



# SPECIALISED FOUNDATION PROGRAMME (SFP) SCOTLAND HANDBOOK 2022

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## Aims

The intention of the Specialised Foundation Programmes (SFPs) is to allow some Foundation Doctors to develop academic skills in addition to the clinical skills that are gained during the foundation years. The Specialised Foundation Programme in Scotland provides excellent opportunities to develop Research, Education and Teaching and Leadership and Management skills in addition to the standard competencies outlined in the curriculum. We very much hope the programme will inspire and encourage these individuals to pursue a career in Academic Medicine in the future.

As with all foundation programmes, the primary aim of the SFP is to enable doctors to acquire and demonstrate the competencies described in the Foundation Programme Curriculum. Doctors on the SFP are required to maintain the same clinical skill level as those on a purely clinical programme, which means that SFP doctors must perform their academic work in addition to their foundation training. Throughout the UK different approaches are taken in the provision of academic training in Foundation Programmes and this is also the case in Scotland, where there are a wide range of opportunities available across the different regions. The focus on developing clinical skills means that NHS Education for Scotland (NES) does not support funded study leave during F1 and there is no study leave budget. There is more time available for academic development during F2 in Scotland and this differs across the regions.

Trainees will be allocated to the specialised programme and associated rotations after national application, longlisting, shortlisting and interview. The link <http://www.scotmt.scot.nhs.uk/foundation/academic-foundation.aspx> takes you to the Scottish Medical Training (SCOTMT) website detailing the Specialised Foundation posts available.

## What do we offer in Scotland?

The Scottish SFP programmes provide a great opportunity to become more involved with medical research, education, management. While the structure and content of the programmes varies, across Scotland there are opportunities to develop research, teaching and/or leadership skills. The opportunities in the different regions are laid out later in this document.

Undertaking an SFP is like any project: the more effort you put in, the more you achieve. Importantly, during the academic components of the SFP there is much less of an emphasis on providing didactic 'teaching' to SFPs and much more of a focus on helping individuals to drive their own career forward, a key skill in clinical academia. Many foundation doctors who have previously completed the academic foundation programme have published work and/or spoken at national and international conferences, whilst others have organised their own conferences to allow people to present and display work. The benefits arising from an specialised programme should not be underestimated; having access to clinical academic mentors and where possible protected time as part of the programme provides the ideal opportunity for a junior doctor to establish themselves as a medical educator, researcher, leader/manager or an expert in any other area.

## Assessment and Portfolio

The purpose of the Foundation Programmes is to provide clinical training to ensure that foundation doctors develop and demonstrate a range of crucial clinical skills as well as interpersonal skills for managing both acute and long-term conditions no matter what specialty. Foundation doctors are assessed against the outcomes in the curriculum – which ensures competency in a number of areas including communication and consultation skills, patient safety and teamwork as well as the more traditional elements of medical training. All assessments will be recorded and kept in the Foundation doctor's Portfolio (Turas).

SFP doctors have to achieve the same outcomes as those on the Foundation Programme, but very often have less time than their colleagues. Keeping on top of assessments, attendance at teaching, clinical practice, engagement with the educational process (completion of work-based supervised learning events etc.) and evidencing it all in the Portfolio is essential. This is useful going forward, as all clinical academics need to balance research/teaching etc. with clinical work throughout their careers.

The SFP F1 year is a generic clinical foundation year which allows newly qualified doctors to gain experience in a range of clinical posts and after successful ARCP move from Provisional to Full GMC registration. The F2 year focuses on the academic elements alongside additional clinical experience. All programmes and rotations advertised via Oriel are indicative and may be subject to change.

## Study Leave

Details on NES Study Leave policy can be found on the Scotland Deanery website: <https://www.scotlanddeanery.nhs.scot/trainee-information/study-leave/>

## SFP Teaching

The Scottish programme offers regular online teaching on a variety of topics. Topics are specifically chosen to be of benefit to Foundation doctors and are hosted by academics from across Scotland. All teaching is interactive so questions and discussions are strongly encouraged. Previous sessions have included themes such as clinical epidemiology and big data and we welcome feedback from SFP trainees about what topics they would find useful. Participants receive a certificate of attendance after every session which can be uploaded to their portfolio.

## East of Scotland – Specialised Programme Overview

In the East Region of Scotland there are 6 SFP posts available each year and are offered in collaboration with the University of Dundee. The F1 year is a generic clinical foundation year which allows newly qualified doctors to gain experience in a range of clinical posts with the F2 year focusing on academic elements alongside additional clinical experience.

A feature of the East Region Programme is that in F2, all trainees have a four-month block of full-time academic activity. This can be in either research; education/teaching; leadership and management or quality improvement. This block also includes one day per week in clinical practice in any specialty in secondary care or in primary care. Each AFP doctor has a dedicated academic supervisor who oversees their academic work, providing support and constructive feedback throughout the rotation. The Academic component is co-ordinated by the University of Dundee through the Dundee Clinical Academic Tract (DCAT) team. Through DCAT, the academic foundation doctors have access to additional resources including Good Clinical Practice (GCP) in Research courses leading to CGP Certification, research methodology support, projects in teaching and quality improvement and other prevailing courses. Additionally, each trainee is given an honorary University appointment, allowing them the opportunity to engage in the teaching of both clinical and preclinical students, as well as participating in the many training opportunities available through the University. During the AFP it is paramount that transferable and documented skills are obtained and those on the programme should aim to publish a paper, present a poster and/or deliver an oral presentation.

