



University of East Anglia

**CERTIFICATE OF HIGHER
EDUCATION
IN
EMERGENCY MEDICAL CARE**

2008-2011

(120 credits at Certificate level)

COURSE HANDBOOK

University of East Anglia, Norwich

**Course Director: Louise Staffell
Academic Consultant: Simon Butler**

CERTIFICATE OF HIGHER EDUCATION IN EMERGENCY MEDICAL CARE 2009

COURSE HANDBOOK

CONTENTS

- A Course Aims and Objectives**
- B Learning Outcomes**
- C Course Structure and Unit Outlines
Accreditation of Prior Learning**
- D Coursework & Assessment**
- E Teaching and Learning**
- F Teaching Team**
- G Award of Credit**
- H Preparatory Reading**
- I Useful Websites**
- J Structuring and Presenting Coursework: A Style
Guide for Certificate Students**

A Aims & Objectives

- The exploration within a multi- and inter-disciplinary framework, the interacting components associated with pre-hospital emergency medical care.
- An introduction to the disciplines and techniques employed in the study of pre-hospital medical care.
- Providing students with opportunities to strengthen their knowledge in medicine, natural sciences, sociology, law, ethics and health organisations.
- Providing opportunities for students to combine and integrate their learning within the context of their professional development and practice.
- To introduce students to the processes underlying injury and disease through the study of medical physics, biosciences, anatomy, physiology, pathophysiology and trauma.
- The acquisition of a sound theoretical base and improved patient assessment skills leading to enhanced diagnostic and clinical decision making abilities.
- The application of a scientific and evidence based approach to patient care through the development of research skills including within clinical practice.
- Through the work-based component, the application of theory to clinical practice
- To develop reflective practice in the workplace.

Broader Educational Objectives

The course is also intended to develop:

- A commitment to study at university level.
- Independent thought and study.
- Use of information and communications technology (ICT) in academic study including proficiency in the use of the UEAs virtual learning environment (VLE) 'Blackboard'.
- Analytical and critical ability in the use of evidence in problem solving.
- Core skills including the ability to present, communicate and discuss ideas and concepts clearly, concisely and logically, both orally and in writing (including the ability to construct coherent and logical arguments).
- An ability to demonstrate an understanding of the mechanics of scholarship.
- A flexible and coherent programme of study at University level one and to provide a progression route to level two study.
- Interaction with others in a way that is conducive to maintaining or enhancing professional relationships, including team-working.
- The ability to work to a schedule and meet deadlines.
- Research skills in handling and interpreting new or unfamiliar data and retrieving relevant information.
- The ability to compare, contrast and summarise information from a wide variety of sources.
- The ability to reflect upon, understand and develop their personal learning style and skills.

B Learning Outcomes

At the conclusion of the course, students should be able to:

- Integrate evidence from a wide variety of sources and different disciplines in the study of unscheduled emergency medical care.
- Employ a range of cognitive and key skills including the ability to present, communicate and discuss ideas and concepts logically both orally and in writing.
- Apply a range of practical data-collection and recording techniques in their own studies.
- Apply the knowledge gained during the course to the care of their patients (assessed during supervisions).
- Demonstrate a clear understanding of unscheduled emergency care through the collection, collation and analysis of patient care data and documentation.
- Apply key theories in biosciences and out of hospital emergency medicine within the context of actual patient care.
- Discuss the relevance and importance of research and observational or scientific evidence in the decisions relating to, and the application of patient care.
- Demonstrate a clear understanding of clinically relevant theories in human biosciences and discuss their relationship in the context of issues relating to patient care.
- Relate the history and structure of previous health care systems in the United Kingdom to the management of those currently in place.
- Incorporate a working knowledge of patient's rights (as set out in current laws and regulations) into the care of patients.
- Discuss the socioeconomic and psychosocial factors that contribute to disease and the impact of these on the provision of acute medical services.
- Demonstrate an understanding of medical ethics and the medico-legal responsibilities associated with professional registration.

C Course Structure and Unit Outlines

The course is made up of eight modules at Certificate Level (equivalent to first year undergraduate level) and is normally studied over two years. To successfully complete the course, students must gain 120 credits by completing **all** of the modules. There is an exit award of a Certificate of Continuing Education (60 credits) for which the student must have completed Modules 1 – 5 and a further 10 credits of study from any course offered by the Centre for Continuing Education.

Modules:

Module 1: Introduction to Practice	(10 credits)
Module 2: Clinical Theory I	(10 credits)
Module 3: Clinical Theory II	(10 credits)
Module 4: Clinical Theory III	(10 credits)
Module 5: Clinical Theory IV	(10 credits)
Module 6: Work-based learning & reflective practice I	(20 credits)
Module 7: Paramedic skills phase	(40 credits)
Module 8: Work-based learning & reflective practice II	(10 credits)

The course has both theoretical and practical components. The practical components will be completed whilst in full-time or part-time practice placements and are supported by a clinician mentor (Modules 6 and 8). They can only be undertaken by those who meet the national paramedic selection criteria. Units 1 to 5 can be studied by any one who has an interest in the subject matter.

Accreditation of Prior Learning (APCL/APL)

All applicants for the full Cert. H.E. must have completed an accredited UK National Ambulance Aid Course of minimum six week (whole-time equivalent) duration. APCL/APL applications will be considered by the Director of Teaching & Learning in the School of Education in accordance with current University regulations. Please contact the Course Director or Lead for more details regarding this.

Core Unit Descriptions:

Module 1: Introduction to Practice (10 credits)

An introduction to health care organisations and the acute patient care work-role focusing on non-clinical aspects of patient care. The module explores, within a multi-disciplinary framework, the interacting components of health care focusing on medical sociology, health care management, medical ethics and law. The module includes the design and implementation of a clinical audit project under the guidance and supervision of a Clinical Audit Manager from the University's partner NHS Trust.

Module 2: Clinical Theory I (10 credits)

The module provides an introduction to human biosciences and clinical care. It progresses from the study of the body at a molecular level to a brief overview of functioning organs and systems. Fundamentals of clinical care such as basic life-saving and patient assessment techniques are also introduced. A strong emphasis is placed on the application of theoretical learning in the work-place. The essential topics

of medicinal chemistry and pharmacology are introduced during the Module One Study Day.

