



MSc Heart Failure

Programme Specification

2022

Programme Specification

A NATURE OF THE AWARD		
1	Programme Title	Heart Failure
2	Final award	MSc
3	Intermediate awards	None
4	Awarding institution/body	St George's Hospital Medical School, a constituent college of the University of London
5	Teaching institution	St George's Hospital Medical School
6	Programme accredited by	N/A
7	UCAS/JACS code	N/A
8	QAA benchmark statements	N/A
9	Date specification produced	April 2022

B FEATURES OF THE PROGRAMME		
1	Mode of study	Part-time
2	Usual length of programme	2 year part-time
3	Other features of the programme	One entry September (Part-time students) Postgraduate Diploma or postgraduate certificate may be awarded if all the MSc components are not completed.

C EDUCATIONAL AIMS OF THE PROGRAMME	
<p>This programme aims to:</p> <ol style="list-style-type: none"> 1. Enhance the qualifications of physicians who are committed to training in Heart Failure, providing them with unique and highly sought-after set of skills. 2. Provide graduates with a novel degree, which will set them apart from potential competition. The Master's degree in Heart failure will be the first of its kind in the UK for physicians and is likely to generate considerable interest for our institution from the international community. 3. Offer a flexible route to postgraduate studies in order to allow individuals with an interest in Heart failure to complete the proposed course part-time over 2 years. 	

D LEARNING OUTCOMES OF THE PROGRAMME

Upon completion of the MSc course, students will acquire the knowledge and skills outlined as follows:

1. Demonstrate an in-depth analysis of the principles of cardiac physiology in health and in disease and display a mastery of cardiovascular maladaptation in pump failure.
2. Demonstrate a deep and systematic understanding of the cellular and molecular aspects of the cardiac and vascular system in heart failure.
3. Acquire a deep and systematic understanding of the definitions and classifications of heart failure as well as its epidemiology and causes.
4. Undertakes analysis of complex, incomplete or contradictory data to diagnose patients with acute and chronic heart failure in the hospital and community setting.
5. Flexibly and creatively interprets history, physical examination and cardiac investigations including advanced cardiac imaging techniques.
6. Acts with initiative in conducting apposite investigations and risk stratification of patients with heart failure through a multi-dimensional approach by interpretation of complex data and is able to critically evaluate their effectiveness.
7. Undertakes analysis of complex, incomplete or contradictory data to determine optimal pharmacological and device therapy.
8. Works effectively with multiple team members to direct management of patients with end-stage heart failure incorporating a critical ethical dimension to their practice and managing the implications of ethical dilemmas.
9. Communicate effectively and in a sensitive manner to patients with heart failure and their relatives as appropriate, taking into consideration issues of confidentiality and the potential psychosocial and financial impact to the individual.
10. Demonstrates an extensive understanding of the current theoretical and methodological approaches to the evaluation and management of co-morbidities in patients with heart failure and be able to make connections between known and unknown areas to allow for adaptation and change.
11. Critically appraise the scientific literature, demonstrate knowledge of key theories and mastery of concepts associated in heart failure and be able to apply this knowledge in unfamiliar contexts.
12. Critically evaluate different types of study design and employ appropriate methods to plan and conduct a research project and be able to utilise personal reflection to analyse self and own actions.
13. Designs and undertakes substantial investigations to address significant areas of theory and/or practice by selection of appropriate advanced methodological approaches with integrity and attention to ethical, legal and research governance frameworks and workplace practices.
14. Demonstrate effective communication of the key findings of the independent research project in a range of complex and specialised contexts concisely and clearly to a relevant audience.

