



# Welcome to Healthcare Scientist Training

in Scotland



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# Contents

Contents	2
Welcome	4
What is Healthcare Science?	6
Healthcare Scientist Training	7
1 Clinical Scientist STP trainees	7
2 and 3 Clinical Scientist non-STP trainees and independent equivalence candidates	8
4 Bursary supported postgraduates	8
5 Healthcare Science Practitioners	8
Attributes of a Healthcare Scientist	9
Training Responsibilities	10
Trainee Responsibilities	10
Supervisor Responsibilities	10
Our Role at NHS Education for Scotland	11
Meet the NES Healthcare Science core team	12
Training Programme Management and Quality Assurance	13
National Training Numbers and Turas TPM	13
Training Plans	14
Annual Review of Competency Progression (ARCP)	14
Feedback and Annual Surveys	15
Multi-Source Feedback	15
Training Centre Recognition in Healthcare Scientist Training	16
Turas Learn for CPD	17
Short Courses and Additional Learning	18
NES Resources	19
Promoting Healthcare Science	20
What happens when things don't go to plan	21
Related Workforce Policies – NHS Scotland	22





Regulator Standards	. 22
HCPC Fitness to Practice Tribunal Service (HCPTS)	. 22
Advice and Support for your Training	. 23
Final Word	. 24
Useful Links	. 24
Acronyms	. 25





## Welcome

Welcome to Healthcare Scientist training in NHS Scotland. Whether you are a clinical scientist trainee, a bursary-holder, or independently progressing through a programme of development, you are all stepping into specialist scientific roles that are essential to our service. This short guide is designed to help you understand and navigate healthcare scientist training, the role of NHS Education for Scotland (NES) and the possibilities for you as a Healthcare Scientist within NHS Scotland.

Your contribution to our NHS as a member of the Healthcare Science workforce is both essential and ubiquitous. You are joining a community of healthcare scientist trainees and a network of trainers, which span the life sciences, clinical physiology, physical sciences and the bioinformatics science.

The Healthcare Science workforce does fantastic innovative work - daily. Patients and service users entering the healthcare system have the anxiety of "waiting for tests" - diagnostics plays a key and vital role in the patient pathway and journey through treatment. Irrespective of whether you have a patient-facing role or work with samples and specimens, your work informs and helps steer medical and surgical decision-making for patients' treatment. Modern medicine relies on safe, accurate tests and measurements.

Imagine... without your contribution to the wider multi-disciplinary clinical team, now and in future, there would be no 24/7 diagnostics, no hot-lab or on-call laboratory services to support theatres, there would be severely impaired acuity in the cause or progression of disease, there would be no advanced treatment planning or interventions, no investigations or medical device management; there would be less innovation, and NHS research would be severely impacted. You are and will become an expert resource as part of the NHS team - vital to its success.





In Scotland, we are a total Healthcare Science workforce of around 6000 staff, with approximately 180 scientists in formal training. Regardless of discipline, we encourage you as a healthcare scientist trainee to acquire key attributes that will prepare you for more senior roles. These attributes are outlined in our <a href="Common Core List">Common Core List</a> framework which challenges you to go beyond scientific specialist training. Think about areas such as leadership, business skills and research. Think about your senior mentors now and the roles and duties they have... ask them about their journey and how their knowledge and skills developed as they moved into more senior roles.

Above all, be open to challenge, be ready to follow your innate scientific curiosity and to enquire as to how, in whatever discipline you work, things can be made better. Welcome.



Dr Rob Farley, Healthcare Science Associate Director





# What is Healthcare Science?

Healthcare Science describes the branch of the NHS staff that use technology and science to help patients by prevention, diagnosis and treatment of a large number of clinical conditions.

NHS Scotland's Healthcare Science workforce spans more than fifty specialties which can be broadly categorised within the following four divisions:

- Bioinformatics
- Life Sciences
- Physical Sciences and Biomedical Engineering
- Physiological Sciences

We are the 4th largest group of NHS staff with approximately 6000 healthcare scientists in post across NHS Scotland.

The NES Healthcare Science core team act as the national focus for Healthcare Science education and training in three ways: we commission training, we offer generic CPD resources and we quality assure training departments.





