

LTC11D073

Title: *New Fast Track Course proposal for MSc in Regional Anaesthesia/PGDip in Regional Anaesthesia.*
Author: Dr Steff Oosthuysen
Date: April 2012
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Agenda: LTC11A005
Version: Final
Status: Open

Issue

New Course proposal for the MSc in Regional Anaesthesia/PGDip in Regional Anaesthesia for 2012/13.

Recommendation

Recipients are invited to endorse the proposal which has been critically read within the Faculty and received approval.

Resource Implications

Apart from the website designer, Faculty (all RA enthusiasts) from NHS Trusts throughout the UK have volunteered to deliver this course.

Many of the resources needed will be electronic, Blackboard and web-based. Students will be expected to use computer equipment within their workplace or at home. They may access the 24 hour services at all NHS Trusts and ECB/Main Library too.

An E-learning Technologist supporting the setting up online resources and running the deliverance of on-line information (the VRE), data collection and posting the assessments.

Risk Implications

A preliminary regional (East Anglian) audit of Registrars studying RA revealed a significant interest in the MSc degree. More than 200 UK Anaesthetists apply to do the European Society of Regional Anaesthesia Diploma (ESRA) annually. This programme has been criticised for being of variable standard and costly over a 2 year study period. Nothing similar currently exists. Viability of this course requires 12 Students and the projected numbers are 20 students, therefore the risk is considered to be low.

Equality and Diversity

The Medical School operates an admissions policy that adheres strictly to the UEA's equal opportunities policy on admissions and access to the University's courses. Accordingly, MSc selection process aims to ensure that no applicant receives less favourable consideration on the grounds of gender, age, marital status, race, colour, disability, sexual orientation, nationality, ethnic origin, political or religious belief. We welcome applications from people with disabilities and work within relevant legislation and the guidelines offered by the General Medical Council, the Health Professions Council, the UEA Admissions Policy for students with a disability, UEA/partner NHS Trust Occupational Health and Human Resources

Departments, and the UEA Dean of Students office. We aim to achieve this by providing clear, accurate and transparent information regarding all of our admissions policies and processes. All recruitment, selection and marketing policies and procedures are agreed, conducted and reviewed in collaboration with service users and our partner Service Providers via the School Recruitment, Selection and Marketing Committee. The School's Director of Admissions, together with the School's Admissions Officer is responsible for ensuring that equality of opportunity is assured for all applicants and is accountable to the Head of the Medical School. The Recruitment, Selection and Marketing Group support the Admissions Officer in this work. The school's performance in relation to equal opportunities legislation and University policy is monitored continuously by the University's marketing and Communications Office and reported to the School via the School Executive Committee. Equal opportunities policies are monitored and reviewed annually via the School's Director of Admissions and the School's Disability Liaison Officer's annual Report to the School Board.

The course will aim to preserve and promote equality of opportunity for all students through its teaching, learning and assessment methods. It is also the case that the concepts of equality and diversity are embedded in the course content and explicit within the module Managing Yourself and Leading Others as well as within portfolio-based assessment activities. Where a student needs support or reasonable adjustments due to a disability the School has a system, linking with appropriate central University services and service provider partners, for ensuring this is achieved promptly and effectively. The Strategic Health Authority monitors a range of metrics including criteria related to equality and diversity in accordance with current legislation. This is reviewed quarterly and formally. Wherever possible within the learning and teaching strategy students are encouraged to work with as wide a range of their peers as possible to develop understanding of co-operation within a diverse population. A range of group work and assessment styles is employed within the teaching framework to ensure all students have the opportunity to succeed. The academic culture in the School encourages the on-going development and review of programmes to establish curricula that are inclusive of knowledge contributing to the subject area from an international perspective.

The School aims to create an atmosphere of learning that welcomes differences and encourages all staff and students to value diversity. We seek to ensure fair treatment for all students in accessing learning opportunities, teaching, assessment, support and welfare. This is achieved by using a wide variety of teaching, learning and assessment methods to meet the needs of a diverse student population. In addition all staff work in close association with the Dean of Students office and Occupational Health to provide individualised learning plans and support where needed. The use of a faith calendar is also used in planning the assessment strategy to ensure that these meet the diversity of students from a diverse range of cultural backgrounds can be accommodated as far as is operationally reasonable. There is careful monitoring of the student experience to ensure that any reported discrimination is followed up and staff regularly receive briefings and training on equality matters (e.g. within the NHS).

Timing of decisions

Further Information

Contact details for FMH: Robert Gray, LTS Co-ordinator, r.gray@uea.ac.uk

Background

This MSc Degree in Regional Anaesthesia (RA), the first higher degree qualification in RA in the UK, has the support of all the major academic and training organisations in the United Kingdom.

These are the Royal College of Anaesthetists (RCoA), Association of Anaesthetists of Great Britain and Ireland (AAGBI) and most importantly Regional Anaesthesia United Kingdom (RA-UK).

There has long been a vacuum or need for trainees to study Regional Anaesthesia (RA) as a sub-speciality as RA is the most popular sub-speciality in Anaesthesia. The effect of Modernisation of Medical Careers (MMC) and the European Working Time Directive (EWTD) on training has served as the tipping point why students would wish to do this degree course. The MSc in RA will play an important role in delivering a need to study RA in more depth.

This course offers a flexible, work-based study programme. The e-learning and distance learning format, using a Virtual Learning Environment (VLE), is an innovative way of delivering the subject material for this course. This is because modern Anaesthetic Students work in a fragmented shift system and “the time factor” is their biggest obstacle and problem. With this method of study, there is a great amount of flexibility allowing both students and their tutors to study and deliver this course. The VLE serves as a repository for all the students needs in terms of formal discussions, tutor interaction and access to the library to research subject material and to write examinations and tests.

The Practical Arm of the MSc in RA course will be delivered with the full support of RA-UK. RA-UK will help provide Regional Supervisors and Local Mentors to facilitate and oversee a system where students are supported to enhance their regional anaesthesia repertoire and ensure a good standard of RA practice. Students will be encouraged to keep detailed log books of blocks performed, and CUSUM scores of commonly performed blocks. Students will be given substantial discounts to attend courses “in the matrix of RA-UK approved training courses”. These include cadaver based courses and ultrasound guided regional anaesthetic courses. Because of the ease to record ultrasound guided blocks (and the general availability of ultrasound machines UK wide), these can be submitted to supervisors, mentors and other faculty for scrutiny and advice. In conjunction with RA-UK there will be an OSCE end of 2 year (or after 6 Modules) examination. This initiative, to ensure an excellent practical standard is to be achieved and maintained, is the first of its kind in the UK.

Discussion

Whether the course can be approved or not.

Rebecca Phillips (PLN)

From: Nicola Spalding (AHP)
Sent: 02 May 2012 12:29
To: Robert Gray (LTS)
Subject: RE: MSc Regional Anaesthesia

Hi

Yes I am happy with this given that Rosie and Debbie have reviewed it. Do you need me to print off and sign the fast track form then send to you?

N

Dr. Nicola Spalding EdD, MA, BSc(Hons), Dip COT
Associate Dean, Learning Teaching and Quality, Faculty of Medicine and Health Sciences
Senior Lecturer in Occupational Therapy
Address: The Queen's Building, University of East Anglia, Norwich Research Park, Norwich, Norfolk NR4 7TJ
Tel: +44(0)1603 593075 (Direct)
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PA: dawn.standley@uea.ac.uk, +44(0)1603 593447

From: Robert Gray (LTS)
Sent: Wednesday, May 02, 2012 10:25 AM
To: Nicola Spalding (AHP)
Subject: MSc Regional Anaesthesia

Dear Nicola, attached is the Programme Spec (Which has been critically read by Debbie and Rosie), Fast Track Approval form and LTS notification form (Which LTS need to have in order for the item to appear on the agenda).

Could you let me know if you are happy for this to go to LTC? If so, I can send it off for inclusion in the next meeting's agenda.

Many thanks,

Rob.