Examples of peer review publications from Academic Foundation doctors can be found on the DCAT website:

<http://dcat.cmdn.dundee.ac.uk/clinical-academic-training/academic-foundation-programme/publications>

As part of the programme, the University of Dundee offers each individual access to a number of additional qualifications that can be seen in the subsequent sections. You may also participate in part-time distance learning master's degrees and associated courses, although note that funding for these courses is not provided. Further qualifications can be challenging, but they are enjoyable and undoubtedly increase the chances of securing future jobs. SFP doctors are also encouraged to be involved with the teaching of medical school students.

It can be useful to contact previous foundation doctors to get their advice about the academic programme and how each individual organised their training. Such information is often very valuable and should be obtained early on. Dr Anna Maria Choy is the SFP University of Dundee Lead and she can facilitate contact with previous trainees (see contact details below).

### **Opportunities in Education and Education Research**

The East region Programme can provide a range of training in the field of education and education research including:

- Accredited training in Medical Education resulting in the award of the Postgraduate Certificate in Medical Education (University of Dundee) – this is the first stage of the Masters in Medical Education programme run by the **Centre for Medical Education** ([www.dundee.ac.uk/postgraduate/medical-education](http://www.dundee.ac.uk/postgraduate/medical-education)) (cost is one third of masters. Students may then progress part-time onto the diploma and masters stages). Please note that there is no NES study leave funding available for this course.
- Innovation in simulation for training and assessment of skills through the **Dundee Institute for Healthcare Simulation** ([dihs.dundee.ac.uk/clinical-skills](http://dihs.dundee.ac.uk/clinical-skills)).
- Training in research skills applied to education, including critical appraisal of a topic; formulating a research question and qualitative and quantitative research methods.

### **Opportunities in Translational Research**

The SFP represents a unique opportunity for early trainees to become involved in translational research in this formative phase of their career. Foundation doctors pursuing a rotation in translational research will be based in one of the Divisions of the School of Medicine within the University of Dundee (<http://www.dundee.ac.uk/medicine/research/>).

The School of Medicine is experienced at offering research projects to clinicians and academic supervisors will be able to advise on suitable projects within trainees' areas of interests. There are excellent resources available in all the school's areas of strength.

In addition, we encourage SFP doctors to consider part-time distance learning through a Masters Degree or associated course. There is no funding provided for these, but some trainees have applied successfully for support and funding from their Royal College or other Societies and Charities. The University of Dundee through the School of Medicine offers excellent opportunities for MSc Certificate Courses in Translational Medicine (<https://www.dundee.ac.uk/medicine/msc-research>).

### **Leadership & Quality Improvement Opportunities**

Collaboration between NHS Tayside and the University of Dundee on Leadership and Quality Improvement has been strengthened by the establishment of the Improvement Academy and AHSP (the Academic Health Sciences Partnership in Tayside), AHSP's mission is to drive quality improvement by developing capacity, capability and skills to allow the adoption and spread of quality improvement and enhanced safety within the partnership and translation to other stakeholders (<https://www.ahspartnership.org.uk/ahsp/improvement-team-nhs-tayside>).

Research is led by the Quality, Safety and Informatics Research Group, which aims to deliver internationally recognised academic research and to ensure that the quality and safety of clinical care is directly changed by its work. The group is focused on translating clinical research evidence into reliable, high quality, safe clinical and organisational practice: <http://medicine.dundee.ac.uk/medical-research-institute/divisions/division-population-health-sciences/research-theme/quality>

The programme on Leadership and Quality Improvement will include online modules, teaching and coaching in leadership skills and quality improvement. in addition to project supervision. The choice of improvement project is very broad. The Foundation doctor in year 1 will be supported to complete the IHI (Institute for Healthcare Improvement) Practicum. In F2 the programme will provide enough protected time to complete an improvement project that can be submitted for a national and international conference and as a paper to BMJ Quality Improvement Reports.

**Contacts for the East Academic Foundation Programme:**

**Academic Foundation Programme Director**

Dr Priya Nair

Consultant

E: [priya.nair@nhs.scot](mailto:priya.nair@nhs.scot)

**Contacts with the University of Dundee:**

**Academic Foundation Programme Lead and DCAT Lead**

Dr Anna Maria Choy

Senior Clinical Lecturer & Honorary Consultant Cardiology

E: [a.choy@dundee.ac.uk](mailto:a.choy@dundee.ac.uk)

**DCAT Administrator**

Yvonne Gormley

E: [dcats@dundee.ac.uk](mailto:dcats@dundee.ac.uk)

**Quality Improvement and Leadership**

Vicki Tully

Teaching Lead for Healthcare Improvement/Scottish Safety and Quality Fellow

E: [vicki.tully@nhs.scot](mailto:vicki.tully@nhs.scot)

## North of Scotland – Specialised Foundation Programme Overview

The North SFP is a two-year fixed programme. The programme offers 12 posts: six research themed posts (three each on medicine and surgical themes) and six medical education-themed posts. These posts are based in Aberdeen, Inverness and Fort William.

