

Critical Care

Postgraduate Diploma and MSc Courses





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 Critical Care with us?

Our Critical Care programme will equip the individual with a systematic understanding of Critical Care, skills in critical appraisal and application of knowledge for direct patient benefit/ service development and future study.

Our Critical Care programme will equip students with the ability to implement best practice and innovation in complex medical scenarios. Students will be able to extend the scope of practice in Critical Care by developing an advanced knowledge base to effectively assess and offer initial treatment to patients presenting with critical conditions.

Critical Care Postgraduate Diploma

Course Modules

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

Module 1 - Respiratory Support

Aim of the module:

- This module addresses the essential topics in respiratory support, along with related ethical decision-making and communication in critical care settings.

Synopsis of module content:

- Fundamentals of respiratory failure
- Mechanical ventilation modes and strategies
- Ventilator-associated complications and prevention
- Weaning and extubation protocols
- Non-invasive ventilation techniques
- Management of acute exacerbations of chronic respiratory diseases

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

1. Demonstrate advanced knowledge and understanding of the aetiology, classification and ethical consideration of acute respiratory failure.
2. Critically evaluate the evidence and guidance relating to patients requiring respiratory support in the critical care setting.
3. Apply effective communication and collaborative skills within multidisciplinary teams to optimise respiratory support and ethical management for critically ill patients.

Module 2 - Sepsis

Aim of the module:

- To equip students with a systematic understanding of sepsis, including the pathophysiology, and the crucial aspects of diagnosis and early management to improve patient outcomes in critical care settings.

Synopsis of module content:

- Fundamentals of sepsis
- Pathophysiology of sepsis
- Diagnosis and risk stratification in sepsis
- Management of sepsis: early interventions
- Antimicrobial therapy in sepsis
- Fluid resuscitation and haemodynamic support in sepsis

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

1. Demonstrate advanced knowledge and understanding of the aetiology, pathophysiology, and management of sepsis in critical care settings.
2. Analyse and critically evaluate diagnostic criteria and early management strategies to manage sepsis promptly in a range of clinical settings.
3. Support the implementation of evidence-based interventions aiming to prevent complications and optimise patient outcomes in sepsis cases.

Module 3 - Cardiovascular Support and Heart Failure

Aim of the module:

- To provide a comprehensive exploration of the delivery of cardiovascular support in critical care settings, and also the pathophysiology and management of heart failure, to include related ethical decision-making and discussions.

Synopsis of module content:

- Pathophysiology of heart failure
- Pharmacological management of heart failure
- Cardiovascular monitoring
- Advanced cardiovascular support devices
- Multidisciplinary approach to heart failure management, including ethical decisions

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

1. Develop a systematic understanding of the pathophysiology and clinical manifestations of heart failure and other cardiovascular issues in patients in need of critical care.
2. Critically evaluate research and guidelines relating to the pathophysiology, presentation and management of patients in critical care requiring cardiovascular support.
3. Apply effective communication and collaboration skills to coordinate cardiovascular support and heart failure management for critically ill patients, ensuring an ethical, patient-centred approach aimed at improved outcomes.

Module 4 - Post-Surgery Management

Aim of the module:

- To address various aspects of post-surgery critical care management, whilst also exploring gastrointestinal considerations and infection prevention to ensure comprehensive care for surgical patients during their critical recovery period.

Synopsis of module content:

- Principles of post-surgery critical care
- Respiratory management following surgery
- Cardiovascular management following surgery
- Pain management and early mobilisation
- Gastrointestinal considerations in post-surgery patients
- Wound care and infection prevention in the post-surgery period

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

1. Demonstrate an in-depth understanding of the principles of postoperative critical care management, including recognition and management of common complications.
2. Develop an ability to critically evaluate and analyse the current evidence and strategies for optimising respiratory and cardiovascular function in the postoperative period.
3. Apply the knowledge acquired to synthesise a multidisciplinary approach to post-surgery management and rehabilitation to enhance patients' critical recovery and functional outcomes.

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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 Lerna...