PRO-FORMA FOR NOTIFICATION OF NEW OR FAST-TRACK COURSE PROPOSALS

THIS FORM SHOULD BE COMPLETED ONCE A FACULTY HAS APPROVED A NEW COURSE PROPOSAL (INCLUDING FAST-TRACK)

Its purpose is to ensure that relevant Offices are informed of the approval of new course proposals, in accordance with the procedures for course approval, and that the Learning, Teaching and Quality Office can report to the Learning and Teaching Committee. Please answer the questions below and return (by email or by internal mail to: Secretary, Learning & Teaching Committee)				
FACULTY	FMH	SCHOOL	MED	
FAST-TRACK	X	NEW		
DEGREE AWARD (e.g. BSc/MA)	MSc/PGDip			
TITLE OF PROGRAMME	Regional Anaesthesia			
START DATE	2012/13	LENGTH OF COURSE	3 Years	
PROGRAMME SPECIFICATION ATTACHED	YES	X	NO	
(Please tick where appropriate)				
IS THIS THE TITLE OF AN EXISTING COURSE	YES		NO	X
IS THIS A CHANGE IN THE TITLE OF AN EXISTING COURSE	YES		NO	X
IF SO, WHAT IS/WAS THE COURSE CODE?				
DOES IT AFFECT ANY EXISTING COHORTS?	YES		NO	X
WHICH (please specify year of entry)				
HAVE THEY BEEN CONSULTED	YES		NO	
DID THEY ALL SUPPORT THE PROPOSAL	YES		NO	
Course Approved by:				
Faculty Associate Dean (LTQ)				
Faculty Learning, Teaching and Quality Committee				

RELEVANT OFFICE INFORMED (please note that course code has already been notified)			
Planning Office (Barrie Osborne)		MAS (Laura Carter)	LEARNING AND TEACHING OFFICE
LTQ OFFICE ONLY:			
Proposal added to report for next LTC meeting	YES		NO
Date of LTC Meeting			
Programme Specification loaded to website	Yes		No
Date Planning Office (PO) informed (if not already done so)			
Date Marketing and Admissions Services (MAS) informed (if not already done so)			

**PROGRAMME SPECIFICATION FOR
AWARDS MADE BY THE UNIVERSITY OF EAST ANGLIA**

SECTION A: SESSION: 2012_ to 2013_		
A1	Course Name	MSc in Regional Anaesthesia PGDip in Regional Anaesthesia
A2	Final Award <i>(e.g. BA/BSc(Hons)/ MA/MSc etc)</i>	MSc in Regional Anaesthesia PGDip in Regional Anaesthesia
A3	UEA Course Code(s)	
A4	UCAS Course Code(s)	N/A
A5	Professional Award <i>(if any)</i>	N/A
A6	School of Studies	MED

SECTION B: SUMMARY OF COURSE STRUCTURE AND FEATURES

B1 Summary

e.g. General statement about course structure, including special features such as placement opportunities, whether these are compulsory or optional; fieldwork; year abroad. Include any cross references to other relevant information such as Student Handbook and/or School/Faculty website.

This MSc Degree in Regional Anaesthesia (RA), the **first higher degree qualification in RA in the UK**, has the **support of all the major academic and training organisations in the United Kingdom**.

These are the Royal College of Anaesthetists (**RCoA**), Association of Anaesthetists of Great Britain and Ireland (**AAGBI**) and most importantly Regional Anaesthesia United Kingdom (**RA-UK**).

There has long been a **vacuum or need for trainees to study Regional Anaesthesia (RA)** as a sub-speciality as RA is the most popular sub-speciality in Anaesthesia. The effect of Modernisation of Medical Careers (MMC) and the European Working Time Directive (EWTD) on training has served as the tipping point why students would wish to do this degree course. The MSc in RA will play

an important role in delivering a need to study RA in more depth.

This course offers a **flexible, work-based study programme**. The e-learning and distance learning format, using a Virtual Learning Environment (**VRE**), is an **innovative way of delivering the subject material** for this course. This is because modern Anaesthetic Students work in a fragmented shift system and “the **time factor**” is their biggest obstacle and problem. With this method of study, there is a great amount of flexibility allowing both students and their tutors to study and deliver this course. The VLE serves as a **repository** for all the students needs in terms of formal discussions, tutor interaction and access to the library to research subject material and to write examinations and tests.

The **Practical Arm of the MSc in RA course** will be delivered with the full support of RA-UK. RA-UK will help provide Regional Supervisors and Local Mentors to facilitate and oversee a system where students are supported to enhance their regional anaesthesia repertoire and ensure a good standard of RA practice. Students will be encouraged to keep detailed log books of blocks performed, and CUSUM scores of commonly performed blocks. Students will be given substantial discounts to attend courses “in the matrix of RA-UK approved training courses”. These include cadaver based courses and ultrasound guided regional anaesthetic courses. Because of the ease to record ultrasound guided blocks (and the general availability of ultrasound machines UK wide), these can be submitted to supervisors, mentors and other faculty for scrutiny and advice. In conjunction with RA-UK there will be an OSCE end of 2 year (or after 6 Modules) examination. This initiative, to ensure an excellent practical standard is to be achieved and maintained, is the first of its kind in the UK.

SECTION C: EDUCATIONAL AIMS AND OUTCOMES

C1	<p>Educational Aims of the Programme (Include any distinctive/innovative features/route pathways)</p> <p>The key aim of this MSc degree course in regional anaesthesia is to enhance the knowledge and skills of (junior) Anaesthetists in the largest sub-speciality (RA) in a flexible way with the award of a postgraduate diploma after completion of 6 modules including the passing of the practical aspect of the course. Successful completion of a 15,000 word dissertation will make students eligible for the MSc in Regional Anaesthesia.</p> <p>Enhanced knowledge of RA fits in well with good anaesthetic practice by providing superior analgesia compared to opiate based methods. Expertly delivered RA plays an important role in all surgery and the absolute analgesia provided by RA techniques forms the basis of all enhanced recovery programmes within the NHS. Blocks performed in Day Procedure Units nationally allow patients early discharge post surgery and effective analgesia post-operatively. This once again, sits well with the DOH ambitions of a target of 75% of all surgical procedures country wide to be performed as day case or short stay procedures, just like the American models as a comparison.</p> <p>Therefore, in providing this programme, it is envisaged that a large pool of trainees and consultants will be developed, delivering high quality RA techniques which will support the DOH ambition and equate to significant savings within the NHS on overnight beds and a satisfied patient population.</p> <p>Some of the distinctive and innovative features of this course are;</p> <ol style="list-style-type: none"> 1. 1st E-learning Specialist Mastership degree in RA in the UK 2. Highly evidence based programme delivered by a Problem Based Learning (PBL) format 3. Assessment of Practical Skills providing a quality benchmark is a first in the UK 4. Highest qualification in this field in the UK and world-wide 5. Delivered by a UK wide eminent faculty of nationally recognised experts in the field (Barrie Fischer, Barry Nicholls, Nick Scott (president of RA-UK) to list a few faculty) and UEA 6. Use of innovative and cutting edge assessment tools including Script Concordance testing for assessing clinical reasoning and decision-making 7. Quality assurance by UEA, RA-UK and Royal College of Anaesthetists

C2 Course Outcomes	
<p>C2(i) Knowledge and understanding By the end of the course students will be able to demonstrate:</p> <p>1 Critical appraisal of a range of evidence to</p>	<p>Teaching/learning methods and strategies</p> <p>The teaching and learning strategy (and this applies to all sections below)</p>

<p>support effective clinical care</p> <p>2 In-depth knowledge of applied anatomy pharmacology and neurophysiology applied to practice in RA</p> <p>3 Advanced clinical reasoning and decision-making underpinned by a sound rationale</p> <p>4 Expertise in the aetiology and management of pain supported by critical analysis of current evidence</p> <p>5 Evaluation of a range of available assessment tools and interventions and effective application to practice</p> <p>6 Evaluation of a range of evidence to support effective practice in RA</p> <p>7 In-depth knowledge and understanding of methodologies for approaching and developing solutions to complex and challenging problems within own speciality</p> <p>8 Proficiency in meeting own learning needs and in enabling evidence-based education of others</p> <p>9 Evaluation of safety, risk and governance issues and expertise in solution-finding to support safe and effective practice in RA</p> <p>10 In-depth understanding of a range of research methods and processes and their application to RA</p> <p>Module 1. “Applied Anatomy & Clinical Application of RA” –</p> <ol style="list-style-type: none"> 1. Introduction and microanatomy of nerves 2. Central nervous system & autonomic nervous system pertaining to RA 3. Sono-anatomy and it's pitfalls as an adjunct in regional anaesthesia 4. Head and neck blocks 5. Applied anatomy of the eye to enable safe eye blocks 6. Anatomy of brachial plexus and adjacent structures above the clavicle 	<p>emphasises the integration of theory and work-placed practice and comprises: - biweekly Problem Based Learning (PBL) scenarios relevant to the modules. Our aim is to “let RA problems drive the learning”. Students are required to research answers and solutions to the PBL's. Students will be encouraged to find the evidence relating back to the basic sciences. The PBL-s are designed to relate to a set of learning outcomes. Both research in the literature and website forum discussions with other students help identify these learning outcomes. E-tutors modulate and direct discussions to cover important points or direct students in the correct direction. After the 1st week, the Faculty /Module Leader shares a full list of learning outcomes with students. The second week allows students the opportunity to research all relevant subject material before being tested. There is usually a second shorter scenario to focus and/or complement student's research at the beginning of the second week.</p> <p>In summary:</p> <ol style="list-style-type: none"> 1. PBL's on line 2. A Discussion board 3. Selective reading materials provided 4. Recommended textbooks provided 5. Formative assessments done 6. Strategy of 80% engagement by students compulsory on line 7. Didactic lectures and seminars at regional training days
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7. Anatomy of the brachial plexus below the clavicle
8. Anatomy of peripheral blocks of the upper limb
9. Applied anatomy to block the thorax and abdomen
10. Vertebral anatomy, epidural anatomy and paravertebral space
11. Lumbar plexus anatomy
12. Sacral plexus anatomy
13. Applying anatomical knowledge for blocks at or above the knee
14. Applying anatomical knowledge for blocks of the lower leg below the knee and at the ankle and foot level

Module 2. “Pharmacology, Neurophysiology of Acute Pain” –

Following successful completion of Module 2 the student will demonstrated in depth knowledge and understanding of:

