information | JE Level | JE Score |
|-----|---|--|-------------|-------------|
| 1. | Communication & Relationship Skills | Communicates highly complex & sensitive information, agreement required/presenting complex information to large groups Negotiates & commissions new services, negotiates for funding Promotes & facilitates professional development for scientific staff, communications on service development/ presenting papers to large scientific meetings | 5(a)(b) | 45 |
| 2. | Knowledge, Training & Experience | Advanced theoretical knowledge of a range of work procedures Science degree, post-graduate qualification in specialised scientific field, doctorate or equivalent experience | 8(a) | 240 |
| 3. | Analytical & Judgemental Skills | Highly complex facts requiring analysis & interpretation Resolving organisational and staffing issues in relation to delivery of laboratory services in line with service need | 5 | 60 |
| 4. | Planning & Organisational Skills | Planning & organisation of broad range of complex activities, long-term planning Planning, organising regional scientific service, commissioning of new services & development of professional education for scientific staff | 4 | 42 |
| 5. | Physical Skills | Highly developed physical skills where accuracy is important Use of scientific equipment, microscope work | 3(b) | 27 |
| 6. | Patient/Client Care | Accountable for delivery of clinical technical service Responsible for the provision of a specialist regional molecular/cytogenetic service, maintains the quality of the service output | 7 | 49 |
| 7. | Policy/Service Development | Implements policies/service, proposes changes to practices for directorate or equivalent Develops policies for the regional or equivalent provision of a specialist scientific service, co-ordinates policy across trusts, with impact on a range of other services | 5 | 45 |
| 8. | Financial & Physical Resources | Budget holder for a service Manages & controls the budget for a specialist scientific department & service | 4(a) | 32 |
| 9. | Human Resources | Responsible as line manager for a department Responsibility for the management and the professional development of scientific & support staff to ensure delivery of a specialised scientific service | 4(a) | 32 |
| 10. | Information Resources | Responsible for operation of one or more information systems Responsible for regional service information systems | 4(b) | 24 |



| 11. | Research & Development | Regularly undertakes R&D activity/major job responsibility/coordinates R&D Manages on-going clinical audit for the scientific service, commissions the development of new methods/co-ordinates departmental & cross-departmental R&D | 2(a)-4 | 12-32 |
|-----|------------------------|---|-----------|----------|
| 12. | Freedom to Act | Guided by general health, occupational policies Guidance from professional protocols, codes of practice & guidelines, manages regional service | 5 | 45 |
| 13. | Physical Effort | Occasional light physical effort/sitting or standing in a restricted position Microscope work | 1–2(a) | 3-7 |
| 14. | Mental Effort | Occasional/frequent requirement for prolonged concentration Detailed analysis of chromosomes, genes, DNA sequence data using microscopes or other methods, verification of written reports for greater part of shift | 3(b)-4(a) | 12-18 |
| 15. | Emotional Effort | Occasional exposure to distressing or emotional circumstances/occasional highly distressing circumstances Diagnoses terminal conditions, abnormalities, genetic diseases, staffing issues/deals with recognisable foetal parts | 2-3(b) | 11-18 |
| 16. | Working Conditions | Occasional exposure to highly unpleasant working conditions Reception & processing of range of biological samples for molecular genetic/cytogenetic analysis includes tumour biopsies & body fluids | 3(b) | 12 |
| | | JE Score 691-728 | Band 8(d |) & over |

