

 Learnna | Diploma MSc

Cardiology

Postgraduate Diploma and MSc Courses



THE UNIVERSITY OF
BUCKINGHAM



Postgraduate Diploma

Delivered over 1 year, the online, part-time Postgraduate Diploma course is specially developed for busy health professionals. Formatted in 6 modules, each 6 weeks in duration; the course is designed to be practical and clinically focused.

MSc

The MSc runs over 2 calendar years, with the first year comprising of the Postgraduate Diploma. The second year starts with an initial 12 week online module to develop skills in critical appraisal and knowledge of research methodologies. Students then complete the professional project module.

Why study Cardiology with us?

Online cardiology courses are something that whilst relatively new, provides an innovative solution to many of the problems faced not just within cardiology, but within healthcare as a whole.

Within international healthcare systems, cardiologists benefit from working as a part of a multidisciplinary team.

Our Postgraduate Diploma and MSc Courses in Cardiology are designed to provide healthcare professionals who experience patients presenting with cardiology related conditions and wish to improve their knowledge, skills and experience in this area.

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Our cardiology programmes offer a unique opportunity to collaborate with international peers and gain invaluable insights from leading experts. Students will gain the skills needed to navigate complex cardiology cases and make informed decisions in a rapidly evolving field.

Prof. Maciej Kostrubiec, Learna | Diploma MSc Programme Leader

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Cardiology Postgraduate Diploma

Course Modules

Our online Postgraduate Diploma in Cardiology allows you to study for just one calendar year and is a part-time, distance-learning course. The course is worth 120 credits and comprises six modules of 20 credits, each running over a period of six weeks.

Module 1 - Ischemic heart disease

Aim of the module:

- Develop a comprehensive understanding of the presentation, diagnosis and management of patients with ischemic heart disease.

Synopsis of module content:

- Acute presentation with chest pain and diagnostic dilemmas
- Chronic and recurrent chest pain
- Diagnostic tests in coronary artery disease (CAD) – ECG, echo, stress test, SPECT, CT, cMRI
- Pharmacological treatment of coronary artery disease
- Interventional treatment of coronary artery disease
- Complex patient with coronary artery disease – comorbidities, non-cardiac surgery, end-stage disease

On completion of this module, students will be able to:

1. Differentially diagnose causes of chest pain and ischaemic heart disease and select appropriate investigative and treatment options.
2. Critically analyses incomplete and/or contradictory evidence, developing effective methodologies to explain recommendations in complex ischemic heart disease contexts.
3. Develops advanced interpersonal, team and networking skills to strategically enhance team performance in complex situations and contributes to the field of ischaemic heart disease. Expands ability of argument presentation in multipronged discussion with the focus on the optimal patient benefit.

Module 2 - Heart failure

Aim of the module:

- Develop a comprehensive understanding of the presentation, diagnosis and management of patients with heart failure.

Synopsis of module content:

- Shortness of breath and other symptoms of heart failure
- Diagnostic tests in heart failure – ECG, echo, CT, cMRI
- Pharmacological treatment of heart failure
Interventional treatment of heart failure, right heart failure – symptoms, pathophysiology, diagnostic management, treatment
- Complex patient with heart failure – comorbidities, non-cardiac surgery, end-stage disease

On completion of this module, students will be able to:

1. Demonstrate an in-depth understanding of the diagnosis, treatment and management of heart failure, including the management of exacerbations and comorbidities recognising the complex effects on patient morbidity and mortality.
2. Selects and adapts appropriate advanced problem-solving strategies, methods and techniques to design systematic investigations that define and critically evaluate problems related to heart failure.
3. Critically evaluate the role of palliative and end-of-life care in heart failure with an identification of a crucial role of local services.

Module 3 - Arrhythmias

Aim of the module:

- Develop a comprehensive understanding of the presentation, diagnosis and management of patients with arrhythmias.

Synopsis of module content:

- Symptoms and basic diagnostic tests of arrhythmia - ECG, Holter
- Other investigation tests in arrhythmia - echo, stress test, CT, cMRI, EPS, genetic test
- Atrial arrhythmia – differentiation, pharmacological management, interventional management
- Stroke prevention in atrial fibrillation – anticoagulation, non-pharmacological prophylaxis
- Ventricular arrhythmia – differentiation, pharmacological management, interventional management
- Syncope due to other reasons

On completion of this module, students will be able to:

1. Compare and contrast the range of presenting rhythm disturbances and how they are investigated.
2. Demonstrate a comprehensive understanding of the diagnosis, treatment and management of supraventricular arrhythmias.
3. Identify and differentiate common causes of syncope, and propose their investigation and treatment.
4. Communicate advanced arrhythmia-related information for different audiences in a variety of contexts.