1. The neurophysiology and pharmacology of pain and
 - 1.1. nociception relevant to perioperative medicine
 - 1.2. Nociception vs. Pain
 - 1.3. Inflammatory / nociceptive pain
 - 1.4. Visceral pain
 - 1.5. Neuropathic pain
 - 1.6. Complex Regional Pain Syndromes
2. The mechanisms of pre-existing chronic pain may modify peri-operative pain
3. The pharmacology and toxicity of
 - 3.1. Local anaesthetics
 - 3.2. Opioids and other analgesics
 - 3.3. Antineuropathic and adjunctive drugs relevant to peri-operative pain medicine
4. The neurophysiology / pharmacology of the injured nerve
5. The mechanisms by which local and systemic anaesthetic agents may improve outcome and survival following surgery

Module 3. “Methodology” –

By the end of this module on the technical

aspects of RA, the student should have insight into the following aspects of RA:

1. Which block for what surgery, where and why?
2. Ultrasound – physical principles, sono-anatomy, awareness of Ultrasound artifacts and their uses and the application of US in regional anaesthesia
3. Needle design
4. Use of catheters for prolonging blocks and catheter management
5. Safety, safe practice of RA
6. Sterility
7. Assessment tools for good RA practice
8. Future advances in RA (3D & 4D U/Sd)

Module 4. “Research Methodology applicable to RA” – By the end of this module the student will be able to understand the difference between audit and research. Be able to conduct an audit and complete the cycle. Be able to initiate a research project from early stages of idea proposal, protocol writing, IRAS form completion, gaining necessary ethics approval and preparing the required paperwork (participant invitation, informed consent, letters to GPs etc.). Be able to critically appraise a study, have a good knowledge of research governance and lastly, have an adequate knowledge of basic statistic methods used for clinical trials.

Module 5. “Clinical Governance” – Is divided into 2 parts: PBL based (4 subsections) and an audit development part by the student.

1. By the end of this module students should have insight into the following topics:
2. Educational issues (pertaining to doctors, nursing staff, ODA's)
3. What constitutes being “competent” including audit development
4. Teaching and training in RA
5. Management issues
6. Cost effectiveness of RA

Module 6. “Procedure Specific RA” – Gain an understanding of RA in special

<p>circumstances or sub-specialities. Also examine in greater detail how increase knowledge influences outcome measures in RA. Look at future developments in RA</p> <p>The specific outcomes are in:</p> <p>Paediatrics: Studying the difference between adults and children for RA. Studying dose, duration and actions of local anaesthetics in small children and the use of LA adjuvants drugs. In depth studies on blocks such as the Ilio-inguinal, penile and central neuraxial blocks, to name a few important blocks in children.</p> <p>Pregnancy: Study the use of epidurals in labour, technique differences, ultrasound placement, infusions versus boluses and the use of patient controlled epidural infusions in labour. Study how local anaesthetics agents affect the foetus. The placental barrier and protein binding in pregnancy of LA drugs. Role of pudendal blocks in labour.</p> <p>Elderly: Physiological reserve and RA techniques in the elderly for central neuraxial blocks, brachial plexus blocks (affecting the phrenic nerve), pharmacokinetics and dynamics of LA agents and pain perception in the elderly</p> <p>Pathological situations: Blocks used in treating cancer pain, or chronic pain situations (nerve root and intra-articular vertebral blocks)</p>	
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<p>C2(ii) Cognitive Skills</p> <p>The course is designed to:</p> <p>Enhance decision making and clinical reasoning Test practical skills by on-going assessments and an end of course practical test Advanced communication skills emphasised Critical analysis of the literature taught and tested</p> <p><u>Evidence critical reflection on student's own advancing practice</u></p> <p><u>Support critical evaluation of the effectiveness of interventions, drawing on new insights gained</u></p>	<p>Teaching/learning methods and strategies</p> <p>See above in addition Extra training at regional study days Supported by local educational supervisors and regional tutors</p> <p>→</p> <p>Assessment using a system of Local Mentors and Regional Supervisors using RA-UK's infrastructure and support throughout the UK Logbook reviews DOPS for "basic set of blocks" Review CUSUM scores for blocks commonly performed Video evidence of basic block</p>
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	performed (easy and difficult blocks) An OSCE examination in conjunction with RA-UK
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<p>C2(iii) Subject Specific Practical Skills</p> <p>Advanced Applied Anatomy taught Ultrasound courses (principles and practice) emphasized and taught Demonstrations of blocks on Cadavers</p>	<p>Teaching/Learning methods and strategies</p> <p>See above</p> <p>Assessment</p> <p>See above and OSCE's Procedure Based Assessments (DOPS)</p> <p>→</p>
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<p>C2(iv) Key Skills and Attributes</p> <p>Advanced communication skills taught Valid consent taught Technical expertise sought or developed This MSc is underpinned by detailed anatomical knowledge and advanced decision making skills Ability to find, critique and apply evidence to practice Critical reflection Independent learning skills Use of VLE and IT in learning</p>	<p>Teaching/Learning methods and strategies</p> <p>See above</p> <p>Assessment</p> <p>See above & OSCE's</p> <p>→</p>
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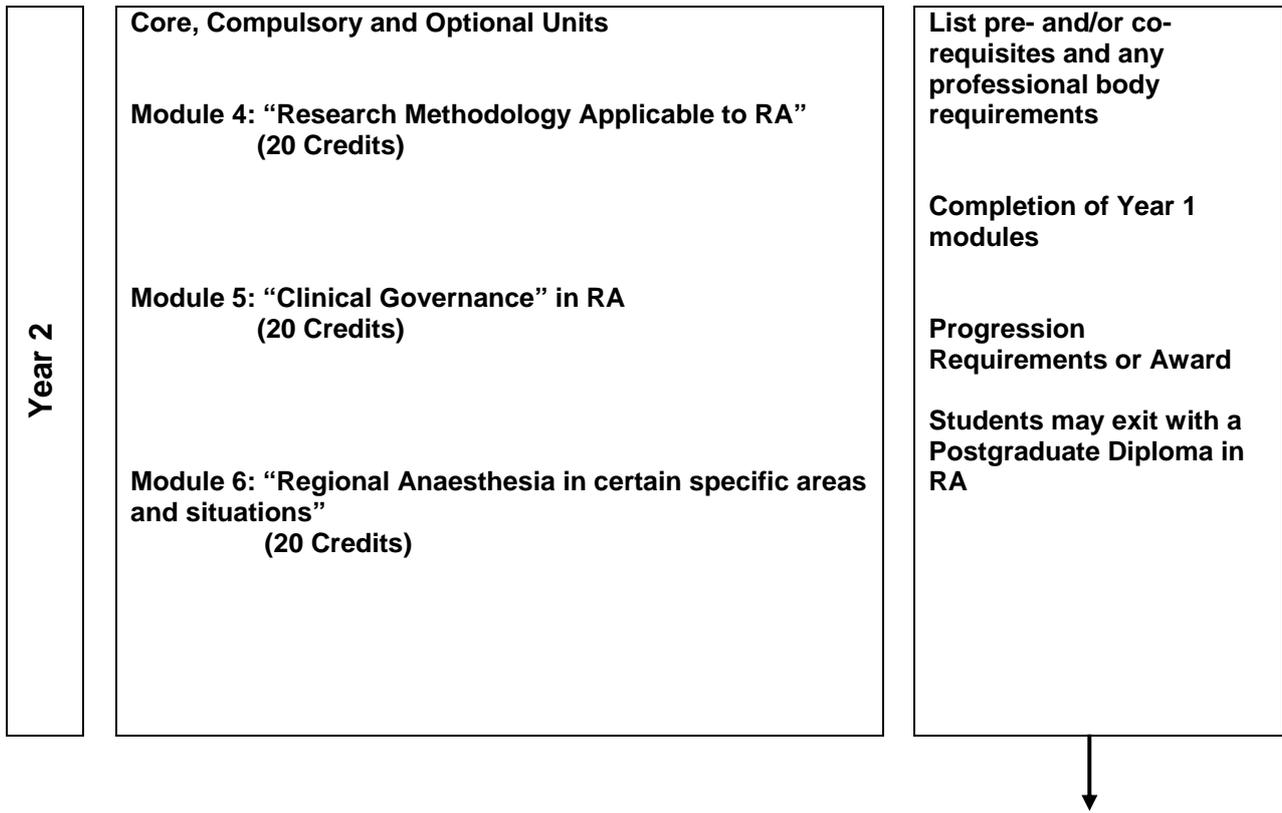
SECTION D1: COURSE PROFILE AND AWARD REQUIREMENTS

Please insert (i.e. cut and paste) the course profile here or complete the following boxes, as appropriate. If you insert the course profile, please ensure that the NOTICE below about changes to units is retained. Each box relates to a year of study. If the programme is part-time or offers a part-time option, please extend the number of years as appropriate (maximum = 9).

NOTICE: Whilst the University will make every effort to offer the units listed, changes may sometimes have to be made for reasons outside the University's control (e.g. illness of a member of staff) or because of low enrolment numbers or sabbatical leave. Where this is the case, the University will endeavour to inform students.

