AHCS Curriculum Development Standards

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Part 1: Introduction

The Academy for Healthcare Science (the Academy) has an overarching role in setting standards across the Modernising Scientific Careers (MSC) education and training framework in Healthcare Science. This includes the standards of curriculum development.

Programmes within the MSC framework are delivered at undergraduate level in the Practitioner Training Programme (PTP), at masters level in the Scientist Training Programme (STP) and doctoral level in the Higher Specialist Scientist Training (HSST) programme. Programmes within the MSC framework at the same educational level as the above programmes must meet these standards as well, e.g. Accredited Scientific Practice.

The delivery model varies between programmes. In PTP, the Higher Education Institution (HEI) delivering the undergraduate degree is responsible for quality managing the workplace training and trainees are students on work placement in partnership with the National School of Healthcare Science (the School). In some PTP Graduate Diploma Programmes, STP and HSST, trainees and Clinical Scientists in HSST respectively are employed by a host healthcare organisation and attend the HEI on a part-time basis. Quality management of the workplace training is the responsibility of the School, quality assured by the Academy.

The role of the Academy also varies between programmes. At PTP and HSST level, the Academy holds a register of those who have completed PTP and HSST programmes or have demonstrated equivalence against the programme outcomes. Programmes must demonstrate that those who have completed a PTP or HSST programme have met the appropriate Academy Standards of Proficiency (SoP). At STP level, the Academy is an approved education provider for the Health and Care Professions Council (HCPC) for the STP Certificate of Attainment and the STP Certificate of Equivalence. The Academy must be able to demonstrate that those who have completed the programme meet the HCPC SoP that are the minimum standards of entry to the Clinical Scientist register.

Curricula are currently reviewed by the Education, Training and Scrutiny Group (ETSG), a sub-group of the Healthcare Science Implementation Network Group (HCSING)* and approved by HCSING on the recommendation of ETSG.

*HCSING acts through Health Education England's delegated executive authority with respect to education, training and workforce arrangements for HCS.

Part 2: Scope

This section describes the programmes covered by these standards:

- Practitioner Training Programmes (PTP) including the BSc (Hons) in Healthcare Science (HCS)
- Scientist Training Programmes (STP) including the MSc in Clinical Science
- Higher Specialist Scientific Training (HSST) programmes including the Doctorate in Clinical Science (DClinSci)
- other programmes within the MSC education and training framework at the same educational level as the above programmes, e.g. Accredited Scientific Practice.

Part 3: Definition

The definition of curriculum used by these standards is:

A statement of the structure, intended aims and objectives, content, experiences, assessment, outcomes and processes of a programme. The curriculum should set out what knowledge, competence, attitudes and behaviours the trainee will achieve together with the assessment strategy.

In these standards, the term curriculum is used to cover the academic curriculum that delivers and assesses the underpinning generic and specialist knowledge, skills, attitudes and behaviours described in the curricula for the BSc(Hons), MSc, DClin Sci and the work based learning guides for PTP and STP which develop the work based learning outcomes into a set of competences, applied knowledge and understanding and clinical experiential learning.

Part 4 Curriculum Development Standards

Standard 1 Curriculum format

The curriculum must conform to the appropriate MSC programme framework in Appendix 1 and show clear alignment to the academic level described by the Quality Assurance Agency for higher education.

The curriculum for programmes at the same academic level as those in Appendix 1 must conform to the module format in curricula at the same academic level, e.g. Accredited Expert Scientific Practice modules must conform to the format for HSST, Graduate Diploma modules must conform to the format for PTP.

The purpose of the curriculum must be stated, including links to previous and subsequent stages of the student/trainees' training and education. There should be coherence in terms of progression both within and between programmes. The appropriateness of the stated curriculum to the stage of learning and to the healthcare science specialism must be described.

The curriculum must state how it was developed and consensus reached on:

- how the content and teaching/learning methods were chosen
- the assessment system must be fit for purpose and the overall purpose of the assessment system must be documented
- how the content meets the needs of employers, the patients and the public
- how the curriculum was agreed and by whom
- the role of professionals, educators, work-based trainers, and students/trainees in curriculum development.