E Programme structure and features

Compulsory modules:

1. Epidemiology & aetiology of Heart Failure
2. Diagnosis of Heart Failure
3. Therapy and management of Heart Failure
4. Co-morbidities in Heart Failure
5. Management of Arrhythmias and device therapies in Heart Failure
6. Advanced Imaging in Heart Failure
7. Advanced heart failure and management
8. Multi-disciplinary team management and end-stage heart failure
9. Acute Heart failure
10. Cardiac rehabilitation
11. Research Project

Research project/Thesis (60 credits)

MSc

The MSc in Heart Failure is a modular two-year (part-time) level 7 degree programme. Each taught module provides 12 credits and all the 10 taught modules are compulsory. A compulsory research project provides 60 credits and a total of 180 credits are required for the qualification of MSc.

In order to accommodate the individual needs of students and the complexity of different research projects the research module can be completed over a prolonged period of time with submission deadline at the end of the course.

MSc in Heart Failure (180 Credits) Modules 1-10 & Thesis					Thesis (60 Credits)
Module 1 Definitions / epidemiology/ aetiology of heart failure	Module 2 Diagnosis of heart failure	Module 3 Therapy and management of heart failure	Module 4 Co-morbidities in heart failure	Module 5 Management of arrhythmia and device therapies in heart failure	
Module 6 Advanced imaging in heart failure	Module 7 Advanced heart failure and management	Module 8 Multi-disciplinary team management and end-stage heart failure	Module 9 Acute heart failure	Module 10 Cardiac rehabilitation	(each module 12 credits)

Recognition of Prior Learning (RPL)

Given the novel nature of the MSc in Heart Failure, which is the first post-graduate qualification in the field of Heart Failure, internationally, the team does not anticipate to receive RPL claims based on prior study at other UK universities. Experiential learning claims based on the knowledge and skills acquired in clinical practice may be possible in the future. Based on these considerations, the course team has decided to delay the introduction of an RPL process until the programme is well established.

F General teaching and learning strategies

Students will be qualified physicians with a minimum of two years cardiology/heart failure experience and will utilise their undergraduate expertise and postgraduate experience. A wide range of teaching and learning strategies are used in the delivery of the MSc in Heart Failure course. Teaching will predominantly consist of online modules, webinars and web-journal clubs. During the face-to-face sessions, students will be taught in small groups, tutorials and one-to-one case-based learning to allow

more hands-on tasks to support the academic learning experience. Face to face sessions will either occur in the tutorial rooms or be delivered through MS Teams.

Students will also participate in self-directed study and wider reading. The course is designed to encourage students to progress towards greater self-direction; students are encouraged to develop insight into their own learning styles and become responsible for their own learning and professional development. The combination of strategies enables students to develop an investigative, independent and individualised approach to learning and to undertake an extended research project at Level 7.

The course is designed to offer flexibility in order to accommodate for the needs of professionals who need to complete their studies around their existing work commitments and on a part-time basis if required. To allow greater flexibility a technology-rich model is used to deliver a significant proportion of learning materials online and provide resources to facilitate self-directed learning and reflective practice.

Face-to-face, practical learning sessions at SGUL are essential in order to gain the necessary experience and complete the required number of procedures. The practical sessions allow students to benefit from direct contact with lecturers and other learners and to facilitate contact with patients. On-site sessions are delivered in three day blocks four times/year to allow for balance with clinical work. Face-to-face sessions will be provided as participation in clinical sessions and imaging sessions, lectures, tutor-led or student-led seminars and workshops, and case or scenario-based learning sessions. If required, face to face sessions may also be delivered through MS Teams (e.g., as a consequence of COVID travel restrictions).

G *Assessment*

Assessments are designed to be aligned to specific module learning outcomes and the overall course aims. They include a range of different assessment types reflecting student preference and allowing strengths in different assessment methods to come to the fore, so as not to advantage or disadvantage particular students.

Giuseppe Rosano and Robin Ray will develop the online learning materials in conjunction with the module leads. The module presentations would be supplemented by webinars, videos from heart failure experts and links to papers covered by existing subscriptions through the library. The intellectual property for all material will be held by SGUL.