Module 3: Clinical Theory II (10 credits)

The module builds on the knowledge gained from Clinical Practice I and is mainly concerned with the core of the body, i.e. the thorax and abdomen. The digestive and urinary systems are studied with their associated pathologies. The section covering toxicology will help consolidate prior learning in biochemistry and pharmacology. The vital subject of patient assessment and clinical decision making is covered in depth. This module includes a one day secondment to the Medical Assessment Unit or Accident & Emergency Department of a Teaching Hospital to observe and participate in patient assessment skills, affording the student the opportunity to discuss with a clinician how clinical decisions are made.

Module 4: Clinical Theory III (10 credits)

The principal theme of this module is the cardiovascular system and clinical cardiology. Having completed study of the physiology and anatomy of the heart, blood and blood vessels with many clinical correlations, the student is gently introduced to the subject of heart disease, electrocardiograms, and vascular emergencies. Environmental emergencies are also explored. Part Two of the module is concerned with obstetrics, gynaecological emergencies and basic paediatric care. The study day emphasises electrocardiograph (ECG) interpretation and how cardiac abnormalities occur.

Module 5: Clinical Theory IV (10 credits)

This module mainly explores the nervous and endocrine systems with their associated pathologies. There are links to medical physics as the student is introduced to Pre-Hospital Trauma Life Support (PHTLS) philosophies in trauma management. Trauma specific to the nervous system is also studied in detail such as head and spinal injuries. There is an introduction to basic psychology in the context of disturbances of behaviour and the medicine that are prescribed in psychiatry. The clinical component of this initial stage of the course concludes with emergencies in the elderly, infection and communicable diseases.

Module 6: Work-based learning & reflective practice I (20 credits)

This component of the programme involves workplace learning for a twelve month period (whole-time equivalent) during which time the student completes a portfolio of case studies and reflective learning journal supported and assessed by a mentor appointed by the relevant training team.

Module 7: Paramedic skills phase

(40 credits)

Part 1: General adult patient care

This is a full-time residential module. Much of this component involves learning advanced clinical skills and the associated background theory. Some new pharmacology, cardiology and pathology is included, but many themes build upon the learning of all prior modules and are covered in much greater depth.

Part 2: Trauma care

This (approximately) one-week, full-time residential module covers all aspects of trauma care in adults and is taught by Pre-Hospital Trauma Life Support (PHTLS) Instructors, certified by the Royal College of Surgeons of England. It is comprised of lectures, taught skill stations and scenario based learning (practical and theoretical).

Part 3: Pre-hospital paediatric care

This (approximately) one-week, full-time residential module covers all aspects of emergency paediatric care and is led by Paediatric Education for Pre-hospital Professionals (PEPP) Coordinators, certified by the American Academy of Paediatricians. It is comprised of lectures, taught skill stations and scenario based learning (practical and theoretical).

Part 4: Pre-hospital obstetrics & gynaecology

This comprehensive module consolidates prior learning in emergency obstetrics and gynaecology and introduced new, more advanced themes. It is taught exclusively by registered midwives, and when available, gynaecologists and obstetricians. It is of a one-week, full-time duration and consists mainly of lectures and demonstrations.

Module 8: Work-based learning & reflective practice II (10 credits)

Part 1

This module is comprised of a four-week, full-time skills based clinical practice placement at a teaching hospital the principal aim of which is to provide practical experience in the application of all of the advanced clinical skills. The hospital environment provides rapid 'exposure' to a greater number of patients which would take an extended time in a pre-hospital setting. The student is provided with a training record booklet outlining the full range of skills for which they must provide evidence of competence and a learning journal. Placements include: two weeks in the operating department; one week in a cardiac care (CCU) and intensive care unit; one week in an accident and emergency and medical assessment unit. In addition to the learning journal and skills record booklet, students are also required to submit two cases studies (trauma

and cardiology) for which marks are awarded, which contribute to the students overall grade.

Part 2

This component of the programme involves workplace mentored learning for a period of between 48 and 160 hours during which time the student completes a learning and reflective practice journal (up to 1,000 words) based on the advanced care they have provided to patients whilst under supervision.

D Coursework & Assessment

In addition to attending the study days you will need to set aside time for private study including reading and completing coursework assignments. Although the tutor support is good you will also need to be fairly self-supporting. You will need to set aside about 10 hours to study each week and possibly a bit more when you have to research and write an assignment. For guidance, for a 10 credit course unit or the equivalent, you will be required to submit work totalling 2,000 words. The nature and length of individual assignments will vary from unit to unit. Assignments will consist of anything from between 2 and 20 questions and the mark distribution will vary between questions.

Assignments have well-defined parameters which are intended to encourage a 'focused' approach from students. The pass mark for each assignment is 40%. Details of the 'weighting' and grading for certificate and diploma courses are detailed in the University's 'Student Handbook: Certificates and Diplomas'.

Alongside the assignments there is a student centred workbook which must be submitted alongside the corresponding assignment. This workbook is formative but **MUST** be completed to show evidence that the module has been studied. This piece of work will not carry any marks, but will be read by tutors and if it is not deemed to have been completed to a good standard then the student will be required to resubmit.

Other assessment methods include: practice portfolios, learning journals, OSCEs for skills and scenarios, project reports and case studies, timed-unseen examinations and contributions to group work (revision projects), assessment of team working skills, viva voce examinations, a scientific poster presentation and in-class tests. Some assignments that contribute to the final grade may be carried out individually or in groups.

Students must pass a written test of 20 short answer questions similar in style to Part One of the module 2 - 5 assignments and Observed Structured Clinical Observations (OSCEs) before they can be admitted to Module 7. Four such tests will be planned annually: for details of dates please contact your training department. Module 7 includes the national Part 1 (end of week 4) and Part 2 (week 7) paramedic examinations set by the IHCD, details for which will be sent prior to your attendance on these modules.

During the end of the course there is a final written test based on 12-lead cardiology, cardiac pathology, thrombolysis and a variety of medical and trauma-based OSCEs.