Year 1	<p>Core, Compulsory and Optional Units</p> <p>All 7 our modules are core for the MSc in RA (6 core modules for the PGDip in RA)</p> <p>Module 1: "Applied Anatomy & Clinical Application" (20 Credits)</p> <p>Module 2: "Pharmacology & Neurophysiology of Acute Pain" (20 Credits)</p> <p>Module 3: "Methodology" (20 Credits)</p>	<p>List pre- and/or co-requisites and any professional body requirements</p> <p>Progression Requirements or Award</p>
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Year 3	<p>Core, Compulsory and Optional Units</p> <p>Dissertation 60 credits (core)</p>	<p>List pre- and/or co-requisites and any professional body requirements</p> <p>Completion of core modules from years 1 and 2</p> <p>Progression Requirements or Award</p>
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Year 4 (if relevant)	<p>Core, Compulsory and Optional Units</p>	<p>List pre- and/or co-requisites and any professional body requirements</p> <p>Progression Requirements or Award</p>
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SECTION D2: REGULATORY FRAMEWORK FOR AWARDS

D2a Regulatory Framework: (please tick against the relevant framework)							
Common Course Structure for Undergraduate Programmes (CCS)	<input type="checkbox"/>						
NAM Common Course Structure (NAM-CCS)	<input type="checkbox"/>						
Common Regulatory Framework for Postgraduate Programmes (CPG)	X						
<p>It is expected that all new degree courses will conform to the common University regulations (either to CCS, NAM-CCS or CPG, and the associated Instructions to Examiners).</p>							
D2b Degree Classifications							
<u>For First degree programmes</u>							
<p>i) Weighting (in percentage terms) which each year of the course contributes to the calculation of the degree classification.</p>							
(Part-time Programmes)							
Year 1	Year 5						
<input style="width: 100px; height: 20px;" type="text"/>	<input style="width: 100px; height: 20px;" type="text"/>						
Year 2	Year 6						
<input style="width: 100px; height: 20px;" type="text"/>	<input style="width: 100px; height: 20px;" type="text"/>						
Year 3	Year 7						
<input style="width: 100px; height: 20px;" type="text"/>	<input style="width: 100px; height: 20px;" type="text"/>						
Year 4	Year 8						
<input style="width: 100px; height: 20px;" type="text"/>	<input style="width: 100px; height: 20px;" type="text"/>						
	Year 9						
<input style="width: 100px; height: 20px;" type="text"/>	<input style="width: 100px; height: 20px;" type="text"/>						
<p>ii) Please indicate whether an aggregate mark and/or the University marks profile is taken into consideration for the purpose of determining degree class.</p>							
D2c Postgraduate Awards							
<p>i) Are (any) units assessed on a pass/fail (instead of numerical) basis? If so how many credits are assessed on a pass/fail basis</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">YES</td> <td style="width: 50%;">x</td> </tr> <tr> <td>NO</td> <td></td> </tr> <tr> <td colspan="2" style="text-align: center;">.....</td> </tr> </table>	YES	x	NO		
YES	x						
NO							
.....							
<p>ii) Can the award be conferred with distinction?</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">YES</td> <td style="width: 50%;">X</td> </tr> <tr> <td>NO</td> <td></td> </tr> </table>	YES	X	NO			
YES	X						
NO							
<p>iii) On what criteria is the distinction awarded? (See also the Regulations for the Common Postgraduate Regulatory Framework.)</p>							

Please note:

This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each unit can be found in the study unit guide and course handbook. The accuracy of the information contained in this document is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education.

Note: Sections E, F, G and H are for internal approval purposes and should NOT be placed on the intranet

SECTION E: EQUAL OPPORTUNITIES (including students with disabilities and students from ethnic minority groups)

Please indicate

- a)** How the admissions policy will aim to preserve and promote equality of opportunity for all applicants.

The Medical School operates an admissions policy that adheres strictly to the UEA's equal opportunities policy on admissions and access to the University's courses. Accordingly, MSc selection process aims to ensure that no applicant receives less favourable consideration on the grounds of gender, age, marital status, race, colour, disability, sexual orientation, nationality, ethnic origin, political or religious belief. We welcome applications from people with disabilities and work within relevant legislation and the guidelines offered by the General Medical Council, the Health Professions Council, the UEA Admissions Policy for students with a disability, UEA/partner NHS Trust Occupational Health and Human Resources Departments, and the UEA Dean of Students office. We aim to achieve this by providing clear, accurate and transparent information regarding all of our admissions policies and processes. All recruitment, selection and marketing policies and procedures are agreed, conducted and reviewed in collaboration with service users and our partner Service Providers via the School Recruitment, Selection and Marketing Committee. The School's Director of Admissions, together with the School's Admissions Officer is responsible for ensuring that equality of opportunity is assured for all applicants and is accountable to the Head of the Medical School. The Recruitment, Selection and Marketing Group support the Admissions Officer in this work. The school's performance in relation to equal opportunities legislation and University policy is monitored continuously by the University's marketing and Communications Office and reported to the School via the School Executive Committee. Equal opportunities policies are monitored and reviewed annually via the School's Director of Admissions and the School's Disability Liaison Officer's annual Report to the School Board.

- b)** How the course will aim to preserve and promote equality of opportunity for all students.

The course will aim to preserve and promote equality of opportunity for all students through its teaching, learning and assessment methods. It is also the case that the concepts of equality and diversity are embedded in the course content and explicit within the module Managing Yourself and Leading Others as well as within portfolio-based assessment activities. Where a student needs support or reasonable adjustments due to a disability the School has a system, linking with appropriate central University services and service provider partners, for ensuring this is achieved promptly and effectively. The Strategic Health Authority monitors a range of metrics including criteria related to equality and diversity in accordance with current legislation. This is reviewed quarterly and formally. Wherever possible within the learning and teaching strategy students are encouraged to work with as wide a range of their peers as possible to develop understanding of co-operation within a diverse population. A range of group work and assessment styles is

employed within the teaching framework to ensure all students have the opportunity to succeed. The academic culture in the School encourages the on-going development and review of programmes to establish curricula that are inclusive of knowledge contributing to the subject area from an international perspective.

- c)** How teaching and learning and assessment methods will aim to preserve and promote equality of opportunity.

The School aims to create an atmosphere of learning that welcomes differences and encourages all staff and students to value diversity. We seek to ensure fair treatment for all students in accessing learning opportunities, teaching, assessment, support and welfare. This is achieved by using a wide variety of teaching, learning and assessment methods to meet the needs of a diverse student population. In addition all staff work in close association with the Dean of Students office and Occupational Health to provide individualised learning plans and support where needed. The use of a faith calendar is also used in planning the assessment strategy to ensure that these meet the diversity of students from a diverse range of cultural backgrounds can be accommodated as far as is operationally reasonable. There is careful monitoring of the student experience to ensure that any reported discrimination is followed up and staff regularly receive briefings and training on equality matters (e.g. within the NHS).

[For any resource implications, please see Section G4c).]

SECTION F: STRATEGY, MARKET DEMAND, ADMISSIONS AND COURSE MANAGEMENT DETAILS (*for all new course proposals*)

F1 Academic Strategy

<p>a) How does the course fit in with:</p> <ul style="list-style-type: none"> • your School's academic plan? <p>This course fits with the strategy of the Norwich Medical School to develop e-learning specialist Mastership programmes in various specialities. The development of this MSc is closely linked with the recently developed and successfully executed MS in Oncoplastic Breast and Reconstructive Surgery programme which is more up to date and flexible in order to meet the specific educational needs and competencies in the field of RA. A number of e-learning Masterships are planned to fulfil the vision to make the UEA a centre of excellence for Post Graduate Medical Education.</p> <p>The programme will be accessible to a National European and International audience once we have successfully completed the first course. The way the course has been designed and costed and fits with the proposed more business-orientated focus for the planned 'Educational Design Unit'. The programme fits with the faculty's aspiration to offer innovative and flexible programmes of learning and to embed blended learning and e-learning</p> <ul style="list-style-type: none"> • UEA's corporate plan? <i>(Please refer to the UEA intranet http://www.uea.ac.uk/ueanetwk/vco/welcome.html)</i> <p>The course is 'enterprising' and 'engaging' in its approach from design/development, through to implementation/delivery and then embedding the learning in the workplace. It will enhance practitioner career development and enrich the patient experience and patient safety.</p>
<p>b) Does the course contain any overlap of material with existing courses at UEA? If so, please give details, naming the School of Studies concerned, identifying the course code and title, and summarising the outcome of prior consultations with that School(s) and the appropriate Faculty on the overlap issue.</p> <p>Yes, the modules on Clinical Education, Research and Management are overlapping with other Mastership Programmes</p>
<p>c) Are there any related dormant course(s) that the School proposes permanently to discontinue? (Please give award, title of course, UEA course code and effective date of discontinuation and indicate Faculty support.)</p> <p>No</p>
<p>d) Are there any related course(s) that the School wishes to make dormant? (Please give award, title of course, UEA course code and effective date of dormancy and indicate Faculty support.)</p> <p>No</p>

e) Are there existing students on any courses affected by actions in d) above? If so, please state how the School will manage the 'exit' strategy?

No

F2 Market Demand

a) Are identical or similar courses offered elsewhere in the UK? If so, please give details of the number, title(s), institution(s) etc and indicate why you think your course has a comparative advantage over its competitors:

No, nothing identical within the NHS or the UK

b) i) What is the evidence of current and future demand for the course from employers (industry, commerce, government agencies, the professions etc.), broadly defined national needs, students, developments in the subject area?