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 - Head Injury: Non-traumatic and Traumatic

Aim of the module:

- To develop a critical knowledge and understanding of non-traumatic injuries, along with the appropriate assessment and management of traumatic head injuries, in a range of presentations that would require critical care interventions and ethical decision-making in complex scenarios.

Synopsis of module content:

- Overview of non-traumatic head injuries, including subarachnoid haemorrhage
- Management of non-traumatic head injuries
- Traumatic head injuries: overview and assessment
- Acute management of traumatic brain injuries
- Rehabilitation and recovery after head injuries
- Ethical considerations in head injury management

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

1. Demonstrate advanced knowledge of the pathophysiology, clinical presentations, diagnosis and management of head injuries.
2. Analyse and critically evaluate the management approaches for head injuries, including the application of evidence-based guidelines to make informed decisions.
3. Synthesise the evidence to deliver diagnostic and management strategies in critical care settings relating to non-traumatic and traumatic head injuries.

Module 6 - Ethics and Law; Critical Care Rehabilitation

Aim of the module:

- To equip healthcare professionals with the necessary knowledge and skills to make ethically sound decisions and communicate effectively with colleagues and patients, whilst upholding principles of patient autonomy, beneficence and justice.

Synopsis of module content:

- Ethical considerations in critical care
- Legal framework: informed consent and patient rights
- Multidisciplinary collaboration and communication
- Ethical issues in organ support and allocation
- Principles of critical care rehabilitation
- Psychosocial aspects of critical care rehabilitation

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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



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

1. Demonstrate a critical and systematic knowledge of complex and ethical dilemmas in critical care to make informed and ethically sound decisions.
2. Critically evaluate the evidence and guidance relating to ethical and legal frameworks within critical care.
3. Develop advanced skills and effectively apply ethical and legal principles in decision-making in critical care settings.

Teaching Methods

Our courses are conducted entirely online through self-directed distance learning. 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 invited to a Study Skills week webinar. 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 not compulsory for you to attend this induction but it is recommended, as it'll provide you with a sturdy introduction to the course.

Critical Care Postgraduate Diploma

Entry Requirements

Documents required:

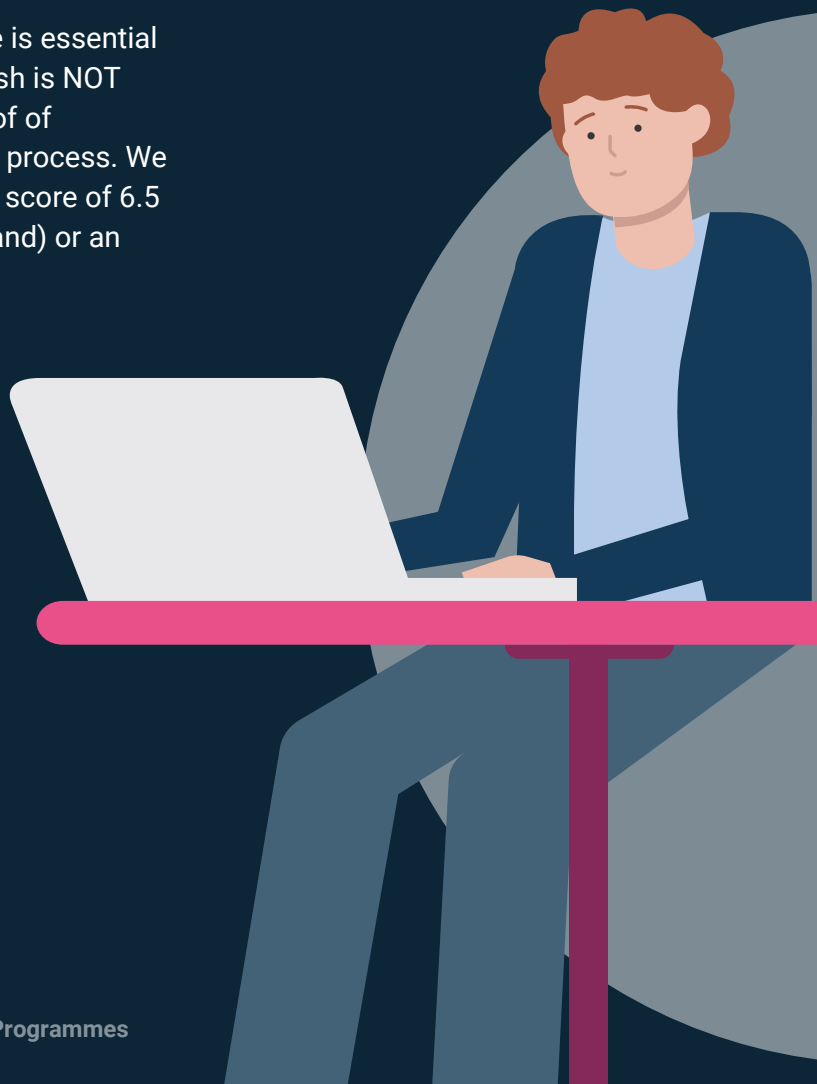
- A copy of your updated CV including your address and date of birth.
- A copy of your undergraduate degree certificate.
- The name and email address of someone who is able to provide a reference, this can be a work colleague, employer or former tutor.
- A detailed personal statement explaining why you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