All programmes offer a dedicated 4-month academic block for research/medical education activities. It also includes additional academic support and mentorship intended to prepare the post holder for a future career in academia.

The primary objective of this programme, as for all other Foundation Programmes, is to ensure satisfactory clinical training through the attainment of foundation competencies (as defined by the Foundation Curriculum and demonstrated through successful completion of the Portfolio (Turas)).

As well as acquiring clinical competencies expected of all trainees, each specialised foundation trainee will be assigned to an academic supervisor/project supervisor and a mentor who are actively engaged in promoting and undertaking research at University and/or NHS level.

Additional features of the programme include the opportunity to engage in the following research activities depending on an individual's interests:

- regular seminars on research skills offered by the NHS Grampian Research & Development
- development of laboratory or clinical research skills offered by the University of Aberdeen
- regular research seminars and staff development courses offered by the University of Aberdeen
- attendance at internal and external scientific meetings
- teaching and assessment of undergraduate medical students
- participation in audit/QI projects, research projects, and ongoing clinical trials of academic departments the trainee rotate through
- regular meetings with Academic Foundation Director & Director of Aberdeen Clinical Academic Training and Development (ACAT)
- supporting activities of the active academic student society (Aberdeen Student Society for Academic Medicine (ASSAM))- examples of such activities include running journal clubs, giving talks at career evenings hosted by ASSAM, information sessions for AFP programme application for senior medical students.

Several Postgraduate Taught Programmes are available. We encourage trainees to enrol in PG Cert. in Research Methods for Health (can be done fully online). Further information can be found at <https://www.abdn.ac.uk/study/postgraduate-taught/degree-programmes/281/research-methods-for-health/>. Please note that there is no NES study leave funding available for this course.

The aim of the academic foundation programme is to prepare the best newly qualified foundation doctors to become future leaders in academic and clinical medicine. Every opportunity will be made available to enhance the academic profile of successful candidates.

The trainees will also be encouraged to formulate plans for medium to long-term research opportunities which may include fellowship applications or MD/PhD studentships. The academic mentor will facilitate academic development at every opportunity and in every rotation within the 2-year programme. All trainees will also have access to guidance and supervision of many academic clinicians participating in this programme.

The academic programme is led by the University of Aberdeen and full details of all that it has to offer are available at Aberdeen Clinical Academic Training (ACAT) Programmes' webpages: <https://www.abdn.ac.uk/smmsn/acat/index.php>

Research opportunities are supported through our institutes, details of which can be found on their websites as below.

- The Institute of Applied Health Sciences <https://www.abdn.ac.uk/iahs/>
- The Institute of Medical Sciences <http://www.abdn.ac.uk/ims/>
- The Rowett Institute <http://www.abdn.ac.uk/rowett/>
- The Institute of Education for Medical and Dental Sciences <https://www.abdn.ac.uk/iemds/>
- The Institute of Dentistry <https://www.abdn.ac.uk/dental/>
- The Health Services Research Unit (<https://www.abdn.ac.uk/hsru/>)
- The Health Economics Research Unit (<https://www.abdn.ac.uk/heru/>)
- The Centre for Healthcare Randomised Trials (<https://www.abdn.ac.uk/hsru/what-we-do/trials-unit/index.php>)
- The Aberdeen Cardiovascular & Diabetes Centre (<https://www.abdn.ac.uk/acdc/>)
- The Aberdeen Centre for Arthritis and Musculoskeletal Health (<https://www.abdn.ac.uk/acamh/>)
- The Aberdeen Centre for Women's Health (<https://www.abdn.ac.uk/acwhr/>)
- The Centre for Rural Health (<https://www.abdn.ac.uk/iahs/research/crh/>)
- The Aberdeen Centre for Health Data Science <https://www.abdn.ac.uk/achds/index.php>
- The Centre for Healthcare Education Research and Innovation <https://www.abdn.ac.uk/cheri/>

#### **Contacts for the North Academic Foundation Programme:**

##### **Academic Foundation Programme Director**

Dr Snehashish Banik

Consultant

E: [snehashish.banik@nhs.net](mailto:snehashish.banik@nhs.net)

##### **Director of ACAT**

Professor Phyo Kyaw Myint

E: [phyo.myint@abdn.ac.uk](mailto:phyo.myint@abdn.ac.uk)

## South East of Scotland – Specialised Programme Overview

In the South East Region 15 SFP posts are available in collaboration with the University of Edinburgh. The focus of the South East SFP is on providing opportunities to conduct research.

All SFP doctors are allocated a mentor at the start of the training. This is done after discussion with the SFP doctor, aiming to match each individual with a clinical academic in a relevant discipline. Trainees may choose to develop research proposals with their mentor, or to work with others in the University whose research interests fit with their own. SFP doctors are also given an honorary University appointment, enabling them to participate in the many training opportunities available through the University and to access the library facilities.