E Teaching and Learning

This course will be taught by a team of professional tutors employed by the University of East Anglia. Tutors are experienced clinicians with higher education and teaching experience or qualifications and differing fields of speciality. Teaching will take place principally by flexible, online learning backed up with regular study days, lectures, practical sessions and work or observational placements. A range of teaching materials will be employed including hand-outs, videos, PowerPoint presentations and specimens. The distance learning modules (1 to 5) are comprised of specially written study guides and workbooks supplemented by core and recommended reading from a variety of publications. Students will be expected to undertake preparatory reading in advance of lectures, tutorials and practical sessions and in relation to coursework.

Tutorial support is principally via email, online and telephone but 'in person' contact either on a personal (individual) basis or in small groups may be arranged by some tutors or is available on request. Opportunities are provided for tutors and students to work together, discussing expectations and concerns, giving feedback and guidance on coursework and discussing course specific topics as required. Lecturers can also be approached for advice or information during study days. Peer support via email, study groups and telephone is also encouraged.

Every autumn, the Centre for Continuing Education hosts a 'Welcome to UEA Day', which is open to all Continuing Education undergraduate students. This provides a useful induction to the University for new (and current) students, and past experience suggests that it really does help students get the most from the Library and from their home WWW-link to the UEAs email system, virtual learning environment and the many internet-based resources on offer to students.

F Teaching Team

The Certificate of Higher Education in Emergency Medical Care is taught by a team of tutors including:

Simon Butler

Simon had a very successful career in the Ambulance Service for over 20 years before commencing his new profession as a science teacher in 2005. He trained as a paramedic with the former Cambridgeshire Ambulance Service before his promotion to various supervisory then operational management roles. He became a Tutor in 1993 and Clinical Training Officer in 1996. His final post was in senior management, leaving as Head of Clinical Education and Training. He is still registered as a paramedic with the Health Professions Council and maintains his registration by working on a part-time basis for the East of England Ambulance Service NHS Trust. Simon has been involved with the voluntary aid societies since 1984, playing an active role in member training and development for both the British Red Cross and St John Ambulance. He is currently a member of the Cambridgeshire St John Ambulance County Training Team. Simon is dedicated to a biomedical science-based approach to education for paramedics as he firmly believes that this is the basis for sound clinical decision-making and confidence in professionalism. To this end, he devised the very successful Certificate in Emergency Medical Care course in 2002 with the University of East Anglia, which now has over two hundred graduates. He is currently Senior Lecturer and Academic Advisor to that programme. Simon has a B.Sc (Hons) in Natural Sciences (biochemistry, cell & molecular biology). He has a keen interest in toxicology and pharmacology and is currently working towards a master's degree in biomedical science. Simon holds the Post Graduate Certificate in Education with Qualified Teacher Status. He is a professionally qualified member of the General Teaching Council teaching general science and ICT at key stage three and biology and chemistry to GCSE. He is currently Lead Teacher for the new Society, Health & Development 14 – 19 diploma in the Ely, Soham and Witchford area. He is also Head of Year for the Class of 2013 at Soham Village College. Simon lives in Cambourne in South Cambridgeshire, England with his partner and his Patterdale Terrier, Ernie. He has a keen interest in computing, aviation, Renaissance literature and history. When he finds the time he goes cycling and swimming. He is quite a good cook and likes real ale spending lots of time cooking for friends! Simon loves music and has pretty obscure tastes: Renaissance and Victorian sacred music; the romantics, especially Wagner and Berlioz; golden oldies (especially the 50s and 60s), some heavy metal and punk rock! He also

confesses to have once played the flute (badly) and the piano (even worse)!

Louise Staffell

Louise began her career as a Biomedical Scientist, during which time she achieved a B.Sc (Hons) in Microbiology and a Postgraduate Diploma in Biomedical Science. In a change of direction she joined the East of England Ambulance NHS Trust in 2005 and gained HPC Paramedic registration in 2007. Currently she is studying a further degree in Health Science with the Open University so is sympathetic to the trials of studying alongside work. Louise is involved in the voluntary sector within her local hospital, and in spare time loves walking, travelling and socialising.

Anthony Kitchener

Ant currently works for the East of England Ambulance NHS Trust within Primary Care, currently completing his training for the Emergency Care Practitioner programme at the University of East Anglia. Previously Ant worked as an operational paramedic in Peterborough after originally completing a Foundation Degree in Paramedic Science and a further Bachelors Degree in Applied Paramedic Sciences at the University of Hertfordshire.

Ant has strong ties with the voluntary aid societies and enjoys his voluntary work as a training manager and youth worker. Previous careers includes work within a hospital pharmacy team and as a customer services clerk, but has stayed within the NHS for the past six years.

Ant has been a tutor for the Certificate programme for groups 11 and 12 and is a keen supporter of Paramedic development.

Jonathan (Jonty) Dean

Jonty Dean joined the East of England Ambulance Service in 1998 and worked for 3 years in the control centre. He completed his Emergency Medical Technician training course in 2001 and shortly after enrolled on this programme, qualifying as a paramedic towards the end of 2003.

Following his completion of an access to medicine course in 2005, he enrolled on the University of East Anglia medical degree programme and is currently in his fourth there. Jonty maintains his skills as a Pre-hospital Care Practitioner by working as a staff responder in the Waveney area. When time allows he enjoys playing football, having a go at just about any racket sport, kitesurfing and loves to travel both locally and abroad.

Ashley (Ash) Richardson

Ash's career in the Ambulance Service started in 2003 when he enrolled on and subsequently completed the Foundation Degree in Paramedic Sciences at the University of Hertfordshire working in conjunction with the East of England Ambulance Service. Ash is currently working as a Paramedic in a seconded position of Clinical Team Leader at Peterborough Ambulance Station and is in the process of developing his career further into Education and Training. He is particularly interested in supporting and mentoring others to develop themselves professionally throughout their career which will in turn allow the profession of Paramedics as a whole to move forward, developing constantly to meet the needs and expectations of the National Health Service. Outside of work Ash likes to keep fairly active maintaining a good down to earth easy going personality. As for the future, watch this space!