# **Healthcare Scientist Training**

Healthcare Scientist training comprises several pathways. This diversity in training pathways is a strength, it ensures as wide a workforce supply pipeline as possible and reflects the broader approach of science. The pathways are:

- 1. Clinical Scientist STP training
- 2. Clinical Scientist non-STP training
- 3. Independent equivalence portfolio development towards Clinical Scientist registration or Higher Specialist Scientific registration (HSSR)
- 4. Bursary-supported postgraduate training (for example specialist/higher specialist portfolios and MScs) irrespective of funding source
- 5. Practitioners and Technologists training towards professional registration

Types 1-3 all require adherence to the <u>Academy for Healthcare Science</u> (AHCS) document <u>Good Scientific Practice</u>, or to very similar competencies defined by the <u>Association of Clinical Scientists</u> or the <u>Institute of Biomedical Science</u>. For STP training, Good Scientific Practice is built into training curricula.

#### 1 Clinical Scientist STP trainees

These are enrolled on the UK <u>Scientist Training Programme</u> (STP). Our STPs are linked to a UK university for the academic component of training and to Health Education England's <u>National School for Healthcare Science</u>. The School acts as a UK hub for STP training, but does not recruit for, nor directly monitor workplace training in, Scotland.

The National School tracks all STP trainee's progression via its One File (on-line learning and assessment tool). It also runs STP exit examinations via its OSFAs (observed structured final assessment). The National School provides induction for new STP trainees and a range of trainer opportunities specific to the STP format of training. Pass lists are shared with the statutory regulator- the <a href="Health and Care Professions Council">Health and Care Professions Council</a>. Trainees may then apply to HCPC for admission to the statutory register as a Clinical Scientist.

The school publishes an annual trainee handbook that describes the training process, responsibilities, and a trainee–school agreement. The agreement relates to expectations of





professional behaviour and to information sharing regarding progress, with commissioners such as NES.

# 2 and 3 Clinical Scientist non-STP trainees and independent equivalence candidates

These follow a locally determined training pathway and do not involve the National School, its OLAT or OSFA systems. Instead, trainees must demonstrate learning outcomes equivalent to STP or meet similar competences laid out by the <u>Association of Clinical Scientists</u> (ACS) or the <u>Institute of Biomedical Science</u>. Such trainees are effectively 'equivalence' type candidates who must submit a portfolio and undergo a viva either with the <u>ACS</u>, <u>IBMS</u> or <u>AHCS</u>.

Guidance is also available on our <u>Turas Learn website</u> about equivalence routes and support.

#### 4 Bursary supported postgraduates

Postgraduates who have engaged with a discipline specific programme, perhaps a masters-level degree, and are not necessarily intending further registration as a clinical scientist. They may be HCPC registered as a Biomedical Scientist, or as a Clinical Physiologist. Whilst Good Scientific Practice is not mandatory for this type of trainee, NES support recommends adherence to it.

#### 5 Healthcare Science Practitioners

Healthcare Science Practitioners train towards professional qualifications in an undergraduate training scheme that includes work-based and academic learning. Their training in some cases articulates with postgraduate training allowing them to step up the Healthcare Science four-tier career model. Practitioner training may be accredited by the National School of Healthcare Science or be via an "equivalence" route. It may lead to admission to a Practitioner register recognised by the <u>Professional Standards Authority</u> (PSA) such as the <u>Registration Council for Clinical Physiology</u>, the <u>Academy for Healthcare Science</u> or the <u>Register of Clinical Technologists</u>. Biomedical Scientists are registered by statute with the <u>Health and Care Professions Council (HCPC)</u> and are accredited by the <u>Institute of Biomedical Sciences</u>.

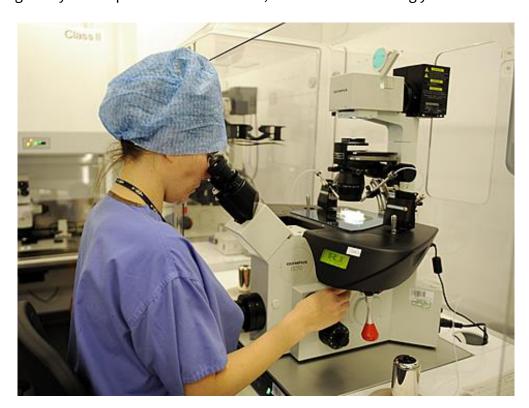




## Attributes of a Healthcare Scientist

For all trainees our <u>Common Core List</u> describes the framework against which they can develop, to foster consistency across all types of scientist. Our <u>Turas Learn</u> page for trainees includes a mapping between the Common Core List and Good Scientific Practice.

Developing as a scientist is more than becoming a specialist in a particular field. We need you, our future scientists, to also think about your leadership role, honing your business skills, developing safety and improvement awareness, and of course refining your research skills.