The online module content will be undergoing a rigorous peer review process by module leaders and invited key opinion leaders to ensure appropriate level and quality for the learners. Each year, the content of the modules will be revised to ensure no errors or omissions and updates will be added.

Lecturers will provide five best single answer questions (best of five), which the students will need to complete at the final part of the lecture, to enhance their understanding of the taught material. The lecturer will provide instant feedback.

During the tutorial sessions students will have the opportunity to test their acquired knowledge by being actively involved in interactive clinical scenarios which will be supported by best single answer questions. The tutor will provide instant feedback to the group as they progress through individual cases. All single best answer questions and clinical scenarios will be aligned with the learning outcomes and individual curriculum content.

Formative presentations of assessment proposals

To assist students with the successful completion of summative assessments, students will prepare either a 10-minute presentation or a critical analysis of a research paper which will be followed by group discussion relating to the aims and importance of the proposed assessment that will form the main part of the module's summative assessment. Students will receive feedback from the peer group

and the expert tutors.

Level of competence

During their practical/clinical sessions students will be required to complete three supervised learning assessments in the form of a combination of oral assessments including a case-based discussion, mini-clinical evaluation exercise, critical review, critical appraisal or poster) that will allow to demonstrate longitudinal progression during the training period. Emphasis will be placed on effective feedback and action plans.

Summative assessment methods will three of the following:

1. Completion of MCQs at the end of the online module
2. Case-based Discussion (CbD)
3. Mini-Clinical Evaluation Exercise (mini-CEX)
4. Poster presentation
5. Oral presentation of 10 minutes may consist of any of the following depending on the interests of the student:
 - a. Literature review: summarising topics, prevailing theories, hypotheses and work of key writers
 - b. Case analysis: to analyse and evaluate information and appropriately present and explain conclusions to others.
 - c. Programme design: perform a critical review of the literature, analyse current practices and propose a study project. The student is required to justify individual choices, apply novel approaches in diagnosis and management and identify future research to fill the knowledge gap.
 - d. Data analysis: to use the correct analytical approaches to handle and interpret data
6. Practical assessments - simulation with interactive mannequins.
7. Essay – 3000-word essay will be required for the cardiac rehabilitation module.

H Support for students and their learning

Professor Rosano and Dr Ray shared responsibility for academic and pastoral support structures although Professor Rosano also will act as overall Programme Advisor. Dr Fadi Jouhra will be involved in student support and allocate each student an educational supervisor, a role that encompasses both academic and pastoral support and includes a responsibility for the student's integration into SGUL. The educational supervisors will monitor the students' progress and provide advice and support including effective strategies for adapting to blended learning if students are unfamiliar with online delivery and directing an appropriate research module title. The educational supervisor will also be able to outline implications for falling behind with the online learning elements of the modules and being unavailable for any of the face-to-face sessions and needing to request time away from the course for personal reasons.

Module Leaders

Module Leaders (lead and deputies) are responsible for the co-ordination of delivery of the on-line and face-to-face module they oversee. The Module Leaders, or other members of the academic teaching

team for the module, will act as academic supervisors and provide support and advice on academic issues, which relate to the module.

Educational Supervisors

Upon commencement of the course, the Course Committee, will assign all MSc students an educational supervisor/personal tutor. The educational supervisor will be responsible for monitoring academic progress and student welfare, including socio-cultural integration. He/she will be the first port of contact for the student, assist the student with any difficulties, and monitor his progress throughout the course to ensure that problems are identified early and satisfactory completion. Supervision meetings will be organised during face-to-face meeting or if necessary, on an *ad hoc* basis using via MS Teams. All meetings will be based on a common format. During the meeting the supervisor should review the students' completion of modules record and work in progress. At the end of the meeting the supervisor and student will be required to submit a report to the Course Director with an overall outcome (satisfactory progress, satisfactory progress with conditions or unsatisfactory progress).