Drew Welch

Drew has been involved in pre-hospital care for around 12 years in a number of capacities. His ambulance experience began in 1995 in the voluntary aid societies and has since worked in the private sector. He has been involved in training and education since 2002 and has devised and run a number of courses designed for voluntary aid society members and emergency medical technicians. He is also involved with both formal and work-based teaching of medical undergraduates at the University of East Anglia. He attained his combined Bachelors degree in Medicine and Surgery (MBBS) in 2007 at the University of East Anglia and is currently employed as a foundation year 1 house officer in otorhinolaryngology (ears, nose and throat surgery). In 2006, he spent eight weeks in the Liverpool regional trauma centre near Sydney, Australia as part of his medical training.

Drew has been involved in the Certificate in Emergency Medical Care course for the last four years and regularly lectures on basic sciences and applied clinical practice. To keep his pre-hospital experience up-to-date, he regularly undertakes ambulance work alongside paramedics and recently undertook an observation shift on the East of England Air Ambulance. He currently holds the PHTLS qualification.

When not at work, Drew is often seen in the Fat Cat public house in Norwich. His other interests include playing the piano and keeping (reasonably) fit in the Norwich sports park.

Ari Ercole

After a PhD and research into condensed matter physics at Trinity College, Cambridge, Ari became involved in both medical computing and

also clinical medicine. As well as teaching on a variety of medical courses, Ari currently works as an Anaesthetic Registrar at Addenbrooke's Hospital, Cambridge. He has a particular interest in intensive care medicine and clinical research. Ari has an active interest in out of hospital medicine and holds the PHTLS and ALS instructor qualifications as well as providing medical cover on the East of England Ambulance Service's helicopter. He has had a long involvement with the teaching of volunteers in St John Ambulance and plays a key role in the Cambridgeshire Clinical Team as Deputy Medical Officer.

Jemma Varela

Jemma joined the Trust in 2001, completing her Foundation Degree in Paramedic Science at the University of Hertfordshire, where she continues to study further modules towards her honours degree. Jemma is a Paramedic based at Ipswich Ambulance Station. She currently facilitates continuing professional development courses and teaches on Technician and Paramedic courses for the East of England Ambulance NHS Trust. Her particular area of clinical interest lies within critical care. To this end she is a member of the MAGPAS team in Cambridgeshire working as part of a medical team. She completed her Diploma in Intermediate Care from the Royal College of Surgeons of Edinburgh last year. In addition to the B.Sc (Hons) at the University of Hertfordshire, she is also studying for an honours degree in critical care at the University Of Essex. Jemma's hobbies include backpacking holidays and socialising with friends. She looks forward to using her current experience as a student to help her students through this programme.

Daniel Phillips

Dan Joined the NHS in 2001 as a Health Care Assistant in trauma and Orthopaedics. Alongside this he achieved 4 A-levels in chemistry, biology, physics, and general studies as well as a key skill level 3 in communication. In 2003 he was accepted as a full time undergraduate at the University of Hertfordshire on a foundation degree in Paramedic science. He subsequently qualified as a technician in 2005 and ultimately a Paramedic in 2006. Having studied academically for his qualification gives him good insight into the process of higher education and the ever changing aspects of Paramedic education in the UK. He is currently based at Ipswich ambulance station. He is particularly interested in education and it is something close to his heart having been one of the first to experience the "up's and downs" of Higher education route within the ambulance service. Outside of work he maintains an active social life and his laid back manner means he is very approachable and is always willing to give sound clinical and academic advice

Lucas Hawkes-Frost

Lucas is a Paramedic and Clinical Tutor working in the Suffolk locality of the East of England Ambulance Service. Originally from western Canada, Lucas has been involved in the provision of pre-hospital care in a variety of roles, ranging from remote area medical cover to search and rescue. Lucas joined the trust in 2004 and two years later completed his Paramedic qualification. He has since held several operational and training positions within the trust, including Clinical Team Leader and operational mentor/assessor. Lucas has a university background in Physical Geography (Eng) and studied at the Universities of Victoria, Canada and East Anglia. In 2007, Lucas completed a professional adult teaching qualification with a view to become more involved in the provision of education within the trust. In addition to this, Lucas has undertaken a further qualification in managing learning and development, and is currently awaiting his IHCD Ambulance tutor accreditation. Lucas is actively involved with the development of new staff, and believes strongly in the new higher-education pathways available to new paramedics. Lucas teaches on both Paramedic foundation and Paramedic skills courses at the Hellesdon training centre with a special interest in pharmacology.

Michael Stewart

Michael is a trainee Emergency Medicine Doctor working in the North-West of England. He has been involved in the provision of pre-hospital emergency care for the last ten years, with a particular interest in resuscitation training for medical professionals and the public. He has been a tutor on the certificate course since the fifth intake and regularly provides lectures in medical physics and patient clerking (advanced clinical assessment). Before graduating from Cambridge with a medical degree, he studies physics at 'the other place': on a good day he even remembers some of it.'

Ben Clayton

Born shortly *after* Simon joined the ambulance service, Ben is a medical doctor currently practicing acute medicine at the James Paget Hospital. He has 10 years experience of pre-hospital and ambulance work in the voluntary and private sectors, for which he also provides regular training. His additional training experience includes work for the Royal Life Saving Society, the British Heart Foundation and the East of England Voluntary Aid Society training programme, as well as teaching medical students from the UEA Medical School.

His clinical interests are acute medicine, trauma care, resuscitation and medical education. Outside of work Ben's interests include exercising, climbing, cider, whiskey and Xbox. His ambitions are to travel the world and remain employed.

David Monk

David's background stems from a longstanding involvement with the voluntary aid societies. Joining the East of England Ambulance Service NHS Trust at 20, David was one of the first members of the Trust to complete the UEA Certificate of Higher Education in Emergency Medical Care. He is County Ambulance Officer for St John Cambridgeshire playing a key role at senior management level. As well as teaching the voluntary aid societies, he has been involved with the delivery of post proficiency training in his previous role as a Clinical Field Operations Trainer. As part of his role for the UEA he is a principal tutor on module seven of this course (paramedic skills development phase). David has previously been a Clinical Field Operations Manager based in Cambridgeshire for both A&E and Primary Care, he currently holds a senior NHS management position as General Manager for A&E and Primary Care Services in Cambridgeshire. Holding a B.Sc degree in Life Sciences and Health Service Management, David has just completed a Professional Certificate in Communication in Health & Social Care and commences a Masters of Public Service Administration in 2009. David believes very firmly in the use of technology in the out-of-hospital care environment and was one of the principal leads in the introduction of electronic patient records.