# Training Responsibilities

#### **Trainee Responsibilities**

- Irrespective of training pathway, scientist training demands a strong element of selfdirection
- Professional conduct, such as that described in <u>Good Scientific Practice</u> and <u>HCPC</u>
   <u>Standards of conduct, performance and ethics</u>
- Maintain high standards of behaviour towards colleagues, service users and patients
- Communication with training officers and supervisors
- Question current practise and raise a concern/grievance or idea
- Work within the limits of your knowledge and skills
- Respect confidentiality
- Be open when things go wrong
- Engage with NES when we request information relating to our quality assurance role

#### **Supervisor Responsibilities**

- Give broad direction to the trainee, including agreeing a training plan
- Meet and monitor trainees regularly
- Attend a Train-the-Trainer and Trainees-in-Difficulty programme
- Plan requisite assessments and monitoring of progression
- Give constructive feedback
- Engage with NES when we request information relating to our quality assurance role
- Provide a supervisor's CV for activating a Turas record and towards centre accreditation

Our NES Turas Learn website offers a range of trainer development courses and resources specifically for the Healthcare Science community; trainers are encouraged to sign up.





# Our Role at NHS Education for Scotland

NHS Education for Scotland has several strands of work for Healthcare Science, which includes our interest in your scientist development.

#### The strands are:

- Commissioning Healthcare Science Trainees
- Funding both post-graduate and Practitioner training positions/courses
- Tracking trainees throughout their training (Turas Trainee Management System)
- Quality assuring all Healthcare Science training throughout Scotland
- Providing CPD including face-to-face training, e-Learning and CPD suggestions
- Promoting Healthcare Science providing conferences/meetings and support for various groups
- Supporting trainees and supervisors

In addition, NES Healthcare Science links with UK agencies, Scottish Government, and other stakeholders to represent NHS Scotland best interests.





# Meet the NES Healthcare Science core team







# Training Programme Management and Quality Assurance

Our purpose in undertaking quality monitoring is to provide assurance that training is secure and safe – and that it will produce the right calibre of Healthcare Scientists. Our approach has been to widen our oversight across HCS groups in training supporting the principles of good-practice and help cement the identity of the scientific workforce. More information about our standards and the state of quality monitoring is on our Turas Learn website – Quality Assurance.

#### National Training Numbers and Turas TPM



All Healthcare Scientist trainees in our community are issued with a unique National Training Number (NTN). You should receive your NTN shortly after your bursary award, admission into NHS employment or recognition by NES of your training plan. Information about obtaining a National Training Number for trainees not funded in some way by NES is on our Turas Learn website.

We track your training using our Turas "TPM" system, that you will have some access to once we activate you user account. (TPM means Training Programme Management) This is a workforce modelling tool and helps inform the wider NHS of those trainees "in the pipeline". Turas records your training journey, if applicable the expected rotations, progression and exit. It associates those trainers and supervisors supporting your training and the locations of training.

Turas TPM is used by other clinical groups with trainees in Scotland such as medicine, dentistry, pharmacy and psychology.





#### **Training Plans**

	Activity	NHS Location	From	То	Activity supervisor (NHS):	Activity supervisor (NHS) email
Year 1	MSc Medical Physics, Full-time Glasgow University	GGC - QEUH Medical Physics	09/18	98/19	Jane Doe	JaneDoeldtDummyDept stotuk
Year 2	Foundation year training – Rotation1 – Non-tonising radiation	* *:	08/19	11/19	John Smith	JohnSmith@DummyDept scot uk
Year 2	Foundation year training – Rotation 2 – Radiotherapy		11/19	01/20	Jane Smith	JanuSmith@DummyDept.scot.uk
Year 2	Foundation year training – Rotation 3 – Nuclear Medicine		02/20	04/20	John Doe	JohnDoe@OummyCept scot uk
Year 2	Foundation year training – Rotation 4 – Radiation Protection	* **	05/20	08/20	Jack Brown	JackSrown@DummyDept scot uk
Year3	Specialist year - Ratiotherapy		09/20	08/21	Jane Smith	JaneSmith@DummyDept scot uk
	Innovation project	GGC – Clinical Engineering Gartnavel	09/21	03/22	Jane Brown	JanuBrown@OummyOept scot uk

All National Training Number holders irrespective of the training schedule they are following are invited to complete an outline training plan (example pictured above). It should be completed by the trainee and supervisors together to ensure an overall plan is agreed and both parties have full oversight of that plan. A request for this training plan with be sent out to all trainees each year. We ask that main elements of each scheme are recorded, and that the plan is returned to us at NES no more than two months into each training year.