A preliminary regional (East Anglian) audit of Registrars studying RA revealed a significant interest in the MSc degree. More than 200 UK Anaesthetists apply to do the European Society of Regional Anaesthesia Diploma (ESRA) annually. This programme has been criticised for being of variable standard and costly over a 2 year study period

ii) What are the career opportunities for students successfully completing the course?

Promotion within NHS/health service provider organisations (e.g. to Consultant Posts within the NHS); access to senior leadership posts. CPD and service development for Anaesthetic practitioners who are already graduates.

c) (For UG proposals only):

d) Is there evidence that current and projected demand for such a course cannot be met from existing provision (a) nationally and (b) regionally? If so, please give details:

Yes, nothing similar currently exists. Viability of this course requires 12 Students and the projected numbers are 20 students

e) What external bodies (e.g. professional associations and relevant employers or employers' groups) have been consulted about the course and what views have they expressed?

Regional Anaesthesia United Kingdom the most important body controlling RA in the UK, the AAGBI, Royal College of Anaesthetists – have all written letters of support

f) How will the School/Faculty ensure that the views and/or requirements of professional bodies and of employers are taken into account during the lifetime of the course?

By inclusion of important national leaders in RA on the Steering Group of the MSc in RA.

g) Does the course require/imply any external accreditation? If so, by whom and when might this occur?

N/A

F3 Admissions		
a) <u>Admissions Criteria</u> (please specify)	GMC accredited Post FRCA level, ST5 and Staff Grade Specialists with 2 yrs experience or Consultant Anaesthetists	
b) <u>Proposed student intake target</u>	FT Home/EU...10.....FT INTL.....PT(heads)...20DL(heads).....	
c) <u>Minimum viable intake (FTEs)</u>	10 heads per cohort.....	
d) <u>Maximum viable intake (FTEs)</u>	20 heads per cohort.....	
e) <u>(For UG proposals only):</u> Are any particular Access programmes relevant to this course (and if so which)?	FRCA	
f) Student Targets		
i) Are the intake targets given in Section E3 additional to the currently approved student targets of the sponsoring School(s) of Studies or will the course involve a redistribution of current targets between courses? Please give details:	No redistribution of current targets	
ii) If the intake targets are additional, have the additional numbers been authorised by the Planning Office (Deputy Academic Registrar)?	YES	
	NO	

F4 Course Management Details		
1. Faculty	MED	

2.	i)	Teaching Institution (UEA or elsewhere)	UEA Norwich and UEA London also, NHS Trust premises country wide		
	ii)	Placement(s)/Work-based Practice required	YES	X	
			NO		
	iii)	Please indicate type (e.g. year in industry)	All students will be employed as registered practitioners or equivalent and will undertake learning activities within their current workplace.		
3.	i)	Exit Awards below final award	YES	X	
			NO		
	ii)	If YES, please specify (e.g. Diploma of Higher Education, Certificate of Higher Education)	Postgraduate Certificate in RA		
4.		Length of Programme	3 years		
5.		Mode(s) of Attendance (Please tick as appropriate)	Full-time		
			Part-time	X	
			Distance Learning	X	
6.		Course Director(s) Jerome Pereira Dr Stef Oosthuysen & Dr Mike Hudspith	Course Code		
			Course Code		
			Course Code		
			Course Code		
			Course Code		
			Course Code		
			Course Code		
7.		Relevant Subject Benchmarking Statements	N/A		
8.		Start date (for new course proposals)	Course Code		Date September 2012
			Course Code		Date
			Course Code		Date
			Course Code		Date
			Course Code		Date
			Course Code		Date
			Course Code		Date
9.	i)	Accreditation/Professional Body (where applicable)			
	ii)	Date of original accreditation/recognition by Profession Body (if relevant)			
	iii)	Most Recent Accreditation Date (if relevant)			
10.	Board of Examiners				
	i)	Is a new Board of Examiners to be responsible for the programme(s)/course (please tick)		YES	X
				NO	

ii)	If NO, please specify which Board of Examiners will be responsible for the programme(s)/course		
iii)	Is (are) any additional external examiner(s) required?	YES	X
		NO	
		If YES, how many?	1
11. (For existing programmes)			
i)	Date of most recent University periodic review	N/A	
ii)	Date of next University periodic review	N/A	

SECTION G: RESOURCES

Preamble

The introduction of new courses/programmes involves the commitment of additional resources and/or the redistribution of existing resources. The full resource implications of a new course are sometimes not immediately obvious: some costs (e.g. the additional demands on teaching accommodation) are "hidden" and are not always recognised by course proposers. This section of the approval form is therefore designed to address the full range of resource issues associated with a new course.

G1 Tuition Fees

Please specify whether the income to be generated by the course is to be from:

- a) tuition fees at the standard home/EU rate plus any HEFCE recurrent grant for teaching that the student numbers may generate**

b) some other source (e.g. full cost fees, teaching contract)

£6800 per student (2 years part time; 6 modules) - plus dissertation at normal cost (i.e. for a 180 credits) (2012/3)

The course has been costed by Helen Latham taking account of the following:

Modules 1, 2 and 3 in year 1:

Development of online resources

E - tutorials: approximately 6 hours per module

Marking/assessment 1 hour per student per module

Follow-up of Practical Assessments 2 hours per module
(DOPS, Log-books, CUSUM scoring of blocks)

Year 2:

E - tutorials: approximately 6 hours per module

Follow-up of Practical Assessments 2 hours per module
(DOPS, Log-books, CUSUM scoring of blocks)

c) Has the Fees Officer in the Planning Office of the Academic Division (ext 2205) been consulted?	YES	
	NO	X

G Units of Teaching 2 Does the course require the provision of additional units of teaching not currently available (if so, please complete the section below)? a)							
For new programmes involving new units: Please complete as far as possible the section below for each new module							
Module Code							
Module Title	Module 1. Applied Anatomy and Clinical Application of RA						
Credit	20						
Term (Autumn)	Autumn						
Pre-requisite(s)	This is the 1st module of the programme, which commences in September of each year.						
Co-requisites(s)							
Convenor	James Stimpson						
Date of Approval							
Brief description (aims, objectives, content, teaching and learning method(s), learning outcomes)	<p>The aim of this module is to</p> <p>MODULE OUTCOMES:</p> <p>By the end of this module practitioners will demonstrate:</p> <p>Aims:</p> <p>To understand the anatomical basis of regional anaesthesia To understand the physiology of normal nerve conduction To understand the mechanisms of nerve location To appreciate the different approaches to neural blockade at different sites in the body To recognise the historical development of regional anaesthesia</p> <p>PBL = problem-based learning</p> <p>Outcomes:</p> <p>1. Neuraxial</p> <table border="1"> <tr> <td></td> <td>Educational Outcomes: must be able to.....</td> </tr> <tr> <td>1.1</td> <td>Understand physiology of nerve conduction</td> </tr> <tr> <td>1.2</td> <td>Describe the microanatomy of nerves: <ul style="list-style-type: none"> • Proximal vs distal </td> </tr> </table>		Educational Outcomes: must be able to.....	1.1	Understand physiology of nerve conduction	1.2	Describe the microanatomy of nerves: <ul style="list-style-type: none"> • Proximal vs distal
	Educational Outcomes: must be able to.....						
1.1	Understand physiology of nerve conduction						
1.2	Describe the microanatomy of nerves: <ul style="list-style-type: none"> • Proximal vs distal 						

		<ul style="list-style-type: none"> • Sizes and speeds of nerve fibres • Blood supply • Chronaxie and rheobase 		
1.3	Describe the anatomy and microanatomy of the spinal canal	<ul style="list-style-type: none"> • The epidural space • The spinal cord • Ascending and descending tracts • Blood supply • The autonomic nervous system • Cerebrospinal fluid and its' circulation 		
1.4	Describe the mechanisms of nerve location	<ul style="list-style-type: none"> • The physiological basis of paresthesia • Physics of electrical neurostimulation • Physics of ultrasound 		
1.5	Know different approaches to neuraxial blockade in:	<ul style="list-style-type: none"> • Thoracic spine • Lumbar spine • Caudal epidural space 		
1.6	Describe the anatomical variations of the vertebrae in:	<ul style="list-style-type: none"> • Thoracic spine • Lumbar spine • Caudal epidural space 		
1.7	Obtain and describe radiological images of the spinal canal at any level			
1.8	Discuss anatomical variations in the spinal canal and their clinical significance			
1.9	Explain how spinal cord anatomy changes in pathology: Kyphoscoliosis Ankylosing spondylitis Osteoporotic fractures Spinal stenosis Spina bifida			
2. Upper Limb				
2.1	Describe the nerve anatomy of the arm in terms of	<ul style="list-style-type: none"> • Dermatomes • Myotomes • Osteotomes • Individual nerves • Sympathetic nerves 		
2.2	Describe the anatomy of the proximal brachial plexus and it's relations	<ul style="list-style-type: none"> • Roots, trunks and divisions • Proximal branches • Motor innervation and appearances with nerve 		