Chris Jeanes

Chris is currently in his fourth year of the MBBS course at UEA and has particular interest in haematology. He received a bachelors degree with honours in biochemistry from the University of Southampton in 2003 and carried out research into proteins involved in haemoglobin biosynthesis whilst there. Chris is currently involved with research into different approaches to new techniques in measuring airway function with the respiratory department at the Norfolk and Norwich University Hospital. Chris is an active member of the surgical society at the UEA and has a current role as anaesthetics representative, which has involved arranging shadowing opportunities for UEA MBBS students with the anaesthetics department and arranging emergency airway teaching and other lectures from senior anaesthetists. .
Chris is currently learning to speak Italian and travels there as often as possible.

Darren Johnson

Originally from Belfast, Darren left school at sixteen with basic qualifications and held various working positions and travelled including living in America for three years. Wanting to return to education he later undertook a Certificate in Foundation Studies in Biology/Sciences as part of an Access to Nursing Course. He passed this course with High Commendation and duly secured a place on the BSc Hons Nursing Science Degree at Queens University, Belfast. After completing his foundation year training he decided to transfer to the newly created Foundation Degree in Paramedic Science, which he completed in 2006 with commendation. He is currently in his final year of the part time BSc Hons Paramedic Science with Emergency Care Practice at the University of Hertfordshire whilst working fulltime as a Paramedic for the East of England Ambulance Service, Essex Locality, Rayleigh Ambulance Station. Having been in higher education for quite a number of years, he states he can relate to the students undertaking the Cert EMC course as he has had to and still is going through the same processes and hopes to bring this experience to help students on the course. During his first year with the Ambulance Trust, following a sporting accident; he was on secondment to Ambulance HQ where he undertook various roles within Clinical Governance, Clinical Audit and Health and Risk Management Departments. He also achieved the Clinical Audit Certificate whilst there. Darren has held the City & Guilds Trainer C23, C24 and Assessor D32 Awards for approx 10 years and more recently has accepted a place on the St John Ambulance County Training team in Essex as a subject verifier. Outside of work Darren holds a black belt in Judo and is also a Judo Club Coach holding the National Governing Body Club Coach Award. In his spare time Darren likes to keep fit and jump out of planes.

David Francis

David Francis was among the first cohort to complete the Foundation Degree in Paramedic Science at the University of Hertfordshire in conjunction with Essex Ambulance Service NHS Trust which he joined in 2002. During the course he worked at all levels in the ambulance service including patient transport services, in the emergency operations centre and of course on the frontline in the accident & emergency service. In December 2005 David gained professional registration as a paramedic and continues to work full-time on an ambulance based at Rayleigh Ambulance Station in the Essex locality of the East of England Ambulance Service NHS Trust. In the following year David completed the clinical audit course and rejoined the University of Hertfordshire in 2006 to complete a BSc (Hons) in Applied Paramedic Science which he graduated from in 2008. David has completed a practice placement educators module and sits on the JRCALC Clinical Guideline

Development Committee. David plans to undertake a masters degree in 2009.

Samantha Dick

Sam joined the ambulance service in 2002 when she enrolled on the University of Hertfordshire Foundation Degree in Paramedic Science. After completing these studies and qualifying as a Paramedic in 2003, Sam went on to complete an BSc Honours Degree in Applied Paramedic Science at Hertfordshire. This was completed earlier this year and she is now keen to use these experiences to help others through their educational courses. Sam has acted as a mentor at Diss (her base station) and has also 'acted-up' on secondments as Clinical Team Leader. She is keen to develop her own skills and knowledge further and support others in their own professional development. She hopes that these recent experiences of studying will help her support her students

Simon Standen

Simon began his career in emergency nursing, having graduated from Brunel University in 1998 with a Diploma of Higher Education in Adult Nursing. Simon Joined the London Ambulance Service in 2001 on a fast track programme, qualifying him as a paramedic. Simon has maintained clinical practice within both professions, working both as a senior charge nurse in A&E and having progressed through the ambulance service initially as a paramedic, then completing his emergency care practitioner course. He now works within the East of England Ambulance Service NHS Trust as a paramedic with critical care skills and is assigned to the pre-hospital critical care and retrieval service. Simon has held a variety of positions within the ambulance service, including acting clinical team leader and duty operations officer. He is a visiting lecturer-practitioner at Kingston University, St Georges Hospital Medical School, teaching on the paramedic foundation degree and the emergency care practitioner programmes. Simon is a Clinical Field Operations Trainer, a Resuscitation Council Instructor for Advanced Life Support training, instructs on Paediatric Education for Pre-hospital Personnel courses. He achieved the Diploma of Immediate Medical Care (RCS, Ed. in 2007 as well as completing his Helicopter Emergency Medical Services crew member training. In 2006, Simon contributed as a chapter author and peer reviewer to the release of the first UK edition of *Emergency Care in the Streets*. He is undertaking a BSc in Health & Social Care management with the Open University. He remains a volunteer with St John Ambulance, London District, which he has done for the past 22 years. Simon enjoys outdoor pursuits, theatre and spending time with friends outside of work.

Erica Towner

Erica is Director of Lifelong Learning and a Senior Lecturer within the School of Education and Lifelong Learning with responsibility for teaching developments and the continuing education programme. She has many years experience of teaching aspects of biological science in higher education and has research interests in lifelong learning include widening participation in higher education and environmental education. She also works extensively with partner organisations on the development and evaluation of Foundation Degree programmes. She works closely with the tutor team and Course Director and is a principal moderator of students' coursework and tutor feedback.

G Award of the Certificate

The Foundation Certificate will be awarded to those who:

1. Have attended **all** of the study days.
2. Attained a satisfactory standard and satisfied the examiners for every module assignment (1 – 5).
3. Amassed 50 credits from the core modules as described above and 10 credits from any other course offered by the Centre for Continuing Education (those progressing to the full Cert H.E. do not have freedom of choice and must complete Module 6).
4. Entry to Module 7 is dependant upon passing a written test and practical OSCEs.