A completed training plan informs the communication between the supervisor and trainee of all expectations and deadlines. It assists in planning appropriate timelines for each element and may be useful to guide the Annual Review of Competence Progression (ARCP). NES will use this information to cross check the information held on training centres, trainees, trainers and supervisors. Further details can be found on our <u>Turas Learn website</u>.

## Annual Review of Competency Progression (ARCP)

Annual reports of competency progression are sent to NES to give us an overview of how the trainee is progressing. All National Training Number holders are requested to complete our Annual Review of Competency Progression (ARCP) monitoring in September/ October of each year. This includes all trainees from one year into training onwards. Trainees can also provide confidential feedback to the HCS team with any issues, concerns or praise relating to their training. Clinical Scientist STP trainees in Scotland undertake Scottish ARCP rather than midpoint review but can expect NES to share with the National School progression matters including One-file progression, HEI progression and Exceptional Extenuating Circumstances as is the norm for Trainees based in England. For more information on ARCP, please refer to the ARCP page on our Turas Learn website.





#### Feedback and Annual Surveys



Individual scientist trainees are also invited to respond to our annual surveys – non-confidential responses to which are summarised on our <u>Turas Learn website</u>. This gives us the reassurance that training for you is going to plan and is an opportunity for you to give us confidential feedback.

#### Multi-Source Feedback

This is an online tool for individuals within the Healthcare Science community to obtain constructive, anonymous, amalgamated feedback, from those they work with, about their practice. The questions are based on the AHCS Standards of Proficiency for Higher Specialist Scientists, the HCPC standards of conduct, performance, and ethics, and AHCS Good Scientific Practice. They are suitable for all career stages, levels of responsibility and disciplines. It is available on our <u>Turas Learn website</u>.





#### Training Centre Recognition in Healthcare Scientist Training



# Centre Accreditation - NES Healthcare Science Quality Assurance V2

This self assessment tool is for Healthcare Science departments providing trainees with work-based practice placement. Completion is essential for postgraduate scientist STP host departments. The self-assessment is applicable to units supporting other postgraduate scientist trainees, and NHS-employed practitioner-level trainees regardless of funding. The self-assessment is designed to give placement providers and our regulators a framework to ensure that HCPC Standards of Education and training are being met for practice placement, these being adopted by NES Healthcare Science as the benchmark for all healthcare science. One return should be made for each department, regardless of the variety of trainees supported.

The basis of this self assessment is a composite drawn from NES Healthcare Science's approach to postgraduate scientist identity, NHS Education for Scotland's Quality Assessment tool 2010 NMAHP, the NES Medical Deanery QA approach, Health Education England's National School for Healthcare Science thinking on its approach to placement accreditation, and HCPC standards of Education and Training.

NES Healthcare Science monitors workplace training via departmental self-assessment, training group reviews and progression monitoring of individual trainees. The basis of this self-assessment is a composite drawn from NES Healthcare Science's approach to Healthcare Scientist identity, NHS Education for Scotland's Quality Assessment tool 2010 NMAHP, the NES Medical Deanery QA approach, Health Education England's National School for Healthcare Science, and HCPC standards of Education and Training.

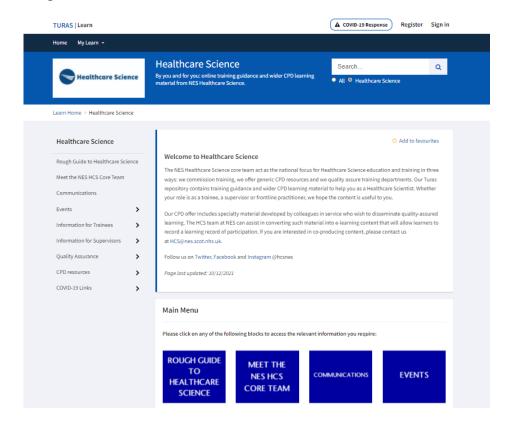
Our process has been updated following engagement with Healthcare Science colleagues requesting a more streamlined self-declaration assessment. We recognise that many Healthcare Science departments are routinely assessed through other accreditation governing bodies such as UKAS, MHRA or professional bodies to uphold high standards of service and training. Essentially, we request a straight-forward self-declaration of compliance with our standards and audit a small sample of responses with a call for evidence. Therefore, in making the declaration, departments must have available supporting documentation should it be requested. Further information and our current accredited list of training centres are listed on our <u>Turas Learn website</u>.