As in the other centres, the F1 year is a generic clinical foundation year which allows newly qualified doctors to gain experience in a range of clinical posts. At least one of these three posts will be in a central location (Edinburgh Royal Infirmary, Western General Hospital, St John's Hospital) and one in a district general hospital (Borders General Hospital, Victoria Hospital, Kirkcaldy). Again, as with the other Scottish centres, there is no study leave funding allocation during F1 as the focus is on gaining clinical experience.

In the F2 year, there are two parallel schemes providing dedicated research time.

1. 6 of the 15 SFP doctors have the opportunity to undertake a four-month research block. These posts are allocated following an application process including preparation of a research proposal, shortlisting and interview. The research blocks are particularly suited to those who wish to undertake lab research. During the research post the SFP doctor will contribute to the on-call rota in Medicine of the Elderly, Royal Infirmary, at a frequency of 50% of the normal rota requirements.
2. For those who choose not to apply for a research block or who are unsuccessful can take a half day per week (or equivalent, e.g. 1-day alternate weeks) through the whole F2 year. This may be more suitable for those undertaking longitudinal or data-analysis projects. Additionally, in clinical posts, 4 study leave days per block can be taken for personal research during F2.

The breadth of research performed in the University of Edinburgh means that research projects can be undertaken in most disciplines.

It may be useful to contact previous foundation doctors to get their advice about the academic programme and how each individual organised their training. Such information is often very valuable and should be obtained early on. Professor Mandy Drake is the AFP University of Edinburgh Lead (see contact list) and can facilitate contact with previous AFPs.

Although we do not offer specific opportunities in teaching or leadership, AFY can seek out their own opportunities e.g. through the Clinical Educators Programme:

[https://www.clinicaleducator.org/index.php/en-gb/?partner\\_site\\_tried=1](https://www.clinicaleducator.org/index.php/en-gb/?partner_site_tried=1)

## **Opportunities in Research**

The SFP represents a unique opportunity for early trainees to become involved in research. The College of Medicine and Veterinary Medicine (CMVM) has a 'One Medicine, One Health' strategy which is built upon integration of research from bench to bedside and from process to population. The University's research is consolidated into multidisciplinary research centres clustered within research institutes on three major translational research campuses and linking with research excellence in the other colleges.

The College of Medicine and Veterinary Medicine (CMVM) has a number of major research centres including:

- The Centre for Cardiovascular Science <https://www.ed.ac.uk/cardiovascular-science>
- The Centre for Inflammation Research <https://www.ed.ac.uk/inflammation-research>
- The MRC Centre for Reproductive Health <https://www.ed.ac.uk/centre-reproductive-health>
- The MRC Institute of Genetics and Molecular Medicine <https://www.ed.ac.uk/igmm>
- The Usher Institute <https://www.ed.ac.uk/usher>
- Edinburgh Neuroscience <https://www.edinburghneuroscience.ed.ac.uk>
- MRC Centre for Regenerative Medicine <http://www.crm.ed.ac.uk>
- MRC Centre for Cognitive Ageing and Cognitive Epidemiology <http://www.ccace.ed.ac.uk>
- The Roslin Institute <https://www.ed.ac.uk/roslin>
- The Cancer Research UK Edinburgh Centre <https://www.ed.ac.uk/cancer-centre>

The choice of research project is not limited to within CMVM and research projects outside of these institutes and in different colleges can also be pursued e.g. within the College of Science and Engineering <https://www.ed.ac.uk/science-engineering> (for example the Wellcome Centre for Cell Biology <https://www.wcb.ed.ac.uk>) or the College of Arts, Humanities and Social Sciences <https://www.ed.ac.uk/arts-humanities-soc-sci/about-us>. However, the research project must be conducted in Edinburgh.

Trainee will be expected to meet their mentors and any other potential supervisors during their F1 year. This allows forward planning for projects and time to obtain ethical approval should it be needed.

## **The Edinburgh Clinical Academic Track (ECAT)**

The ECAT programme was established in 2008 following the award of one of the first Wellcome Trust Clinical PhD programmes. Incorporating a clinical and academic PhD programme, and supported by the University of Edinburgh and NHS Education Scotland, the ECAT scheme provides run-through clinical academic training that gives individuals flexibility, security and mentorship whatever their clinical discipline. Most ECAT trainees are ECAT Clinical Lectures and typically enter the programme early in clinical training to undertake a prestigious Wellcome Trust funded PhD fellowship. This is followed by a postdoctoral clinical lectureship allowing for the completion of clinical training while maintaining academic momentum during applications for an Intermediate Fellowship. Previously a number of SE Scotland trainees have been successful in applying for the ECAT programme. More information can be found here: [www.ecat.ed.ac.uk](http://www.ecat.ed.ac.uk)

**Can I undertake a Masters Degree during the SFP?**

SFP doctors may consider part-time distance learning through a Masters Degree or associated courses. There are a wide range of postgrad courses and degrees available through the University of Edinburgh (<https://www.ed.ac.uk/studying/postgraduate/degrees>). There is NES no funding available through but some previous trainees have applied successfully for support and funding from their Royal College or other Societies and Charities.