The Certificate of Higher Education will be awarded to those who:

1. Have attended all of the study days and the MAU secondment as part of Module 3.
2. Attained a satisfactory standard and satisfied the examiners for each module (1 – 8 unless APL has been awarded).
3. Amassed 120 credits from the core modules as described above.
4. Passed the Module 7 and end of course examinations and OSCEs.

H Essential Reading

From 2008 the texts listed below, together with a study guide and workbook for each module, constitute the largest component of the teaching and learning of the course. Evidence of study of these books is required before a module can be successfully completed (such evidence is submitted as part of the assignments). You must purchase your own copy of these books or make arrangement for their long-term loan.

Module 1:

Komaromy, C (ed) 2001 *Dilemmas in UK Health Care* Open University, Milton Keynes. ISBN 0335 20841X

Modules 2 to 6:

Caroline, N. L. (2007) *Emergency Care in the Streets (International Edition)*, Sixth Edition, Jones & Bartlett Publishers International, London.

Tortora, G., Derrickson, B. (2008) *Principles of Anatomy & Physiology (International Edition)*, Twelfth Edition, Wiley International, London.

Neal, M. J. (2005) *Medical Pharmacology at a Glance*, Fifth Edition, Blackwell Publishing Ltd, Oxford.

Gray, D., Houton, A.R. (2008) *Making Sense of the ECG*, Edition Three, Hodder Arnold Press, London. ISBN 9780340946886.

Joint Royal Colleges Ambulance Liaison Committee (JRCALC) *UK Ambulance Service Clinical Practice Guidelines (2006)* (eds. Fisher, J. D., Brown, S. N., Cooke, M. W.). ISBN 1-84690-060-3. This is available as a free internet download.

The following books may provide useful and interesting further reading but are not an essential component of the course:

Reid, R. L., Rubin, P. C., Whiting, B. (2000) *Lecture Notes on Clinical Pharmacology*, Edition 5. Blackwell Science, London.

Saunders, P. (2000) *Mosby's Paramedic Textbook*, Edition 2. Mosby Publishing, Inc, St Louis.

Woodward, V., Bates, K., Young, N. (2005) *Managing Childbirth Emergencies in Community Settings*. Palgrave Macmillan, Basingstoke.

Modules 7 & 8

As Modules 2 to 6, and

Paediatric Education for Pre-Hospital Professionals (2000), (American Academy of Pediatrics). Jones & Bartlett Publishers, London.

Pre-Hospital Trauma Life Support Manual (2002), (Ed. McSwain, N.E. Jnr). Edition 5. Mosby Publishing Inc, St Louis.

For interest, reference or further reading

Kumar, P., Clarke, M., (2002) *Clinical Medicine: A Textbook for Medical Students & Doctors*. Edition 5. W.B. Saunders, London.

Merriam Webster's Medical Dictionary – Merriam-Webster Inc (or any medical, not nursing, dictionary)

Turner, R., Blackwood, R. (1997) *Lecture Notes on Clinical Skills*, Third Edition. Blackwell Science, London.

I Useful Websites

'Surfing the Web': Some Useful websites for Certificate Students. Other sites will be recommended during the course. *Beware of using internet resources in assignments!*

Pubmed. The most valuable website and can be safely used in TMAs (URL changes often so you may need to do a search).

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>

University of East Anglia intranet (registered students and staff only):

www.uea.ac.uk/intranet

Mosby's Paramedic Textbook website. Interactive site with learning aids. Lots of links that give you direct access to hundreds of active websites that are keyed specifically to the content of the recommended book for this course:

www.mosby.com/MERLIN/Sanders

BioMedNet – a handy site for biological and medical science information. Free subscription required:

www.bmn.com

ChemFinder.com – a useful site which lists every chemical compound and drug, it's properties and shows a molecular structure. Free but slow!
<http://chemfinder.cambridgesoft.com>

British Medical Journal e-website:
www.bmj.com

British National Formulary. An excellent resource which includes an electronic searchable version of the current BNF:
www.bnf.org

Department of Health Website on patient consent. A good resource for medical practitioners of all grades:
<http://www.doh.gov.uk/consent/>

Is your paramedic a real one? Check them out by using the HPC searchable website:
<http://www.hpc-uk.org/>

An emergency medicine website in the US which has some useful links and resources:
<http://www.emedicine.com/emerg/index.shtml>

The Joint Royal Colleges Ambulance Service Website. Includes free downloads including the JRCALC Clinical Guidelines and updates:
<http://www.jrcalc.org.uk/>

McGill University Virtual Stethoscope webpage. Listen to the breath and heart sounds of real patient online. A good resource for improving your patient assessment skills:
<http://sprojects.mmi.mcgill.ca/mvs/mvsteth.htm>

Scottish National Poisons Information Database (Toxbase). Free subscription required. Why not sign up your station?
<http://www.spib.axl.co.uk/toxbase/toxbaseindex.htm>

College of Pharmacy and Allied Health Professions, St John's University, New York City. A useful drug pharmacology website:
<http://facpub.stjohns.edu/~yoburnb/pages/dropdowncurrent.html>

Resuscitation Council, (UK). Incorporate the latest resuscitation guidelines and amendments into your clinical practice. Downloadable PDFs:
<http://www.resus.org.uk/pages/guide.htm>

The Lancet interactive:
<http://www.thelancet.com/>

The Merck Manual. Excellent searchable medical journal:
<http://www.merck.com/pubs/mmanual/>

An essential guide for getting good marks in this guide to Harvard referencing:
<http://www.shef.ac.uk/library/libdocs/hsl-dvc1.pdf>

J Structuring and Presenting Written Work: A Style Guide for Certificate Students

Important: The anonymity of patients must be upheld in all of your writings, including your clinical audits. This is not simply a matter of keeping an individual's name and/or address confidential. If a patient or client can be identified as the result of any information you give, this is considered a breach of confidentiality and may incur penalties. This can be quite subtle. For example, if you identify a patient as being a male of Asian descent living in a given road, he would be identifiable if he was the only Asian male living there! The best safeguard is to alter names, addresses and the locations or finer details of incidents and the patients involved. As long as the gender, age and circumstances are accurate, and the patient cannot be identified, you should be safe!