Module 4 - Valvular heart disease and Congenital Heart Disease

Aim of the module:

- Develop a comprehensive understanding of the presentation, diagnosis and management of patients with valvular heart disease.

Synopsis of module content:

- Symptoms and signs of valvular heart disease
-Diagnostic tests in valvular heart disease – ECG, echo, stress test, CT, cMRI
- Aortic valve disease – screening, pharmacological and interventional management
- Mitral valve disease – screening, pharmacological and interventional management
- Pulmonary and tricuspid valvular disease – screening, pharmacological and interventional management
- Congenital Heart Disease

On completion of this module, students will be able to:

1. Apply in-depth understanding of anatomy, pathophysiology and the physiology of the cardiovascular system and its relevance to the pathophysiology of valvular heart disease.
2. Demonstrate an in-depth understanding of the diagnosis, prevention, treatment and management of valvular heart disease.
3. Justify and critically evaluate indications for interventional management of valvular heart disease.
4. Demonstrate understanding of the presentation, diagnosis and management of Congenital Heart Disease.
5. Systematically synthesises advanced and specialist cardiological-related information and ideas, and formulates and develops innovative proposals to address valvular and congenital heart disease.
6. Applies advanced interpersonal, team and networking skills to enhance team performance in unpredictable contexts strategically and contributes to the field of Valvular Heart Disease and Congenital Heart Disease.



Doing a course, all online is a lot more convenient for me around my clinical role so that's why I chose to study with Learna... I really like how flexible the course was, I liked the freedom I got with the professional project and I was well supported throughout the whole 2 years!

- Lisa Jayne Edwards, Medical Education MSc graduate

Module 5 - Cardio-oncology. Infective, inflammatory and thromboembolic cardiovascular disorders.

Aim of the module:

- Develop an understanding of the presentation, diagnosis and management of patients with wide-range cardiovascular diseases.

Synopsis of module content:

- Cardio Oncology
- Pulmonary embolism
- Pulmonary hypertension
- Aortopathy and other vasculopathies
- Endocarditis
- Myocarditis and pericarditis

On completion of this module, students will be able to:

1. Identify and manage cardiovascular issues related to oncological therapies.
2. Demonstrate an in-depth understanding of the diagnosis, treatment and management of pulmonary embolism.
3. Critically differentiate conditions that lead to pulmonary hypertension, their investigation and treatment.
4. Formulate a robust approach for investigating and treating patients with aorta abnormalities
5. Compare the presentation, diagnosis and management of myocarditis, pericarditis and endocarditis.
6. Demonstrate knowledge of issues related to the management of a patient with endocarditis.

Module 6 - Cardiovascular prevention and physical activity

Aim of the module:

- Develop a comprehensive understanding of the significance of physical activity and cardiovascular prevention, and depth insight into the association of various comorbidities with cardiovascular risk.

Synopsis of module content:

- Dyslipidemia – diagnostic management, risk assessment and treatment
- Hypertension – diagnostic management, risk assessment and treatment
- Patients with diabetes and cardiovascular disease
- Kidney dysfunction and cardiovascular disease
- Physical activity of patients with arrhythmia and elements of sports cardiology
- Physical activity of patients with CAD, HF or after a heart surgery

On completion of this module, students will be able to:

1. Identify and manage cardiovascular risk factors in primary and secondary prevention.
2. Formulate a robust approach for investigating and treating patients with dyslipidemia.
3. Demonstrate in-depth understanding of the diagnosis, treatment and management of hypertension.
4. Demonstrate knowledge of issues related to the management of a patient with diabetes.
5. Apply in-depth understanding of the interdependence between cardiovascular diseases and renal dysfunction, its investigation and management.
6. Formulate comprehensive recommendations for physical activity in different clinical scenarios.



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"When I enrolled into the course I had no idea about the opportunities it would provide me with. Having my first paper published through this course helped me overcome my apprehensions of academic writing and made me more confident to pursue it further."

Rutu Dave

Cardiology: MSc Course Modules

Note: The first year of the MSc comprises of the 6 modules within the PGDip.

Module 7 - Research Methodologies and Critical Appraisal: Cardiology

Aim of the module:

- To help students recognise, understand, interpret and apply methods used in healthcare research and critically appraise the various methodologies specific to cardiovascular research.