**Contacts for the South East AFP Programme:****Academic Foundation Programme Director**

Dr Bryan Conway

Senior Clinical Lecturer and Honorary Consultant Nephrologist

E: [bryan.conway@ed.ac.uk](mailto:bryan.conway@ed.ac.uk)

**Academic Foundation Programme co-Director**

Dr Sarah Stock

Senior Clinical Lecturer in Maternal and Fetal Health and Honorary Consultant and Subspecialist in Maternal and Fetal Medicine

E: [sarah.stock@ed.ac.uk](mailto:sarah.stock@ed.ac.uk)

## West of Scotland – Specialised Programme Overview

The programme comprising of 15 posts is available in Glasgow. The F1 year is a generic clinical Foundation year which allows newly qualified doctors to gain experience in a range of clinical posts with the F2 year focusing on academic elements alongside additional clinical experiences.

It offers the same clinical training as other Foundation posts but will also include 2 sessions per week for academic research. The West SFP is a two-year fixed programme.

### **What the Academic Programme Offers**

In addition to clinical tuition and the teaching below, there will be opportunities to attend academic journal clubs with Glasgow Academic Training Environment trainees (GATE, CMT 1-2 and equivalent in other specialties).

In addition to foundation training, trainees will have additional training opportunities, usually in the form of academic training afternoons covering aspects such as research methodology, ethics submission, good clinical practice for research and career advice.

SFP posts offer a unique opportunity to have mentoring by a senior clinical academic, in a specialty aligned to the SFYs chosen career intentions. All SFP trainees become Honorary Clinical Fellows with the University of Glasgow which allows access to University e-mail accounts and IT systems (e.g. statistical programmes).

### **Who Should Apply?**

The aim of the programme is to encourage those individuals with an interest in research and teaching to pursue their goals. As such we invite all those who are thinking about a future in academia to apply. F1 will comprise three blocks, each of four months' duration, based at the Queen Elizabeth University Hospital, Glasgow. All blocks will be in Medicine or Surgery although some rotations also offer Intensive Care Medicine or Renal Medicine.

F2 will also comprise three blocks, each of four months' duration, based at the Royal Infirmary, Queen Elizabeth University Hospital, the Royal Hospital for Children, Gartnavel General Hospital, Leverndale Hospital, the Beatson West of Scotland Cancer Centre or in General Practice.

During F2, two sessions per week will be allocated for individual research. In addition to a clinical and educational supervision, an academic mentor will also be allocated to oversee the post holder's progress.

In addition to clinical tuition and the teaching below, there will be opportunities to attend academic journal clubs with Glasgow Academic Training Environment trainees (GATE, CMT 1-2 and equivalent in other specialties), covering aspects such as research methodology, ethics submission, good clinical practice for research and career advice. Following completion of a specialised foundation programme, trainees may wish to continue their academic and clinical training in Glasgow and participate in the GATE programme.

**The Glasgow Academic Training Environment (GATE) for Specialty Trainees:**

The Glasgow Academic Training Environment (GATE) Programme, has been running since 2012 and admits a variable number of trainees per year. GATE is a joint undertaking between the University of Glasgow and the West region of NHS Education for Scotland (NES). GATE allows trainees to benefit from exposure to excellence in both the research environment and clinical training. All West of Scotland trainees appointed to the first years of specialty training from selected clinical disciplines are eligible to apply. We particularly encourage applications from trainees who have research interests that are aligned with University of Glasgow's strongest academic centres. At present the participating training programs are: Core Medical Training, Core Surgical Training, Psychiatry, Obstetrics and Gynaecology and Anaesthetics. The GATE Programme is designed to take the most promising clinical academic trainees, develop their potential and create the next generation of research leaders. The anticipation is that GATE trainees will apply for funded higher degrees (MD or PhD) and/or Clinical Lectureship posts.

**Contacts for West Academic Foundation programme:****Academic Foundation Programme Director**

Dr Craig Harrow

E: [charrow@nhs.net](mailto:charrow@nhs.net)

**Academic Director**

Professor Patrick Mark

E: [Patrick.Mark@glasgow.ac.uk](mailto:Patrick.Mark@glasgow.ac.uk)

## Scottish Foundation School Contacts

### Scottish Foundation School Team

[sfas@nes.scot.nhs.uk](mailto:sfas@nes.scot.nhs.uk)

### Helpful Websites

<http://www.scotlanddeanery.nhs.scot/trainee-information/scottish-foundation-school/>

<http://www.scotmt.scot.nhs.uk/foundation.aspx>

<https://www.oriel.nhs.uk>

<https://foundationprogramme.nhs.uk/>

## Compendium of Academic Competences

### **What is the purpose of this document?**

The Compendium aims to bring together outcomes and competences that academic foundation doctors could work towards during their academic foundation programme (AFP). These have been categorised into:

- (i) Research programmes
- (ii) Medical education programmes
- (iii) Management and Leadership programmes.

There is enormous diversity in the range of AFPs on offer and so it is hoped that the Compendium provides a “pick and mix” resource for foundation doctors and their supervisors. The outcomes and competences are designed to assist academic foundation doctors, in particular, and their supervisors plan work, and monitor learning.