Standard 2 Patients and the Public

Patients and the public must be involved in curriculum development, approval and review:

- the curriculum must state how patients and the public were involved in the development, approval and review of the curriculum

Standard 3 Content of the curriculum

The curriculum must set out the generic, healthcare science, professional practice, clinical leadership and specialty-specific content, including:

- the acquisition and application of knowledge, skills, attitudes, behaviours and NHS values demonstrated through behaviours, and expertise
- the recommendations on the sequencing of learning and experience should be provided, if appropriate
- the generic, healthcare science, professional practice, clinical leadership content should include a statement about how Good Scientific Practice is to be addressed.
- The curriculum should also:
- include a description of the training structure (entry requirements, length and organisation of the training programme) including its flexibilities and assessment systems)
- have a description of expected methods of learning, teaching, feedback, assessment and supervision
- promote learner centred education and training and adult models of learning
- enable safe and effective practice by the integration of theory and practice which must be central to the curriculum
- remain relevant to current practice

- support autonomous and critical reflective thinking and evidence-based, up-to-date practice through the delivery of the curriculum
- ensure that the range of learning and teaching approaches used are appropriate to the subjects within the curriculum.

Content areas should be presented in terms of the intended outcomes of learning benchmarked to identifiable stages of training and, using Bloom's Taxonomy to describe the intended learning outcomes and recognised taxonomies to describe skills and attitudes and behaviours, what the trainee will know, understand, describe, recognise, be aware of, and be able to do at the end of the course.

Standard 4 Preparation for working life

The curriculum must ensure that it prepares students/trainees to:

- work as Healthcare Scientists at the expected level of the Healthcare Science Career Framework, gaining a wide knowledge and skills base to set their specialism in the context of health and healthcare science and meet the expected output of the programme
- have the necessary compassion, NHS values and behaviours to provide high quality patient centred care
- work effectively within a multidisciplinary clinical team
- enhance the quality of the patient experience through education, training, multi-professional learning and regular Continuing Personal and Professional Development (CPPD), that instils respect for patients
- be effective communicators and be able to explain science and the application of science in healthcare to patients and the public
- develop appropriate leadership skills and competences in healthcare and healthcare science in preparation for leading teams and clinical services
- prioritise patient safety and the safety of all those working in or accessing the specialism
- play an active role in innovation and development in healthcare and identify opportunities for the introduction of innovation to improve healthcare services and promote high quality care for all users of the NHS.

Standard 5 Professional Regulation

The curriculum must demonstrate that the learning outcomes ensure that those who successfully complete the programme meet the appropriate standards of proficiency i.e.:

- at Healthcare Science Practitioner level, the Academy PTP SoP
- at Clinical Scientist level, the HCPC Clinical Scientist SoP
- at Higher Specialist Scientist level, the Academy Higher Specialist Scientist Register SoP.

The curriculum must enable learners to meet the Academy requirements of Good Scientific Practice.

The curriculum must enable learners to understand the need to comply with the HCPC Standards of Conduct, Performance and Ethics.

Standard 6 Publication, Review and Revision

Curriculum documentation must conform to the standards of the currently published curricula and must be publicly accessible.

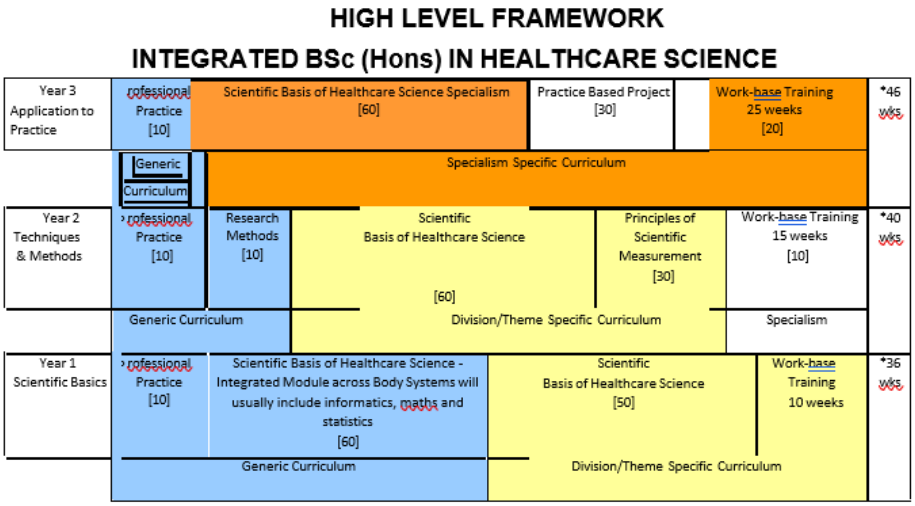
Plans for curriculum review, including curriculum evaluation and monitoring, must be set out.

The schedule for curriculum review and updating, with rationale, must be provided including reference to the governance arrangements.

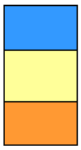
Mechanisms for involving all partners including trainees, patients and lay persons, HEI staff, employers etc in curriculum updating must be in place and operational.