		stimulation (twitch mapping)		
2.3	Explain the anatomy of the 1 st rib and it's relevance to brachial plexus anaesthesia			
2.4	Describe relevant anatomical and surgical variations in the brachial plexus anatomy			
2.5	Know the approaches to the supraclavicular brachial plexus <ul style="list-style-type: none"> • Winnie • Modified Winnie • Raj • Posterior • SPVB • SCB 			
2.6	Describe the ultrasonographic appearance of the supraclavicular brachial plexus			
2.7	Describe the anatomy of the distal brachial plexus and it's relations <ul style="list-style-type: none"> • Divisions, cords and terminal branches • Motor innervation and appearances with nerve stimulation (twitch mapping) • Clavicle and axilla anatomy 			
2.8	Describe relevant common anatomical variants of the infraclavicular and axillary areas			
2.9	Know the techniques of: <ul style="list-style-type: none"> • Vertical infraclavicular • Infracoracoid • Axillary nerve block 			
2.10	Describe the ultrasonographic appearances of the infraclavicular brachial plexus and it's relations			
2.11	Describe the anatomy of the terminal nerves to the upper limb			
2.12	Know the techniques of: <ul style="list-style-type: none"> • Mid-humeral block • Elbow block • Mid-forearm block • Wrist block 			
2.13	Describe the ultrasonographic appearance of <ul style="list-style-type: none"> • Mid-humeral block • Elbow block • Mid-forearm block • Wrist block 			
2.14	Be able to describe the potential			

		benefits and risks of proximal vs distal upper limb neural blockade		
3. Lower limb				
3.1	Describe the nerve anatomy of the leg in terms of	<ul style="list-style-type: none"> • Dermatomes • Myotomes • Osteotomes • Individual nerves • Sympathetic nerves 		
3.2	Describe the anatomy of the lumbar plexus			
3.3	Describe the anatomy of the sacral plexus			
3.4	Describe relevant common anatomical variants of the groin and popliteal areas			
3.5	Describe the techniques of	<ul style="list-style-type: none"> • Posterior lumbar plexus block (lumbar plexus) • Anterior lumbar plexus block (femoral nerve block) • Saphenous block 		
3.6	Describe the techniques of	<ul style="list-style-type: none"> • Mansour parasacral sciatic block • Winnie transgluteal sciatic block • Raj anterior sciatic block • Infra-gluteal block • Popliteal block • Tibial / peroneal block in the foot 		
3.7	Understand the relevant nerve location techniques for blocks of the lower limb			
3.8	Know the sonographic appearance of the	<ul style="list-style-type: none"> • Paraspinous / psoas compartment • Transgluteal area • Infragluteal area • Groin • Medial knee • Popliteal fossa • Ankle 		
3.9	Be able to explain the clinical applications, benefits and limitations of lower limb blockade			

4. Head and Neck			
4.1	Understand the nerve supply of the head and neck		
4.2	Explain the relationship of surface anatomy and landmarks to nerve distribution and deep structures		
4.3	Describe nerve location techniques and strategies for nerve blockade of the head and face		
4.4	Describe the techniques and clinical applications of head and face blocks, including Scalp block Nerve of Arnold block Infra-orbital nerve block Mental nerve block Deep / superficial Cervical plexus block		
4.5	Know the sonographic appearance of the: cervical vertebrae upper and mid cervical nerve roots branches of the cervical plexus		
4.6	Be able to explain the clinical applications, benefits and limitations of head and neck blockade		
5. The Thorax and Trunk			
5.1	Understand the nerve supply of the thorax and trunk		
5.2	Explain the relationship of surface anatomy and landmarks to nerve distribution and deep structures		
5.3	Describe nerve location techniques and strategies for nerve blockade of the thorax and trunk		
5.4	Describe the techniques and clinical applications of thorax and trunk blocks, including <ul style="list-style-type: none"> • Paravertebral block • Intercostal block • Intrapleural block • TAP block • Ilioinguinal block • Rectus sheath block 		
5.5	Know the sonographic appearance of the: <ul style="list-style-type: none"> • Thoracic vertebrae • Paravertebral structures • Ribs and their neurovascular 		

			<ul style="list-style-type: none"> bundle • Lungs and pleura • Musculature and structures of the anterior abdominal wall 		
	5.6	Be able to explain the clinical applications, benefits and limitations of thorax and trunk blockade			
	5.7	Describe the anatomical variations associated with pathology of the thorax and trunk			
Method(s) of assessment	<p>Coursework- For the Theory:</p> <p>Short Answer Questions MCQ's EMQ's Script Concordance Questions on module content</p> <p>(See attached Master Document for Module 1)</p>				
Module Code					
Module Title	Module 2. Pharmacology and Neurophysiology of Acute Pain				
Credit	20				
Term (Winter)	Winter Term (semester 2)				
Pre-requisite (s)	None				
Co-requisite s(s)					
Conven or	Dr Mike Hudspith				
Date of Approva l					
Brief descripti	Module 2: Neuropharmacology and Physiology relevant to Perioperative pain				

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Medicine

Aims:

- 6. To understand the neurophysiology and pharmacology of pain and
 - 6.1. nociception relevant to perioperative medicine
 - 6.2. Nociception vs. Pain
 - 6.3. Inflammatory / nociceptive pain
 - 6.4. Visceral pain
 - 6.5. Neuropathic pain
 - 6.6. Complex Regional Pain Syndromes
- 7. To understand how the mechanisms of pre-existing chronic pain may modify perioperative pain
- 8. To understand the pharmacology and toxicity of
 - 8.1. Local anaesthetics
 - 8.2. Opioids and other analgesics
 - 8.3. Antineuropathic and adjunctive drugs relevant to perioperative pain medicine
- 9. To understand the neurophysiology / pharmacology of the injured nerve
- 10. To understand the mechanisms by which local and systemic anaesthetic agents may improve outcome and survival following surgery

Topic	Educational outcome: to understand and demonstrate knowledge of	Content to include pharmacology and physiology of:
Peripheral mechanisms of nociceptive and visceral pain	Mechanisms of inflammatory nociception Pain transduction Pain transmission Experimental models	Peripheral nociceptor physiology Peripheral nociceptor pharmacology Peripheral sensitisation Mediators of inflammation
	Mechanisms of visceral nociception Pain transduction Pain transmission Experimental models	Visceral innervation Visceral autonomic physiology and pharmacology Silent nociceptors Mechanisms of somatic referral
Axonal blockade and peripheral antinociception	Axonal conduction Na ⁺ channels Mechanism of block Differential blockade Short / long acting agents	Physiology of axonal conduction Na ⁺ channel pharmacology Pharmacokinetics and pharmacodynamics of LA
	Pharmacology of agents that prolong peripheral and central blockade	Depot LA preparations Sympathomimetics Clonidine Ketamine

		Neostigmine Peripheral opioid pharmacology
Neurological damage associated with regional anaesthesia	Risk factors Mechanisms of nerve injury Investigation of nerve injury	Neurotransmission in the injured neurone Peripheral mechanisms Central mechanisms Neuronal and glial involvement Neurotoxicity of LA / adjunctive agents
Neuropathic pain and antineuropathic drugs	Mechanisms of neuropathic pain	Dorsal horn Central sensitisation disinhibition Descending inhibition Descending facilitation Experimental models
The chronic opioid-using patient	recognition and understanding of pharmacological basis of opioid tolerance /dependence / withdrawal opioid insensitive pain	Definitions of tolerance & dependence Opioid receptor pharmacology Opioid receptor desensitisation Opioid-induced hyperalgesia
Amputation CRPS	CRPS1 CRPS2 Neuromatrix Pre-emptive analgesia	Contributions of sympathetic nervous system to pain Peripheral inflammatory mechanisms Peripheral neuropathic mechanisms Neurophysiological mechanisms of central pain processing
The patient that fits / arrests	Concepts of safe dose Mechanisms of systemic LA toxicity	Cardio toxicity Direct / indirect CNS toxicity Lipid rescue Traditional resuscitative techniques
Predictors of long-term pain	Risk factors	Surgery Pre-existing pain Coexisting disease Yellow flags Scoring tools
Perioperative systemic drugs to optimise recovery	Neuropharmacology of drugs that modify pain outcomes. Acute neuropathic pain	Gabapentinoids Systemic Na ⁺ blockade Mg ²⁺ NMDA antag

	<table border="1"> <tr> <td>Strategies to improve survival in high risk and cancer surgery</td> <td>The mechanisms by which regional vs. General anaesthesia may beneficially influence outcome</td> <td>Pain stress immunomodulation Opioid immunomodulation GA immunomodulation Advantages of RA in surgical outcome – eg graft perfusion</td> </tr> </table>	Strategies to improve survival in high risk and cancer surgery	The mechanisms by which regional vs. General anaesthesia may beneficially influence outcome	Pain stress immunomodulation Opioid immunomodulation GA immunomodulation Advantages of RA in surgical outcome – eg graft perfusion	
Strategies to improve survival in high risk and cancer surgery	The mechanisms by which regional vs. General anaesthesia may beneficially influence outcome	Pain stress immunomodulation Opioid immunomodulation GA immunomodulation Advantages of RA in surgical outcome – eg graft perfusion			
Method(s) of assessment	<p>Coursework- For the Theory:</p> <p>Short Answer Questions MCQ's EMQ's Script Concordance Questions on module content</p>				
Module Code					
Module Title	Module 3. Methodology in RA				
Credit	20				
Term (Spring/ Summer)	Summer				
Pre-requisite (s)					
Co-requisite s(s)					
Conven or	Dr Fred Sage or Dr Simon Parrington				
Date of Approva l					
Brief descripti on (aims, objectiv es, content,	Topic:	Educational Outcomes:	Attit		