This list of competencies is based on a review of: (i) outcomes and competences for current academic foundation doctors around the UK; (ii) the content of taught diplomas and masters programmes focusing on research and/or medical education and/or clinical management/leadership; (iii) interviews with local academic foundation programme leads, academic foundation doctors, recent graduates of academic foundation programmes, The Academy of Medical Sciences The Academy of Medical Educators and The Faculty of Medical Management and Leadership.

The Compendium of Academic Competences is an outcome-based document, which outlines a series of outcomes and supporting competencies for each type of programme (i.e. research, medical education and management and leadership). It also includes the types of supporting evidence that could be included in each foundation doctor’s portfolio.

We would encourage all users to extract those bits of the compendium that are most relevant (i.e. do not feel that all outcomes have to be achieved). It is important to recognise that successful completion of an AFP does NOT depend on achieving these outcomes.

## Research programmes

### Supported by the Academy of Medical Sciences

<b>Outcome(s)</b> <i>Identifies a specific research question and develops an appropriate study protocol</i>
<b>Competences</b> <ul style="list-style-type: none"><li>• Performs a systematic review of the literature.</li><li>• Formulates a credible/realistic research question.</li><li>• Describes different research methods available.</li></ul>
<b>Examples of relevant supporting evidence</b> <ul style="list-style-type: none"><li>• A systematic review.</li><li>• Proposed research question.</li><li>• The study protocols.</li></ul>
<b>Content suggestions for programme designers</b> <ul style="list-style-type: none"><li>• Provide access to local university online journals.</li><li>• Assigning an academic supervisor for doctors to contact prior to the official programme start date.</li><li>• Educational sessions to cover research question development, critical appraisal, and systematic review methodology</li></ul>

<b>Outcome(s)</b> <i>Writes and submits an application for funding.</i>
<b>Competences</b> <ul style="list-style-type: none"><li>• Describes the different funding sources available.</li><li>• Accurately estimates the study costing.</li><li>• Completes a funding application</li></ul>
<b>Examples of relevant supporting evidence</b> <ul style="list-style-type: none"><li>• Completed funding application.</li><li>• Funding approval/feedback from a funding source.</li></ul>
<b>Content suggestions for programme designers</b> <ul style="list-style-type: none"><li>• Educational session that explores the techniques for completing funding applications and the principles of full economic costing.</li><li>• Guidance and resources to identify suggested funding sources.</li></ul>

<p><b>Outcome(s)</b> Writes and submits an application for ethical approval (local/national).</p>
<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>• Describes the general ethical principles that underpin research.</li> <li>• Describes the process for ethical approval in a university setting and/or the NHS (local/national).</li> <li>• Completes an application for ethical approval (local/national).</li> </ul>
<p><b>Examples of relevant supporting evidence</b></p> <ul style="list-style-type: none"> <li>• Completed application for ethical approval.</li> <li>• Ethical approval (local/national).</li> </ul>
<p><b>Content suggestions for programme designers</b></p> <ul style="list-style-type: none"> <li>• Educational session that explores the techniques for completing applications for ethical approval in various settings.</li> </ul>

<p><b>Outcome(s)</b> Conducts a study/experiment (lab-based study, a study that uses patients'/human volunteers or a population-based study).</p>
<p><b>Competences</b></p> <p><i>Lab based</i></p> <ul style="list-style-type: none"> <li>• Performs laboratory techniques specific to their area of study.</li> <li>• Applies laboratory safety principles specific to their area of study.</li> </ul> <p><i>All (lab based; human volunteers/patients; population-based).</i></p> <ul style="list-style-type: none"> <li>• Describes procedures to obtain valid research consent.</li> <li>• Obtains valid research consent.</li> <li>• Communicates effectively with patients and/or carers.</li> <li>• Manages research documentation and handles data.</li> </ul>
<p><b>Examples of relevant supporting evidence</b></p> <ul style="list-style-type: none"> <li>• Reflective report on study/experiment.</li> <li>• Supervised learning events e.g. laboratory techniques, obtaining consent.</li> <li>• Study/experiment results.</li> </ul>
<p><b>Content suggestions for programme designers</b></p> <ul style="list-style-type: none"> <li>• Educational sessions that cover laboratory techniques, laboratory safety and the principles of valid consent.</li> <li>• Teaching about the types of clinical trial used in research, and their advantages/disadvantages</li> </ul>

<p><b>Outcome(s)</b>  <i>Writes up a study/experiment for publication in a peer-reviewed journal.</i></p>
<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>• Uses appropriate statistical tests to analyse the data.</li> <li>• Uses appropriate structure and writing style for an academic paper.</li> <li>• Describes the peer-review process.</li> <li>• Describes the limitations of the study and its interpretation.</li> </ul>
<p><b>Examples of relevant supporting evidence</b></p> <ul style="list-style-type: none"> <li>• Completed manuscript.</li> <li>• Acceptance letter from a journal.</li> </ul>
<p><b>Content suggestions for programme designers</b></p> <ul style="list-style-type: none"> <li>• Provide access to local university online journals.</li> <li>• Organise a regular journal club.</li> <li>• Teaching session on academic writing styles.</li> </ul>