Student peer support: Peer-to-peer student learning is encouraged within the structure of the course. Student webinars will be organised once a month on specific topics (Journal club, clinical cases, clinical trial discussions). Group work and other class and online activities will provide opportunities for students to share knowledge and experiences, and provide a platform to offer each other support and advice.

SGUL Support Services: A comprehensive range of support is provided to all SGUL students, including the confidential and independent Student Counselling Service, the multi-faith Chaplaincy, advice on financial issues through the Registry, the Occupational Health service, the Careers Advisor, the Disabilities Advisor, the International Students Advisor, and the Students' Union. Two members of academic staff are employed specifically to provide study skills support and English language support, respectively. Students also have on and off-site access to library services and IT facilities, with access to a dedicated librarian for postgraduate courses who can facilitate additional one-to-one or group study support sessions if required.

The Student Handbook will be available to students and staff at the start of the course and contains information on the full range of student support offered.

SGUL Graduate School: The SGUL Graduate School provides students with a space to meet and the opportunity to mix with postgraduate students from other courses, and to broaden their social and academic support network.

Resources

In addition to its staff resources, SGUL has a wealth of teaching and research laboratories, an extensive computer network, a large library and well-equipped computer classroom, specialized workshops and efficient academic service facilities. Students have access to a substantial collection of web-based learning resources. This incorporates web links to specific useful sites, as well as key learning topic materials developed by SGUL staff to support student learning.

The library holds a specialist medicine and health sciences collection of over 40,000 books, and audio-visual items, subscribes to over 10,000 print and electronic journals, and provides more than 250 reader seats (divided into quiet study, silent study and group study areas).

The area has Wi-Fi throughout as well as some desks with fixed data points (ethernet cables to connect laptop directly to the network rather than using Wi-Fi). Power sockets are available at over 100 desks and a number of laptops are available for use.

Upon enrolment, students take part in an induction programme to help their orientation. This includes

introductions to the programme, health and safety on campus, library and computing resources.

Criteria for admissions

Standard programme entry requirements:

The entry to the programme is limited to cardiologists with a minimum of two years' postgraduate clinical experience in cardiology and a documented familiarity with Heart Failure. To ensure administrative efficiency all candidates will undergo an initial electronic filtering process, which will ensure candidate meet the following minimum entry requirements:

1. Undergraduate degree

- MBBS (Medical Bachelor & Bachelor in Surgery) or equivalent

2. Practical experience

- Physicians are required to have 2 years postgraduate clinical experience in heart failure. Candidates may be asked to present evidence of competency that may include certification or letter from their supervisor.

3. English language skills.

International applicants who do not hold a first degree equivalent to UK honors degree studies in a majority English-speaking country as defined by UK Visas and Immigration will need to present evidence of proficiency in English language (IELTS with an overall score of 6.5, with no component less than 6.0; Pearson test with an overall score of 67, with no component less than 67; Cambridge English Advanced (Certificate in Advanced English) with an overall score of 185, with no component less than 176; or Cambridge English: Proficiency (also known as Certificate of Proficiency in English) with an overall score of 185, with no component less than 176).

4. Enhanced Disclosure and Barring Services check (requirement dependent on research project)

If candidates are required to be in contact with patients for patient-facing research as part of their dissertation, in line with standard practices and legislation, students will be required to undergo a health check by the Occupational Health team. This will be facilitated by the cardiology management team (cardiology service manager) in the Trust who will support students through this process if required. This is dependent on the research project chosen by the candidate and will not be required for library-based dissertations.

5. Occupational Health check (requirement dependent on research project)

If candidates are required to be in contact with patients for patient-facing research as part of their dissertation, in line with standard practices and legislation, students will be required to undergo a health check by the Occupational Health team. This will be facilitated by the cardiology management team (cardiology service manager) in the Trust who will support students through this process if required. This is dependent on the research project chosen by the candidate and will not be required for library-based dissertations.