Health professionals working within a clinical setting, both UK and overseas, with a related Healthcare Science degree (including international qualifications) are eligible to apply for the Postgraduate Diploma in Critical Care.

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 6.5 (with a minimum of 6.0 for each band) or an equivalent qualification.



Critical Care 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

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 research in the subject area.

Synopsis of module content:

- Terminology used in epidemiology and research studies such as prevalence, incidence, sensitivity, specificity, false positive 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 system;
- Establishing patient registers and the value of disease-specific registers;
- Research into educational principles for both healthcare practitioner and patient.

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

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

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 formulating the question and the creation of a piece of work based upon a specific critical care related project relevant to the person's practice.

This project may comprise:

- Systematic literature review and appraisal of the evidence.
- Audit of non-patient data/organisational audit Review and implementation of evidence-based practice.
- Literature review and qualitative or quantitative research proposal.
- Case(s)-based and quality of service review with critical appraisal.
- Case report, review of literature and organisational assessment.
- Secondary data analysis.

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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

Module 7 - Research Methodologies and Critical Appraisal

MSc teaching methods for this module are similar to the Postgraduate Diploma course modules, however it is run over 12 weeks.

Module 8 - Professional Project

To produce the professional project, students continue to use the online course; however, much of the work is self-directed.

Students are expected in the first 8 weeks to interact with their tutor on a weekly basis.

Students select a specific project and submit a project summary/proposal (approximately 1,000 words).

Once the proposal has been approved, the professional project (11,000 words) itself is then completed through online guidance and supervision offered by the tutor. The student and tutor will interact regularly (weekly on the dedicated students/ tutor discussion area or through any other means of communication deemed appropriate by both parties (telephone/ SKYPE/ email. Note of any verbal communication with the tutor is recorded in the student's journal by the student.

Entry Requirements

Health professionals working within a clinical setting, both UK and overseas, with a related Healthcare Science degree (including international qualifications) are eligible to apply for the Master's in Critical Care.

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 MSc level (applicants may be asked to submit a piece of work for assessment to confirm that they are able to work comfortably at MSc level and demonstrate requisite clinical/professional knowledge).

Entry requirements for the two-year course are as for the Postgraduate Diploma.

Applicants should be working in a clinical setting, either in the UK or overseas, and have a science degree in a relevant subject.

You will also need to submit copies of the following with your application:

- Qualification certificates
- A maximum of two professional and/or academic references
- IELTS score of 6.5 with a minimum of 6.0 for each band (or an equivalent qualification)

Graduates of this course will receive a Master of Science award from the University of Buckingham.

The Critical Care Postgraduate Diploma course provides a progression route for the MSc course in Critical Care.



What do our students think?

Since 2010, over 1000 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 Kinattupurayil, 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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