## Turas Learn for CPD

Turas Learn is a free depository that holds a range of on-line learning resources for all NHS staff in Scotland. It covers a wide range of topics including patient safety, risk, human factors, HAI and other more generic themes.



We have developed a dedicated <u>Healthcare Science webpage</u> within Turas Learn which is your one-stop shop whether you are looking for information, CPD resources or e-learning materials. Along with Healthcare Science specific content, there are also a variety of generic CPD short courses and signposting with some examples referenced in our next section 'Short Courses and Additional Learning'. However, please be aware that accessing these resources will require you to login to Turas Learn so that your progress can be tracked and recorded.

Our open public area includes the following content which should be useful for you all:

- Communications
- Events
- Information for Trainees
- Quality Assurance





# **Short Courses and Additional Learning**



Both our <u>Common Core List</u> and the needs of STP or equivalence applicants can be in-part fulfilled using NES short courses for generic learning.

Below are some examples of the courses supported by NES on our <u>Turas Learn website</u>;

**Train-the-Trainer** – Our newly revised virtual training programme for Train-the-Trainer examines key concepts, principles and techniques of training and learning to help facilitate the design, delivery and evaluation of effective training in practice. The course is aimed at Healthcare Science (HCS) supervisors and mentors, and it is aligned with NES quality management of practice placement. It applies to all grades and levels of Healthcare Science training. It is an ideal opportunity to learn alongside other HCS colleagues and has been used as a bolt-on for subsequent discipline-specific training. Link

**Trainees-in-Difficulty** – This virtual training course for Trainees-In-Difficulty builds upon Trainthe-Trainer. It investigates potential root causes and remediation of training difficulties, and the role NES has in monitoring HCS postgraduate scientist practice placement. The course is aimed at supervisors and mentors, and it is aligned with NES quality management of practice placement and applies to all grades and levels of Healthcare Science training. <u>Link</u>

**Early Years programme –** We have revised our previous face-to-face Early Careers leadership programme into a virtual offering called Early Years. <u>Link</u>

It is comprised of 4 modules which cover the following topics:

- Introduction to Leadership
- Introduction to Teamwork
- Managing Meetings
- Time Management





# **NES Resources**

**Our NES Healthcare Science Turas Learn webpage** <u>Link</u> is your one-stop shop whether you are looking for information, CPD resources or e-learning materials. Along with Healthcare Science specific content, there are also a variety of generic CPD short courses and signposting.

Our NES Healthcare Science Website Link details information about our support for the training and development of postgraduate scientist staff and other key groups in the Healthcare Science workforce. There are also signposting of our communications about the following;

- <u>Social media:</u> We now have social media pages live on *Twitter, Facebook and Instagram* to share news of our activities, CPD offers, events and general updates in Healthcare Science. If you are not already following us our social media handle is @hcsnes.
- <u>Annual Report</u> Our NES Healthcare Science annual report is published every year and provides a summary of our activity.
- <u>Noticeboard</u> To keep you up-to-date with the latest news from NES and other information in Healthcare Science we publish a quarterly noticeboard and distribute via our Mailchimp emailing list to all our registered NTN trainees and mailing list subscribers.
- Webinars Our webinar series are hosted on MS Teams on a variety of topics related to our training resources for Healthcare Science. Notifications of up-and-coming webinars are posted on our social media pages and distributed via Mailchimp. Resources from past webinars are also available on our <u>Turas Learn Events page</u>.





# **Promoting Healthcare Science**

Our annual Healthcare Science Trainees and Supervisors Event for all healthcare scientist trainees and supervisors is an opportunity to learn more about and help shape our role, and to participate in a national poster competition. <u>NES Events</u> hold details of upcoming events.

Join a professional body! Whether it is ARTP or BAA, IPEM or IBMS, ACB or ACGS to name but a few, these are all vital in supporting and nurturing your development. The <u>Academy for Healthcare Science</u> is the "One Voice" agency and has a comprehensive list of professional bodies.

**Become a** STEM ambassador! Opportunities are available for Healthcare Scientists to engage with science promotion, school engagement and professional body activities – all an essential part of your development as scientists.

**Public engagement or social media** to raise awareness of Healthcare Science careers such as national promotions; Royal College of Pathologists - National Pathology Week, Healthcare Science Week, International Day of Radiology, Biomedical Science Day, International Day of Medical Physics and Clinical Engineering to name a few.