International applicants:

Equivalent international qualifications will also be accepted, and the equivalence of these qualifications will be checked using the UK NARIC website. International applicants must satisfy the requirements of the UK Visas and Immigration department in relation to St George's responsibilities as a Highly Trusted Sponsor for Tier 4 students.

Career opportunities

A Master's degree in Heart failure will provide a validated qualification from an established and highly ranked University that assures a high level of expertise in the management of heart failure. Such a qualification will provide physicians with employment opportunities above their cardiology qualifications. For example, cardiologists with such a qualification will be selected over others for jobs seeking a Heart Failure Specialist. Primary care physicians may manage the cardiac health of their heart failure patients in the community, thereby enhancing the provision of out of hospital care for these patients.

Currently, despite advertisement of heart failure posts and Chairs there is no formal training in heart failure. Given the complexities of the field, individuals with limited knowledge and experience are likely to resort to numerous, costly, and often redundant investigations, and apply inadequate therapeutic algorithms with relevant implications for public health and for the National Health Service. An MSc in heart failure will ensure a high level of competence during the diagnosis and management of patients with heart failure.

A formal MSc degree in Heart Failure conferred by a well-established and well published academic institution will set our graduates apart from potential competition and will provide them with unique employment opportunities within National health systems. The initiative will address the ever-growing need for individuals with an in-depth knowledge of Heart Failure given the exponential increase of patients with heart failure. A Master's degree in Heart failure will address the need for structured training in the field. A qualification that assures high level of expertise will provide physicians with employment opportunities above their qualifications. In the current economic era where National health systems have to cut down on resources,

The availability of individuals with expertise in the field of heart failure will have a considerable positive impact for the majority of patients and health care providers. Currently, physicians with no formal training in Heart failure are still required to manage patients with heart failure. Given the complexities of the field, individuals with limited knowledge and experience are likely to offer sub-optimal care.

Methods for evaluating and improving the quality and standards of teaching and learning

A range of methods are employed:

- Dedicated individuals in-charge of Assessment and Quality assurance.
- The Course Committee meetings have standing agenda items on course progress where student representatives can raise any issues.
- Reports of Student Evaluation Questionnaires are reviewed by the Course Committee.
- External Examiners' reports are reviewed by the Course Committee and Board of Examiners. Points requiring action are sent to the relevant members of academic or administrative or the Course Committee.
- Taught Postgraduate Courses Committee (TPCC) is responsible for quality monitoring of all postgraduate programmes. The Committee receives the minutes of Course Committee meetings, and the Annual Programme Monitoring Report. There is robust debate at TPCC meetings, attended by course directors of all postgraduate courses, where good practice is shared and areas for improvement are reviewed.

Other methods

- Staff appraisal against SGUL criteria
- Teaching skills courses for staff
- Review of research activities of teaching staff

L Regulation of assessment

The course complies with the General Regulations for Students and Programmes of Study as devised by St George's.

Examinations are regulated through:

- Scheme of Assessment, which is reviewed and revised as necessary every year
- The Board of Examiners, which meets at least twice annually, and identifies strengths and weakness of assessments
- External Examiner who reviews specific assignment and examination questions, a sample of student coursework and exam scripts, and all dissertations. The External Examiner provides an annual report on practices and processes, which is considered at course committee.

M Indicators of quality and standards

Internal review

- Monitoring and responding to student feedback
- Monitoring of course content with periodic review
- Regular analysis of student performance in assessments
- Annual analysis of student progression and final degree outcomes
- Periodic review every 5 years
- External examiner reports
- Annual Programme Monitoring Report
- HEE reporting

Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, course content, and the teaching, learning and assessment methods of each module can be found in the course handbook and individual module guides.

Key sources of information are:

- Course documents
- Course Canvas pages
- Student Handbook
- The St George's prospectus
- The St George's internet site (www.sgul.ac.uk)
- General Regulations for students and programmes of study
- QAA subject review reports