1. Assignments

Please read this section prior to answering the essays that form part of your assignments. You may refer to these notes before, during and after writing your essay.

Each assignment question begins with brief notes that give: an overall view of the objectives to which the question refers; guidance on how to structure your answer; and an idea of the desired content. These notes are very important and should be studied carefully as they help you to plan your answer. You should also take into consideration your tutor's comments from previous assignments (if any).

You should always plan your answer before 'writing it up'. Ensure that your answer:

- sticks to the point

- covers all relevant points
- demonstrates that you understand the concepts that you are discussing
- includes appropriate references in support of your comments
- includes evidence that you have studied the course materials.

Most frequently students lose marks for:

- failing to read and interpret the question carefully
- failing to cover all of the relevant details
- including irrelevant material in preference to the course texts
- wandering off the point of the question
- giving unsubstantiated opinions
- not explaining the answer fully
- failing to double check that all of the points in the question have been covered.

2. Writing an essay

There are five stages to producing a good essay:

1. Examine the question;
2. Organise the relevant material (books, papers, journals, course texts);
3. Draw up an outline plan;
4. Produce a rough draft (time permitting);
5. Write up your answer.

Reading the question

Read the question a few times. Ask yourself: What is the question asking? You may decide to underline the key points of the question. As a rough guide:

Compare: show similarities or differences between two or more things and perhaps say which is better

Contrast: look for differences between

Define: give the meaning of (as if you were writing the entry for a dictionary)

Demonstrate: show how and prove with examples

Describe: write in detail about a given subject in the form of a 'word picture' so that the examiner can visualise from your description

Discuss: describe the important aspects making sure that, if relevant, you put both sides of an argument

Explain: give a clear account of, and give reasons for

Illustrate: draw diagrams, charts or tables in support of your answer

- List: provide a series of short statements or items without explanation
- Outline: indicate important aspects only, omitting minor detail
- Relate: show connections and similarities between
- State: write a brief statement, usually in only one or two sentences
- Summarise: bring together the main points

Organising relevant material

When you have discovered the main objective of the essay, write down the main points you want to cover, then make a 'shopping list' and use it to get together your references. You could mark relevant pages in the texts using labels or a bookmark.

Making a plan

Using the points in your shopping list, make an essay plan. Include the major points and note the references and page numbers. As you are doing this, or afterwards, write in subsidiary points that you may wish to make in passing. These are often useful in backing up your main argument.

- decide on the main points you wish to discuss
- put these in an appropriate order
- write in the sub-points, examples and illustrations that support your main points
- note places where an illustration might help clarify a point
- think of an interesting and appropriate introduction
- think of a 'punchy' and appropriate conclusion to end your essay with.

Essay plans are usually untidy, rough notes that take up a lot of space (so that you can include things retrospectively). When you have made your plan, make sure that your proposed answer is relevant to the question and doesn't go off the point. Make sure that you are covering things in a sensible order. Make sure that your conclusion doesn't leave your argument 'up in the air'. You might decide that your conclusion should summarise the main points. Introductions should be less than five sentences.

Producing a draft

You may decide to do a rough draft (if you have the time). It is a good idea to go back to your draft after a while to see if your opinions and ideas have changed before writing up your answer. Drafts are useful because you can:

- change the order of the points (easy if you use a word processor)
- check the length of your answer

- add or remove quotations if you are under or over length
- add or remove examples if you need to
- make sure that you have explained yourself well and unambiguously
- delete repetitions
- make sure that references are listed correctly.

Writing up the essay/answer

You should now produce a final draft. Points to bear in mind are:

Abbreviations (for example ECG) are acceptable but you should write the full term the first time they are used followed by the abbreviations in brackets. You could lose marks if the examiner doesn't understand the abbreviation. So, using this example I might write: An electrocardiogram (ECG) can be a useful diagnostic tool'. In subsequent cases I will only state ECG.

Definitions: words or phrases should be defined unless they are in common use. It is wise to define technical terms that the examiner might not be familiar with.

Diagrams and tables: should be used where appropriate and be labelled correctly (in the way that they are in your course material). If you wish to refer to a diagram in one of the course texts (providing that the examiner will have easy access), you may refer to them instead of drawing a table or diagram. For example, '...as Figure 6.1 in Unit 9 shows'.

Use *paragraphs* to split your work into manageable 'chunks' as this makes it easier to read. As a rule, each paragraph should cover one particular theme or point.

Objectivity: in scientific writing, essays need to be as objective as possible (i.e. factual not opinionated). If you are considering using a personal view or anecdote to illustrate a given point or add weight to factual content, ensure that it is backed up with hard evidence.

Quotations and references: make sure that these are listed correctly.

Subheadings: are permissible in examination questions and the answers to technical questions, but should be avoided in essays. An essay should be a single piece of coherent prose. Subheadings tend to make it difficult for parts of the essay to relate to each other.

If you have a spell-checker, please feel free to use it! Although you won't get marked down for everyday words that are misspelled, you will lose marks if technical or professional terms are not spelled correctly. If you

don't have a computer spell-checker, use a dictionary or the course texts.

3. Referencing, quoting and plagiarism

Referencing

It is essential that you state your references in the text and at the end of your work. Only include arguments from published documents in your work. What an individual says, even if s/he is a leading professional, is not an acceptable reference. For example, we will not consider your argument valid if you write things such as, 'Dr Pennyfarthing at Addenbrooke's CCU states that aspirin is of no benefit to MI patients'. However, if Dr Pennyfarthing's research has been published in the British Medical Journal, for example, it *might* be a valid reference (providing that it is quoted properly).

There are two accepted academic conventions for referencing work: the Harvard method and the Cambridge (Traditional) method. For this course the Harvard method must be used for your written submissions.

The Harvard Method

Rule 1

If you refer to a discussion or statement in a published work, including the course materials and recommended reading, you should identify the reference at the end of the sentence in parenthesis. This is an abbreviated form of reference, known as 'short references' and the standard format is: (name of author or editor, date of publication). For example, 'Coronary artery disease is a major cause of death in the Western world (Caroline, 1995)'. If the reference includes more than one author, name the editor or leading author followed by *et al* in italics, then the year (*et al* is Latin for 'and others'). For example, 'Recent evidence suggests that the incidence of coronary heart disease is declining in recent years (Tortora *et al*, 1993). If you refer to a course book, you should state the unit number and page number. For example, '(Unit 9, Figure 6.1, p.47). Be careful that you put your punctuation marks exactly as shown.