<i>teaching and learning method(s), learning outcome(s)</i>	Which block for what surgery, where and why?	Why: better, different, fun, RA as a gold standard for peri-operative management RA indications for specific surgery: consensus, Prospect: value, relevance Efficiency, recovery, mobilisation, discharge, delayed outcomes			1. 2.
	Ultrasound – Physical principles, artifacts	Future developments in US Importance in medicine			1. 2.
	RA tools	Anatomy and clinical examination; variations; anatomy based landmark approaches Nerve stimulator; principle, evidence, history. Localisation and risks Accuracy , success rate NS: physiology based approach. Current & nerve response, cessation of twitch after injection. Optimum current, significance; absence of stimulation despite visualisation. Implication for blind approach Software for needle visualisation 3D echo Dose/location relationship. Localisation and safety.			1.
	Needle design	Size Tip design, bevel angle, Tuohy Length, echogenicity Safety, risks Needle design versus localisation technique Catheters and needle design			1.
	Use of catheters for prolonging blocks and catheter management	Catheter; purpose of Placement technique: difficulties, teaching, visualisation, safety, time taken on list time, efficiency measures Catheter design: material, stimulation, connection, non Luer; different models/ manufacturers. Industry standard for safety fixture (connectors) Control & removal; duration; drug infusion; pumps; risks; drug errors; disposal LA: duration, storage, infection, sterility, costs Risk benefit ratio, efficiency ratio, Indications; community use;			2.

		ambulatory			
	Education and RA	Syllabus Teaching techniques; theory and practice Assessment. Monitoring of progress Phantom, mannequin, simulation Supervision, logbook Transfer of knowledge and skills from 1 block to another Keeping up to date with new technology			3.
	Safety, safe practice of RA	Technique: sterility, equipment, skills Nerve damage, evaluation of risk. Safe technique, neurological risks with new techniques Learning new skills. Nursing care, observations, top ups Use of Intralipids in toxicity			4.
	Sterility	Evidence, governance, risk benefits			5.
	Risk management	Evidence, evaluation, info to patients Data collection. Reporting of critical incidents/complications Risk/ benefit assessment Damage prevention and recovery Post damage management: referral to neurology, treatment, investigation Differentiate between damage due to surgery, position, block RA and neuro-assessment, trauma, paediatric.			6.
	Assessment tools for good RA practice				7.
	Compartment syndrome and the practicing trauma Regional Anaesthetist				8.
Method(s) of assessment	<p>Coursework- For the Theory:</p> <p>Short Answer Questions MCQ's EMQ's Script Concordance Questions on module content</p>				

Module Code					
Module Title	Module 4. Research Methodology applicable to RA				
Credit	20				
Term (Summer/Autumn)	Summer				
Pre-requisite(s)	After Completion of 1st Year's 3 modules				
Co-requisite(s)					
Convenor	Dr Karim Mukhtar				
Date of Approval					
Brief description (aims, objectives, content, teaching and learning methods), learning outcomes)	The module examines service improvement and innovation and provides the scope and skills for the student to undertake an evidence-based service improvement project				
	By the end of the module the practitioner will demonstrate:				
	Topic	Knowledge	Skills	Attitude	Supervision of studies
A Clinical audit	<ol style="list-style-type: none"> 1. Explain what clinical audit is including a full explanation of the audit cycle 2. Identify suitable sources for standards against which the audit will be conducted 	<ol style="list-style-type: none"> 1. Be able to design a clinical audit project including the drafting of a protocol, definition of adequate patient numbers. 2. Be able to organise a clinical audit project 3. Be able to write an audit report including discussion of changes that will be made to remedy any deficiencies and the necessary. Repeat of the audit following these changes 	<ol style="list-style-type: none"> 3. Understand the ethical issues of clinical audit 4. Be able to sensitively deal with problems identified by an audit 	<ol style="list-style-type: none"> 3. Be able to assess the quality of a protocol drafted by another person. 4. offer suitable critical appraisal & support identifying major areas of 	

					weakness	
		B Service evaluation	<ol style="list-style-type: none"> 1. Explain what a service evaluation is 2. compare the relative uses of service evaluation and audit 3. Identify suitable components of the service for evaluation 	<ol style="list-style-type: none"> 1. Be able to design a service evaluation including the drafting of a protocol, definition of adequate patient numbers. 2. Be able to organise a service evaluation 3. The able to write a report on a completed service evaluation including further of changes that could be made to the service to bring about an improvement 	<ol style="list-style-type: none"> 3. Understand the ethical issues of service evaluation 4. Be able to sensitively deal with problems identified by an evaluation 	<ol style="list-style-type: none"> 3. Be able to assess the quality of a protocol drafted by another person. 4. offer suitable critical appraisal & support identifying major areas of weakness
		C Clinical research	<ol style="list-style-type: none"> 1. Explain the importance of ongoing clinical research 2. Explain the design of research projects in <ol style="list-style-type: none"> a. none quantified tissue based studies, b. qualitative studies c. quantitative studies d. Systematic review 3. understand the problems of recruitment and how these can be addressed 4. be able to make a realistic assessment of how long the research project will take 5. Explain the legal restrictions on research eg tissue based, mental capacity Human 	<ol style="list-style-type: none"> 1. Be able to design a clinical research project involving recruitment of patients as participants including <ol style="list-style-type: none"> a. defining inclusion and exclusion criteria. b. Identify Numbers of participants required c. Be able to carry out a power calculation d. Be able to draft a participant information sheet e. Be able to draft a participant 	<ol style="list-style-type: none"> 2. Understand the need for ongoing research in the NHS 3. Place a high importance on the quality of information given to potential research participants 4. Place a high importance on the process of giving information and gaining consent 5. Place a high importance on proper explanation to people whose first language is 	<ol style="list-style-type: none"> 2. Be able to assess the quality of a protocol drafted by another person. 3. offer suitable critical appraisal & support identifying major areas of

		6. Rights. GCP 7. Draft a suitable realistic budget for carrying out a research project	consent form 2. Be able to write a questionnaire	not English 6. Understand the implications of genetic studies.	weakness
	D review and approval of studies	1. Explain the research governance & audit control systems within an NHS trust 2. Explain the need for research ethics review 3. Explain which ethics committee a project to be referred to	1. Be able to complete an NHS research ethics application form	9. Understand the need for proper consideration of ethical project design at the outset (built-in rather than bolt-on ethics)	9. Be able to assess the quality of a protocol drafted by another person. 10. offer suitable critical appraisal & support identifying major areas of weakness
Method(s) of assessment	Coursework- For the Theory: Short Answer Questions MCQ's EMQ's Script Concordance Questions on module content				
Module Code					
Module Title	Module 5. Clinical Governance				
Credit	20				
Term (Autumn)	Autumn				

/Winter)	
Pre-requisite (s)	After completion of 1 st year's 3 modules
Co-requisite s(s)	
Conven or	Dr Amr Abdelaal
Date of Approva l	
Module Code	
Module Title	
Credit	
Term (Autumn /Spring)	
Pre-requisite (s)	After completion of 1 st year's 3 modules
Co-requisite s(s)	
Conven or	
Date of Approva l	
Brief description (<i>aims, objectives, content, teaching and learning method(s), learning outcomes</i>)	<p>Management, Clinical Governance, Education & Maintenance of Standards</p> <p>Objectives:</p> <ol style="list-style-type: none"> 1. Educational issues relating to doctors, nursing staff, theatre staff with RA 2. Understand "what constitutes being competent" 3. Overview of Teaching and training strategies in RA 4. Understand Management issues relating to RA 5. Understand Cost effectiveness issues as it pertains to RA

Module Code	
Module Title	Module 6. RA in Special Circumstances and situations or subspecialties
Credit	20
Term (Autumn /Winter)	
Pre-requisite (s)	After Completion of 1 st Year's 3 Modules
Co-requisite s(s)	
Convenor	Dr Dhiraj Ail
Date of Approval	
Module Code	
Module Title	
Credit	
Semester (Autumn /Spring)	
Pre-requisite (s)	Completion of year 1 and 2 modules
Co-requisite s(s)	
Convenor	
Date of Approval	
Brief description (aims, objectives, content, teaching)	<p>3f3t ~ ~ °f3 ~ #0 ~ "E L" # ~ #E L 1 ° # \$ 1 ° ~ 1 - a ~ 1 E #</p> <p>Outcomes and aims of this module: To gain understanding in areas of regional anaesthesia under special circumstances To understand the effects of regional anaesthesia on the health service vs GA's To increase knowledge regarding outcome measures for regional anaesthesia To future developments in Regional Anaesthesia</p>