Appendix 1 Framework Structure of MSC Programmes

Practitioner Training Programme



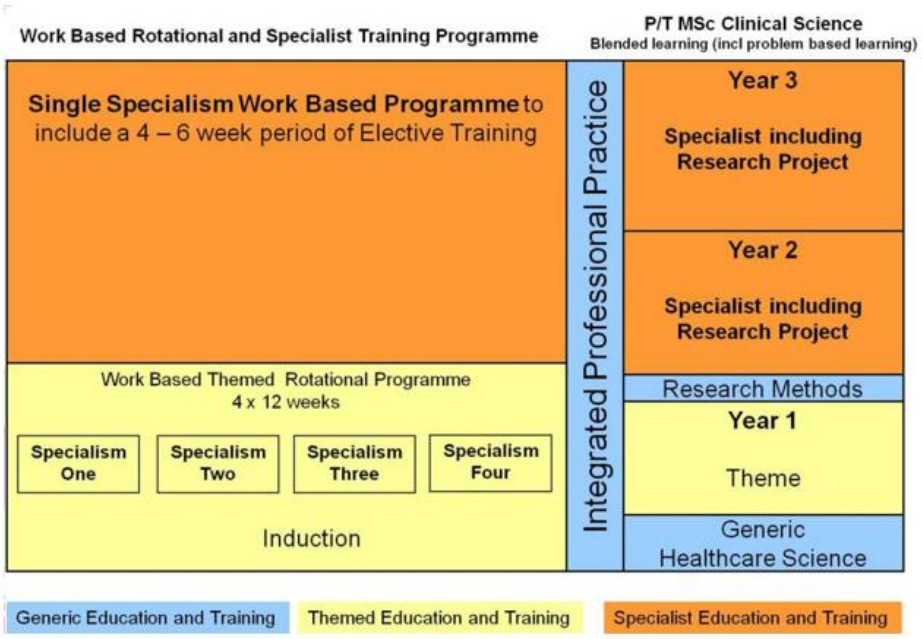
Extended Academic Year *estimated duration
[XX] = number of credits



Generic Modules: common to all divisions of Healthcare Science
Division/Theme Specific Modules: Life Sciences; Medical Physics and Clinical Engineering; Cardiovascular, Respiratory and Sleep Sciences; Neurosensory Sciences
Specialist Modules: specific to a specialism

Scientist Training Programme

Modernising Scientific Careers: Scientist Training Programme (STP):
Diagrammatic representation of employment-based, pre-registration 3-year NHS commissioned education and training programme



Higher Specialist Scientist Training

FRAMEWORK FOR MSC HSST DOCTORAL TRAINING PROGRAMME

<table>
<tr><td>Year</td><td colspan="4"></td></tr>
<tr><td>5</td><td colspan="4">Section C: Research, Development and Innovation (130)</td></tr>
<tr><td>4</td><td colspan="2">Section B:
Specialist Learning (50)</td><td colspan="2">Section C: Research, Development and Innovation
(70)</td></tr>
<tr><td>3</td><td>Section A: Module A5
Improving Outcomes for Health and Social Care
(20)</td><td>Section B:
Specialist Learning
(20)</td><td>Section B:
Generic Learning
(20)</td><td>Section C: Research, Development and Innovation (40)</td></tr>
<tr><td>2</td><td>Section A: Module A3
Personal and Professional Development to Enhance Performance in Practice (30)</td><td>Section A: Module A4
Leadership and Quality Improvement in the Clinical and Scientific Environment (20)</td><td colspan="2">Section B:
Themed Learning (30)</td><td>Section B:
Specialist Learning
(20)</td></tr>
<tr><td>1</td><td>Section A: Module A1
Professionalism and Professional Development -M Level
(30)</td><td>Section A: Module A2
Theoretical Foundations of Leadership
(20)</td><td>Section B:
Themed Learning
(15)</td><td colspan="2">Section B: Module B
Specialist Learning (25) M Level</td></tr>
<tr><td></td><td colspan="2">Section A: Generic Modules for Physiological and Physical Sciences</td><td colspan="3">Leadership and Professional Development Modules</td></tr>
<tr><td></td><td colspan="2">Section B: Theme Modules for Physiological Sciences, a small number of which may also be shared by Physical Sciences</td><td colspan="3">Modules shared by more than one specialism
Specialist Scientific and Clinical Programme Module</td></tr>
<tr><td></td><td colspan="2">Section B: Specialist Modules</td><td colspan="3">Modules from Specialism Specific Scientific and Clinical Programme</td></tr>
<tr><td></td><td colspan="2">Section C: Generic Modules for Physiological and Physical Sciences</td><td colspan="3">Research, Development and Innovation Modules</td></tr>
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Accredited Scientific Practice