Rule 2

You should always include a reference list at the end of your work (long references) *in alphabetical order according to author surname*. Make sure that if you quoted abbreviated references in the main body of your text, the full reference is stated in this list. The second and subsequent lines must be indented and the punctuation, use of Roman text and italics must be exactly as shown in the examples below.

Papers/articles in journals

Boyd, I.L., Arnould, J.P.Y., Barton, T. & Croxall, J.P. (1994) Foraging Behaviour of Antarctic Fur Seals During Period of Contrasting Prey Abundance. *Journal of Animal Ecology*, **63**: 703 – 713.

If your reference is a leaflet:

Barker, D.J.P. (1992) *Fetal and Infant Origins of Adult Disease*, Tavistock Press.

Reports

Royal College of General Practitioners (2001) *Annual Report 2000: The Weekly Returns Service*, Birmingham Research Unit of the RCGP, Birmingham.

Course Booklets or those as part of series

Author evident

Butler, S. J., (2002) Certificate in Emergency Medical Care: Booklet for Module 3 *Clinical Practice II*, East of England Ambulance NHS Trust, Norwich.

Editor evident

MacQueen, H. (2001) (ed.) S204 Biology: Uniformity and Diversity, Book 4 *Microbes*, The Open University, Milton Keynes.

Neither editor nor author evident

SK220* Human Biology and Health (1997). Book 3: *Maintaining the Whole* (eds. Saffrey, J. and Stewart, M.), The Open University, Milton Keynes.

*If course does not have a code, simply omit this and start with the course title.

Books

Tortora, G., Grabowski, S. (1993) *Principles of Anatomy and Physiology*, Edition 7. Harper Collins, New York.

Wilson, K.J.W., Waugh, A. (1998) *Anatomy and Physiology in Health & Illness*, Edition 8. Churchill Livingstone, London.

Internet references

Beware of validity!

Report pages

Public Health Laboratory Service (2002) *CDR Weekly Report 12*.
<http://www.phls.co.uk/publications/cdr/archive02/News/news0702.html#GI2001>
[Accessed September 2002].

Paper in/as part of internet resource

Plowman, R., Graves, N., Griffin, M., Roberts, J. A., Swan, A. V., Cookson, B. D. and Taylor, L. (2000) *The Socio-economic Burden of Hospital Acquired Infection*, Public Health Laboratory Service, London.
<http://www.doh.gov.uk.haicosts.htm>
[accessed September 2002].

Quoting

As a general rule, you should always try to express things in your own words. This shows that you understand the subject or area under discussion. ***Rearranging words in sentences does not show you understand the subject matter and is still plagiarism!*** However, sometimes something is expressed so well or eloquently by another individual or author, that to change it would be a shame. In these cases you may choose to add a direct quote. You must put your quote in “speech marks” and reference it at the end of the sentence. For example, “No patient is dead unless they are warm and dead” (Caroline, 1995).

You will get marked down if you include too many direct quotes or if you use them inappropriately as this may be evidence of laziness or lack of understanding of the subject matter.

Plagiarism & collusion

Plagiarism is when you copy someone else’s work or words and ‘pass them off’ as your own. This could be copying the work of another student (in other words cheating), or copying out sections of a text word for word or by simply changing the words around. Unless expressly stated, assessable components of the course such as assignments, portfolios, learning journals and case studies should not involve collusion with others. Most tutors have read the same materials you have read and so

will spot plagiarism and collusion with ease. When marking assignments similarities in student's submissions are also very easy to detect. **The UEA, like many other higher education institutions use antiplagiarism software such as 'TurnitinUK'**. All universities, colleges and institutions consider plagiarism to be a serious offence and might not give a warning before taking action.

References for this section

This document was adapted from an original copyright text with kind permission of the Open University:

Science Supplementary Material (1998) *SK220 Introduction and Guide*, SUP 372927, pp. 5 – 10, The Open University, Milton Keynes.

4. Presentation

4.1 *Word-processing*

From 2008, all assignments will be submitted online. The marked script will be returned to you by your tutor. An unmarked copy will be retained by the Centre for Continuing Education for moderation purposes. All work must be completed using Microsoft Word (2003 version or later). As a registered University student you are eligible to use the facilities of the Computing Centre at UEA, including the Help Desk service which can assist or provide advice about word-processing packages and all forms of computer software and hardware. Most modern packages can provide a very high standard of presentation. Your assignment document must not exceed 2 megabytes.

4.2 *Pagination*

- i. Completed work should have properly numbered pages with a header that shown your name and assignment number. Illustrations, tables, graphs etc. should be scanned in and properly integrated within the sequence of pagination if this is possible.
- ii. Page numbers should be placed at the upper right corner or centre bottom of each page.
- iii. Your work must be double-spaced (paragraph feature in Word) **except your references**, which must be single spaced with the second and subsequent lines indented.

4.3 *Title page*

Each piece of coursework should carry the following information:

- Your name & email address
- The exact title of the essay/project (not in quotes)
- The title of the award for which you are studying (i.e. Certificate of Higher Education: Emergency Medical Care or Certificate of Continuing Education: Emergency Medical Care)
- The name of the department in which you are registered (i.e. The Centre for Continuing Education)
- The names of the Course Director and your tutor
- The date submitted (Day, month and year)

4.4 Assessment feedback form

From Group 11 this will be in electronic form (an Edexcel spreadsheet) and will be initiated by tutors.

4.5 Margins

These should be 3 cm at the top, bottom, left & right-hand sides of each.

5. Study Skills and Academic Writing Guides

Frank, S., (1998), *Study Secrets*, Backpack Study Series

Northedge, A., (1990), *The Sciences Good Study Guide*, OUP

Peck, J., & Coyle, M., (1999), *The Student's Guide to Writing*, Macmillan Study Guides

Rose, J., (2001), *The Mature Student's Guide to Writing*, Palgrave Study Guides

Whale, J., (1984, 1985), *Put it in Writing*, Dent paperback

Last amended March 2009