<p><b>Outcome(s)</b>  <i>Presents the study/experiment results at a local/national/international meeting.</i></p>
<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>• Describes the purpose of scientific meetings.</li> <li>• Submits an abstract to a scientific meeting.</li> <li>• Produces and presents a poster/oral presentation.</li> </ul>
<p><b>Examples of relevant supporting evidence</b></p> <ul style="list-style-type: none"> <li>• Acceptance letter at a local/national/international meeting.</li> <li>• Poster/PowerPoint slides.</li> <li>• Published conference abstract/programme.</li> <li>• Certificate of attendance.</li> </ul>
<p><b>Content suggestions for programme designers</b></p> <ul style="list-style-type: none"> <li>• Provide local opportunities for doctors to present their work.</li> <li>• Outlines local funding opportunities available for candidates to attend meetings</li> </ul>

## Medical Education programmes

### Developed in association with the Academy of Medical Educators

<p><b>Outcome(s)</b> <i>Develops a new module/course in the undergraduate or postgraduate medical curriculum that enhances learning.</i></p>
<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>• Describes and applies the principles that underpin curriculum development.</li> <li>• Constructs and undertakes a Needs Analysis plan.</li> <li>• Develops patient centred educational and clinical outcomes.</li> <li>• Identifies and designs a feedback tool(s).</li> <li>• Appropriately reflects on feedback and adjusts the programme accordingly.</li> </ul>
<p><b>Examples of relevant supporting evidence</b></p> <ul style="list-style-type: none"> <li>• The new course curriculum.</li> <li>• Feedback from participants.</li> <li>• Feedback from peers/supervisors.</li> </ul>
<p><b>Content suggestions for programme designers</b></p> <ul style="list-style-type: none"> <li>• Support completion of a postgraduate medical education qualification.</li> <li>• Provides education sessions that cover curriculum development, Needs Analysis and feedback.</li> </ul>

<p><b>Outcome</b> <i>Adapts teaching style to different learner needs and to different learning environments.</i></p>
<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>• Describes and critically appraises the major pedagogic theories.</li> <li>• Adapts teaching style, as appropriate, during learning events.</li> <li>• Applies these theories to different professional groups, at different career stages (e.g. medical students, doctors, nurses) in different settings e.g. small groups (e.g. seminars, bed side teaching) and large groups (e.g. lecture theatres).</li> </ul>
<p><b>Examples of relevant supporting evidence</b></p> <ul style="list-style-type: none"> <li>• Lesson plans.</li> <li>• Feedback from participants.</li> <li>• Reflective logs on teaching sessions.</li> </ul>
<p><b>Content suggestions for programme designers</b></p> <ul style="list-style-type: none"> <li>• Provide educational sessions and electronic resources that cover pedagogic theories.</li> <li>• Provide opportunities for foundation doctors to teach different professional groups in different settings.</li> </ul>

<p><b>Outcome</b> <i>Participates in the selection process to medical degree programmes</i></p>
<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>• Describes the different selection methods available and their supporting evidence.</li> <li>• Describes the relevant equality and diversity legislation.</li> <li>• Works effectively as part of an admissions team.</li> </ul>
<p><b>Examples of relevant supporting evidence</b></p> <ul style="list-style-type: none"> <li>• Equality and diversity training record.</li> <li>• Reflective log of interview experiences</li> </ul>
<p><b>Content suggestions for programme designers</b></p> <ul style="list-style-type: none"> <li>• Provide educational sessions and online resources that cover medical student selection methods and evidence.</li> </ul>

<p><b>Outcome</b> <i>Develops and then uses an assessment programme to test knowledge, skills and attitudes.</i></p>
<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>• Describes and critically appraises the different assessment tools currently used and their underlying evidence base.</li> <li>• Outlines what constitutes a “good” assessment.</li> <li>• Blueprints assessments to the curriculum/learning outcomes</li> <li>• Uses technology to add value to medical assessment.</li> </ul>
<p><b>Examples of relevant supporting evidence</b></p> <ul style="list-style-type: none"> <li>• Description of the assessment programme</li> </ul>
<p><b>Content suggestions for programme designers</b></p> <ul style="list-style-type: none"> <li>• Supports completion of a postgraduate medical education qualification.</li> <li>• Educational sessions/online resources that consider contemporary evidence-based assessment principles.</li> </ul>

<p><b>Outcome</b> <i>Develops and/or completes a piece of medical education research.</i></p>
<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>• See outcomes and competences listed in the research section of the compendium.</li> </ul>
<p><b>Examples of relevant supporting evidence</b></p> <ul style="list-style-type: none"> <li>• A completed manuscript.</li> <li>• An accepted abstract at a local/national/international meeting.</li> </ul>
<p><b>Content suggestions for programme designers</b></p> <ul style="list-style-type: none"> <li>• Please see ‘Research’ section</li> </ul>