**Healthcare Science Careers:** NES have an <u>NHS Careers website</u> detailing the profiles for promoting the many Healthcare Science roles and career opportunities within the NHS. Examples of the career leaflets for Healthcare Science can be seen below











# What happens when things don't go to plan

NES guidance and resources are available when there is difficulty which arises in training. Our quality assurance of training progression provides assurances that training is continuing to a satisfactory manner. However, when things don't go to plan, our Special Measures Guide outlines our approach to cases where either trainees, supervisors or training departments cannot demonstrate satisfactory attainment or maintenance of training standards. Two primary objectives of Special Measures are to:

- ensure patient safety, both in the immediate practice placement and later likely performance of an individual whose training experience has been compromised.
- ensure progression, both for the well-being of the individual trainee and the return on investment of public funds in NHS training.

The Special Measures Guide underpins our quality assurance role. We very rarely "visit" or "enquire", but when we do it is to help solve a problem. The ultimate sanction if the training centre is a root cause is an alert to the Board about the state of training. Ultimately, potential future placements would be discouraged or not directly funded. This is in line with other Health Care professions.

Special Measures Guidance is arranged in the following categories:

- Trainees in difficulty
- Supervisor performance / availability
- Department-level concerns. With each referencing Adverse indicators
- Root cause
- Special measures: action / remediation / outcome

Our Turas Learn website outlines <u>NES Special Measures Principles</u> alongside other Standards of Education and Training standards relating to admission and practice placement.





#### Related Workforce Policies – NHS Scotland

All relevant workforce policies are now available on 'Once for Scotland' Workforce Policies programme and apply to all NHS employees in Scotland. Examples include; the Conduct Policy, Bullying and Harassment Policy and Whistleblowing Policy. <u>Link</u>

#### **Regulator Standards**

The <u>Health and Care Professions Council</u> is the principal statutory regulator of Clinical Scientists and Biomedical Scientists. There are others that are "Accredited Registers" and have a non-statutory remit; whether statutory or non-statutory, there are generic standards of education and training. These Admissions and Placement standards in Scotland, are interpreted at our Turas Learn website and underpins our quality role.

#### HCPC Fitness to Practice Tribunal Service (HCPTS)

Trainees are invited to study the HCPC's Tribunal Service case-load at <a href="https://www.hcpts-uk.org/">https://www.hcpts-uk.org/</a> to better appreciated the challenges that can arise in a career where standards of conduct and competence are not met.





# Advice and Support for your Training

#### **Trainee Networks:**

<u>SMPETN – Scottish Medical Physics & Engineering Trainee Network</u>

#### **Health and Wellbeing:**

NHS Inform have advice on dealing with low mood, anxiety, phobias, stress and where you can get help.

National Wellbeing Hub for those working in Health and Social Care

Psychosocial mental health and wellbeing support (resource on Turas Learn)

#### **NES Principal Leads**

The NES Principal Leads are available to help supervisors and trainees with our quality assurance standards and requirements. They can offer advice on training pathways and are also the first line of intervention when NES needs to become more closely involved in trainees' progression. Principal Leads may be supervisors themselves but generally cover a wider range of disciplines when dealing with generic issues. The Principal Leads are an impartial contact and can be approached by trainers and trainees at any time.





# **Final Word**

Enjoy your journey as a healthcare scientist trainee. Should you at any point require further assistance, please don't hesitate to get in touch using the contacts listed on the <u>NES website</u> or email us at <u>HCS@nes.scot.nhs.uk</u>

# **Useful Links**

**NES Healthcare Science website** 

**NES Special Measures Principles** 

Academy for Healthcare Science

National School for Healthcare Science

**Good Scientific Practice** 

<u>Turas Learn</u> – online learning resources

<u>Turas Learn for Healthcare Science</u> – online learning resources for HCS





# **Acronyms**

ACS Association of Clinical Scientists

AHCS Academy for Healthcare Science

ARCP Annual Review of Competency Progression

**CCL** Common Core List

**GSP** Good Scientific Practice

**HCPC** Health and Care Professions Council

**HCS** Healthcare Science

**HEE** Health Education England

**HSS(T)** Higher Scientific Specialist (Training)

**IBMS** Institute of Biomedical Science

**IPEM** Institute of Physics and Engineering in Medicine

**NES** NHS Education for Scotland

**NSHCS** National School for Healthcare Science

NTN National Training Number

**OSFA** Objective Final Structured Assessment

PTP Practitioner Training Programme (graduate level)

**SG** Scottish Government

STP Scientist Training Programme (postgraduate level)

**TPM** Training Programme Management (Turas NES app)