Synopsis of module content:

- Terminology used in epidemiology and research studies such as prevalence, incidence, sensitivity, specificity, false positives and false negatives
- Interpreting graphical representation of epidemiological and statistical data such as Kaplan-Meier curves, forest plots and meta-analyses
- Calculations used in the assessment of research data such as relative risk, absolute risk and number needed to treat. Statistical tests and their applications including t-tests, ANOVA and chi-square
- Qualitative research methods
- Fundamentals of evidence-based practice and its application into the clinical setting
- Principles of health economics, audit and quality improvement/assurance systems
- Establishing patient registers and the value of disease-specific registers
- Research into educational principles for both healthcare practitioner and patient
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On completion of this module, students will be able to:

1. Select and apply different methodological perspectives and tools to answer research questions in cardiology.
2. Critically analyse and interpret research in cardiology.

Module 8 - Professional Project

Aim of the module:

- To develop students' ability to critically appraise specific areas of clinical, research and/or organisational practice and develop skills in independent research, study and writing for publication.

Synopsis of the module:

- The module will depend on the creation of a piece of work based upon a specific clinically related project relevant to the student's practice.

This project may comprise:

- Literature review and appraisal of the evidence
- Audit
- of practice including organisational or clinical Review
- and implementation of evidence-based practice
- Qualitative or quantitative research (formal research involving human subjects is not anticipated)
- Case(s)-based and quality of service review with critical appraisal
- Case report, review of the literature and organisational assessment

On completion of this module, students will be able to:

1. Design and undertake research and development of a project in order to produce an extensive piece of literature which may be suitable for peer-reviewed publication.
2. Critically evaluate practice and suggest improvements or change in a healthcare setting.
3. Incorporate knowledge of the research process in developing services appropriately.



Teaching Methods

Our courses are conducted entirely online through our online learning platform. However, you will receive guidance throughout with tutor-stimulated academic discussions, which are based on clinically-rich case scenarios. These usually occur within groups of 10-15 students, allowing you to clearly communicate with both your tutor and fellow students.

You will participate in a combination of group and individual activities, which are recorded in a reflective journal. This innovative teaching method enables you to envisage the translation of your studies into your every day work and practice.

Our dedicated Student Support Team are also available to help with any problems you may face. From navigating our online platform to advising you on deadlines, our team can assist with any questions or challenges you may have along the way.

Study skills week

Once you have secured your place on the course, you will be required to attend our Study Skills week. This will give you the opportunity to participate in workshops on Harvard referencing, scientific and reflective writings, and levels of evidence in preparation for your studies. It is compulsory for you to attend this induction, as it'll provide you with a sturdy introduction to the course.

Cardiology: Postgraduate Diploma **Entry Requirements**

Documents required:

- A copy of your updated CV including your address and date of birth.
- A copy of your undergraduate degree certificate.
- The name and email address of someone who is able to provide a reference, this can be a work colleague, employer or former tutor.
- A detailed personal statement explaining why you would like to undertake the course.

Applicants without the above academic criteria but relevant/suitable experience can apply.

Applications will be judged on the individual specifics of background and qualifications including ability to work at postgraduate level (applicants may be asked to submit a piece of work for assessment to confirm that they are able to work comfortably at postgraduate level and demonstrate requisite clinical/professional knowledge).

Applicants should submit copies of the following with their application:

Proficiency in the English language is essential to completing our courses. If English is NOT your first language, we ask for proof of competency during the application process. We are able to accept an IELTS overall score of 6.0 (with a minimum of 5.5 for each band) or an equivalent qualification.





What do our students think?

Since 2010, over 8000 students have progressed their medical career by enrolling in one of our qualifications. We ourselves have learned a lot during this time and continually seek to improve the student learning experience. Here is what some of our previous students have said:

"I found the online learning very interesting. It enabled me to save money and time."

Dr Imad Eddin Rahamtalla, Doctor

"I strongly recommend Diploma MSc to all those busy physicians who are working in remote areas and wish to upgrade their knowledge."

Dr Junaid Zaffar, Diabetologist

"The learning was fun and enjoyable. The course was awesome and it increased my confidence."

Dr Sankar Nath Jha, Assistant Professor

"I found learning with Diploma MSc interesting, it helped to update my academic knowledge."

Dr Prasanth Kinattapurayil, Doctor

"I love that it was flexible and that I could log in at my convenience. I found this course to be very in-depth, informative, challenging and stimulating."

Kerri-Ann Best PGDip, RD



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