## Management and Leadership

<b>Outcome(s)</b> <i>Identifies an opportunity to improve a component of the health system (hospital, primary care, pre-clinical/clinical/post-graduate training etc.) and develops an initial project plan.</i>
<b>Competences</b> <ul style="list-style-type: none"><li>• Uses specific quality improvement tools (e.g. Needs Analysis, Process Mapping, Statistical Process Control etc. (SPC)).</li><li>• Develops an initial project plan.</li><li>• Describes how the organisation works and its overall strategy.</li><li>• Outlines different funding sources</li><li>• Constructs the project budget</li></ul>
<b>Examples of relevant supporting evidence</b> <ul style="list-style-type: none"><li>• Initial project plan.</li><li>• Reflection on the process of identifying an opportunity and developing a project plan.</li></ul>
<b>Content suggestions for programme designers</b> <ul style="list-style-type: none"><li>• Teaching sessions covering the different quality improvement tools and how to construct a project plan.</li><li>• Assistance with identification of a project.</li><li>• Link doctors up to participants in the NHS management training scheme.</li><li>• Link doctors to other sessions being run by the hospital e.g. project planning workshops</li></ul>

<b>Outcome(s)</b> <i>Brings together a team to plan how to improve a component of the health system (hospital, primary care, pre-clinical/clinical/post-graduate training etc.).</i>
<b>Competences</b> <ul style="list-style-type: none"><li>• Develops networks and builds and maintains professional relationships.</li><li>• Takes part in and where appropriate, facilitates brainstorming sessions.</li><li>• Works effectively in a team and where appropriate, leads a team.</li><li>• Applies key principles and theories in organisational behaviour, for example: (i) decision making, (ii) motivation, (iii) groups/teamwork, (iv) culture, (v) change (vi) leadership.</li><li>• Manages other healthcare professionals: provides direction, reviews performance, motivates others and promotes equality and diversity.</li></ul>
<b>Examples of relevant supporting evidence</b> <ul style="list-style-type: none"><li>• Results of brainstorming activities.</li><li>• The project plan.</li><li>• Reflection on achievements and challenges in bringing teams together and then working with them effectively.</li></ul>
<b>Content suggestions for programme designers</b> <ul style="list-style-type: none"><li>• Provide internal events to network with professionals'/outlines potential supervisors within local health systems.</li><li>• Sessions on how to brainstorm effectively.</li><li>• Sessions on interacting with/managing/leading teams.</li><li>• Sessions covering the key theories in organisational behaviour.</li></ul>

**Outcome(s)**

*Presents a project proposal to senior colleagues*

**Competences**

- Produces a high impact written document.
- Delivers an effective, high impact power point presentation.
- Adapts presentation style to the specific audience.
- Responds positively to feedback.

**Examples of relevant supporting evidence**

- Reflection on experience of presenting to senior colleagues.
- Written document/PowerPoint presentation.

**Content suggestions for programme designers**

- Direct doctors to sample business cases/project proposals.
- A session covering the art of good power point presentations.

**Outcome(s)**

*Works with a team to implement a project in the health system (hospital, primary care, pre-clinical/clinical/post-graduate training environment etc.).*

**Competences**

- Project manages a specific piece of work e.g. manages time and resources
- Understands key principles and theories in organisational behaviour, for example: (i) decision making, (ii) motivation, (iii) groups/team work, (iv) culture, (v) change (vi) leadership.
- Engages with multi-professional groups e.g. the project team and external stakeholders.
- Uses key marketing principles e.g. how you effectively promote an idea so that people will be more likely to engage.

**Examples of relevant supporting evidence**

- Reflects on the project implementation process.

**Content suggestions for programme designers**

- A session on how to project manage.
- Access to project managers for advice.
- A session on marketing techniques – how to get people to engage with ideas.
- Sessions covering the key theories in organisational behaviour.

<p><b>Outcome(s)</b>  <i>Measures the effectiveness of a project and develops recommendations for the future.</i></p>
<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>• At the beginning of the project, appraises the different measurement options available.</li> <li>• At the beginning of the project, identifies realistic and measurable outcomes.</li> <li>• During/at the end of the project, uses a tool(s) to measure the project's success.</li> <li>• Plans how the project will be sustainable.</li> </ul>
<p><b>Examples of relevant supporting evidence</b></p> <ul style="list-style-type: none"> <li>• Reports the results of the measurement exercise and the actions taken.</li> <li>• Reflection on the results.</li> </ul>
<p><b>Content suggestions for programme designers</b></p> <ul style="list-style-type: none"> <li>• A session covering the different ways to measure the success of a project</li> </ul>

<p><b>Outcome(s)</b>  <i>Presents and disseminates the learning to local and/or national and/or international colleagues</i>  <i>NB: All national and international presentations should be supported by a local presentation and a strategy to disseminate learning locally.</i></p>
<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>• Produces and publishes a written report</li> <li>• Produces and presents a poster/oral presentation.</li> <li>• Effectively disseminates results (throughout the organisation) to enable lessons to be learnt.</li> <li>• Describes the different opportunities available to present this type of work.</li> </ul>
<p><b>Examples of relevant supporting evidence</b></p> <ul style="list-style-type: none"> <li>• A copy of the written report</li> <li>• A copy of the poster or oral presentation.</li> <li>• A copy of the conference acceptance letter.</li> </ul>
<p><b>Content suggestions for programme designers</b></p> <ul style="list-style-type: none"> <li>• Provide local opportunities for doctors to present their work.</li> </ul>