<i>and learning method(s), learning outcome(s)</i>	1. Regional Anaesthesia in specific circumstances		
	Paediatrics Difference in Physiology and application to regional Anaesthesia Pharmacology of LA in children Adjuvant drugs used in RA in children. Procedure specific blocks in children Ilio-inguinal block Penile block Central Neuraxial blockade in children Use of ultrasound in placement of NA blockade		
	Pregnancy Labour epidurals Technique differences in labour epidurals Use of ultrasound in epidural placement Infusion vs bolus in labour Use of PCEA in labour Local anaesthetic and the Foetus Placental barrier Protein binding Pudendal blocks in labour		
	Elderly Physiological reserve and local anaesthetic techniques Central neuraxial blocks Brachial plexus blocks affecting the phrenic nerve Protein binding of local anaesthetics in the elderly Pain perception in the elderly		
	Pathological conditions Blocks in cancer Coeliac Plexus blocks Blocks used in chronic pain situations Nerve root blocks Intra-articular blocks of the vertebrae Trigeminal blocks Dorsal scapular blocks Sympathetic blocks Stellate ganglion blocks Thoracic sympathetic blocks (ETS) Intravenous regional anaesthesia		

<p>Biers block Indications Tourniquet type and pressure Choice of local anaesthetic Duration of action</p> <p>Other intravenous use of local anaesthetics Cardiac arrhythmias Suppress the Intubation Response Chronic pain syndromes</p>		
<p>2 .Regional Anaesthesia and Enhanced recovery programmes.</p>		
<p>2.1 Effect of regional anaesthesia on physiotherapy Effect of RA on early mobilisation RA as a part of a “Multimodal Anaesthetic Technique”</p> <p>2.2 Local infiltration vs Blocks in Knee and Hip Surgery.</p> <p>2.3 RA in abdominal surgery Role of rectus sheath catheters Role of TAP blocks Role of thoracic epidurals.</p>		
<p>3.Cost Effectiveness of Regional Anaesthesia</p>		
<p>3.1 Cost of regional anaesthesia vs cost of general anaesthesia Cost of disposables and drugs Ultrasound vs nerve stimulation Cost of theatre time taken to perform regional anaesthesia Cost of time in recovery Cost of time to discharge from the ward</p> <p>3.2 Cost to the patient undergoing regional anaesthesia RA as Stressful for the patient Patient satisfaction</p> <p>3.3 Cost to the health service as a whole Short and long term complications of regional anaesthesia Litigation and regional anaesthesia</p>		
<p>4. Outcome measures of regional anaesthesia</p>		
<p>4.1 Block efficacy Patient satisfaction Synergistic effects of surgery & RA on surgical recovery.</p> <p>4.2 Complication rate following regional anaesthesia (block specific) Short term complications Long term complications Recovery time of common complications</p> <p>4.3 Ultrasound vs nerve stimulation on block satisfaction</p>		

	<p>4.4 Cost to society vs general anaesthesia</p> <p>4.5 NAP3</p>		
	<p>5. Malignancy and Regional anaesthesia</p>		
	<p>5.1 GA vs Regional for Anaesthetising Cancer surgeries</p>		
	<p>5.2 Regional anaesthesia for Breast surgeries Paravertebral blocks Ultrasound guidance in placements Single shot vs Continuous blocks</p>		
	<p>5.3 Regional anaesthesia as an adjuvant to improve outcomes (e.g. Ovarian Cancer Surgery)</p>		
	<p>6.Future advances in Regional Anaesthesia</p>		
	<p>6.1 Ultrasound development Resolution development Needle development</p>		
	<p>6.2 Development of new drugs</p>		
	<p>6.3 Safety gadgets</p>		
Method(s) of assessment	<p>Coursework- For the Theory:</p> <p>Short Answer Questions MCQ's EMQ's Script Concordance Questions on module content</p>		
<p>b Please specify which/whether any existing Modules are to be withdrawn from the) Course.</p> <p>None</p>			

<p>G Staffing 3 a Are new teaching appointments required and if so how many, at what level and how does the School(s)/Faculty intend to fund these?) No</p>
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	<p>b If no new teaching appointments are required, what teaching adjustments for existing faculty are proposed if</p> <ul style="list-style-type: none"> i) new Modules of teaching are required? ii) certain existing Modules of teaching are to be withdrawn? <p>Apart from the website designer, Faculty (all RA enthusiasts) from NHS Trusts throughout the UK have volunteered to deliver this course.</p>
	<p>c What are the resource implications for Schools of Studies outside the sponsoring School(s) (e.g. service teaching, overseas exchange links)? Please give below the outcome of consultations that have taken place on this matter (including with the relevant Faculty/Faculties) and attach relevant documentation.</p> <p>The argument has been that all Consultant Anaesthetists in the UK have to demonstrate on-going Continuous Professional Development and being involved with this course helps faculty satisfy this GMC Revalidation requirement.</p>

G4 Other resources	
a)	<p>Is any other additional recurrent or non-recurrent expenditure envisaged in the sponsoring School(s)? If so, please give details, indicating how the School(s)/Faculty intends to fund these:</p> <ul style="list-style-type: none"> i) equipment, including computers <p>Many of the resources needed will be electronic, Blackboard and web-based. Students will be expected to use computer equipment within their workplace or at home. They may access the 24 hour services at all NHS Trusts and ECB/Main Library too.</p>
	<ul style="list-style-type: none"> ii) consumables <p>No more than standard modules.</p>
	<ul style="list-style-type: none"> iii) non-teaching staff <p>E-learning Technologist support for setting up online resources and running the deliverance of on-line information (the VRE), data collection and posting the assessments.</p>
b)	<p>What are the resource implications for the following central services of the course:</p> <ul style="list-style-type: none"> i) academic administration <p>As per similar courses</p>
	<ul style="list-style-type: none"> ii) the Audio Visual Service

Videocasts and use of Lecture capture to record master-classes
iii) Centre for English Language and British Studies N/A
iv) Dean of Students' Office No more than other MED Part Time CPD programmes
v) IT and Computing Services Speak to Helen Latham in the Finance Department
vi) Library and Learning Resources a) Resources: <ul style="list-style-type: none"> • What resources (books, journals, other media) are already available in the Library to support this programme? <p>A range of books and journals already is in place</p> <ul style="list-style-type: none"> • What resources (books, journals, other media) other than those already available will be required (a) immediately (b) as the programme numbers increase? <i>The answer should include comments on the need for additional copies as well as for new stock and on the degree of reliance on interlending which may be necessary to support the programme.</i> <p>Additional copies of the Core texts:</p>
b) Services <ul style="list-style-type: none"> • What Library services are likely to be used by student taking this programme (a) during the daytime (b) in the evening and at weekends? <i>Please comment on the likely use of Restricted Loan, and the Audio-Visual Services and on the need for evening/weekend access to borrowing facilities, particularly by part-time or distance learning students. Will there be regular teaching in the evening? Will any teaching take place away from the campus? Will professional placement form part of the programme?</i> <p>Most students are likely to use online and digital library and information resources. Students are also likely to use own Trust Library resources.</p>

c) Usage

- Are there other, similar programmes which the Library could use as indicators of likely demand for stock and services if the programme is approved and introduced?

Not possible to answer.

- What level of bibliographic instruction is likely to be required in order that the students taking the programme are able to use the Library fully and effectively? Will this be given by faculty or by Library staff?

2-3 hours induction per cohort by Library staff

vii) teaching accommodation

This will be a rare occurrence and difficult to quantify as most courses will be day courses either at the UEA in Norwich or using the London UEA facility

viii) University Counselling Service

Occasional- as with other MED programmes

ix) University Careers Service

Unlikely

c) **Equal Opportunities**

- i) Is any special provision (e.g. equipment) or alteration (e.g. to facilitate access, to ensure health and safety is maintained) required to preserve and enhance equality of opportunity.

No

- ii) Has the Dean of Students' Office been consulted and if so, what is their advice?

No

It is important that the Schools discuss with the Information Services Directorate any resource implications and that any additional needs can be met from within their routine resource allocation unless otherwise indicated in the comment above.

SECTION H: APPROVAL SHEET

TITLE OF PROGRAMME:

1. CENTRAL SERVICES
a) Director of Careers Centre: Date: (Section F2 refers)
b) Access and Admissions Office: Date: (Section F3 refers)
c) Deputy Academic Registrar (Planning Office): Date: (Section F3 refers if the proposal is for additional intake numbers)
d) Director of Library, Learning and IT Services: Date: (Section G4b refers if the proposal has resource implications)

2.	DEAN of the FACULTY of MEDICINE & HEALTH SCIENCES Date of approval: Signature of Chair:
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After signatures have been obtained, please forward this form to Sue Korja, Room 3.30, Learning, Teaching and Quality Office, Academic Division, Floor 3, The Registry

3. LEARNING, TEACHING AND QUALITY COMMITTEE APPROVAL

3.1 (for new course proposals with resource implications)

Date of LTQC Approval in principle:

Signature of Chair:
.....

3.2 (for new course proposals without resource implications/major modifications to existing courses)

i) Signature of Director of Undergraduate Studies or Director of Graduate Studies (as appropriate):
.....

Date:

ii)

Signature of Academic Registrar:
.....

Date:

iii)

Signature of Director of Admissions (or nominee):
.....

Date:

4. FACULTY APPROVAL

(for new course proposals remitted to the Faculty for detailed consideration)

Date of Faculty approval:

Signature of Associate Dean: