



## Master of Science in Medical Ultrasound

Accredited by The Consortium for the Accreditation of Sonographic Education (CASE)



**Please note:** *Bournemouth University is the awarding body for this degree at present although the MSc Medical Ultrasound is delivered entirely by the Centre for Ultrasound Studies at the AECC. Please note that all Programmes starting in September 2017 will be validated by AECC and not BU, including the MSc Medical Ultrasound programme. This means that the qualification you receive at the end of your studies will be made in the name of this institution. Currently we are applying for University College title and we hope our new name will be in place by September 2017. In this case, our current name of AECC will be replaced by our new name, which will incorporate the University College title. Please be assured that the qualification, the teaching staff, the content and the assessments will be unchanged, and the programme will continue to be delivered, as it is now, by the Centre for Ultrasound Studies and accredited by CASE. Nothing will change in fact apart from the name of the institution on the degree parchment you receive when you graduate.*

## COURSE INFORMATION (Enrolment October 2017)

The MSc degree in Medical Ultrasound programme, has been developed by the Centre for Ultrasound Studies (CUS), Anglo-European College of Chiropractic (AECC), to support professional development for healthcare professions including radiographers, physiotherapists, chiropractors, podiatrists and doctors to attain the generic skills and attitudes of continuing professional development, experiential learning and reflective practice, and to develop advanced clinical and practical skills in ultrasound practice. The MSc is a part-time programme enabling healthcare practitioners to combine professional learning in the workplace with a postgraduate academic qualification.

**Entry requirements:** Applicants must have a recognised professional qualification or a first degree in a relevant subject in line with the admissions regulations. Credit for prior learning is possible on approval by the Programme Leader. **Applicants must submit at the time of application, to the satisfaction of the Programme Leader, a Clinical Workplace Agreement (completed by the work-place supervisor/mentor).** This ensures that the clinical requirements of the programme can be met by the student.

**A limited number of Clinical placements** are available at CUS. Placements are at the discretion of the Programme Leader and are reviewed each year. These are charged at an additional cost to the programme fee. CUS clinical placement students should expect to attend 1 - 2 clinical placement days per month, for each clinical application, for a period of at least 6 months. For example, a student studying Upper Limb MSK Ultrasound and Lower Limb MSK Ultrasound should expect to attend clinical placement days 3-4 times per month. The current cost for each clinical placement day is £240. Please contact [sbattiston@aecc.ac.uk](mailto:sbattiston@aecc.ac.uk) for dates and further details on CUS clinical placements.

Applicants for whom English is not their first language, must offer evidence of qualifications in written and spoken English. Acceptable qualification is IELTS (academic) 7.0.

Applicants should confirm their ability to study at this level by presenting evidence of:

- a UK bachelors degree or overseas equivalent in a relevant subject.



# CENTRE FOR ULTRASOUND STUDIES

Feedback from one of our graduates

*Just a small word to tell you that my 2 studies done during the MSc have been published in the "International Musculoskeletal Medicine" journal. .... I want to thank you all for this great experience lived at the AECC.*

**Length:** the course consists of three progressive levels: the Postgraduate Certificate, the Postgraduate Diploma and the MSc. Exit qualifications are available at each of these stages.

<b>PgCert (60 Level 7 credits)</b>	<b>Normally one year</b>	<b>Part-time study</b>
<b>PgDip (120 Level 7 credits)</b>	<b>Normally an additional year</b>	<b>Part-time study</b>
<b>MSc (180 Level 7 credits)</b>	<b>Normally an additional one to two years</b>	<b>Part time study</b>

**Enrolment:** Once a year in October.

## **Programme Units:**

180 Master's level credits are required for an MSc Medical Ultrasound. For the MSc Medical Ultrasound award you must complete the Science and Instrumentation mandatory unit (20 credits) and either the Research Methods and Dissertation units (60 credits) or the Audit Methods and Clinical Audit units (60 credits). This totals 80 credits. The remaining 100 credits can be made up from the Optional Units listed. Please note that it is not possible to undertake any units that take this total above 180 credits.

Due to the practical-skills workload of the Ultrasound Skills units, we do not advise students to undertake more than 40 credits per year in skills-based units such as Upper Limb Musculoskeletal Ultrasound, Lower Limb Musculoskeletal Ultrasound, Obstetrics 1<sup>st</sup> Trimester Ultrasound etc).

## **Science and Instrumentation of Ultrasound (20 credits) core mandatory unit**

This unit aims to develop knowledge and understanding of the science and instrumentation of ultrasound in order to produce optimum images. Emphasis will be on safety and quality assurance leading to safe practice. During attendance for this Unit, students will be introduced to the entire MSc programme and the underlying concepts of professional development and advanced professional practice (mandatory Induction Seminar).

*Assessment will consist of a critical written account of the safe use of ultrasound in clinical practice supported by empirical evidence; 4000 words max (100%) and an OSE (Objective Structured Examination) (P/F).*



## Optional Ultrasound Skills-based Units

### **Gynaecology Ultrasound (20 credits)**

This unit aims to develop the knowledge and understanding of gynaecology ultrasound anatomy and pathology. Students will explore the interventional and non-interventional techniques and procedures of obtaining diagnostic ultrasound images. This is an attendance-based unit.

*Assessment will consist of 1 critical written account of the safe use of gynaecology ultrasound in clinical practice supported by empirical evidence (2000 words max (60%)); 1 case study (1500 words max) (40%); a log book of a minimum 75 cases (P/F) and a competency assessment of 3 cases (P/F).*

### **First Trimester Ultrasound (20 credits)**

This unit aims to develop the knowledge and understanding of first trimester ultrasound. Students will explore the interventional and non-interventional techniques and procedures of obtaining diagnostic ultrasound images. This is an attendance-based unit.

*Assessment will consist of 1 critical written account of the safe use of first trimester ultrasound in clinical practice supported by empirical evidence (2000 words max 1st trimester (60%)); 1 case study (1st trimester) (1500 words max) (40%); a log book of a minimum 50 cases (1st trimester) (P/F) and a competency assessment of 3 cases (P/F).*

### **Second & Third Trimester Ultrasound (20 credits)**

This unit aims to develop the knowledge and understanding in 2nd and 3rd trimester obstetrics ultrasound anatomy and pathology. Students will have the opportunity to specialise in any one or all of these areas. Students will be guided in the competent production, interpretation, and assessment and reporting of obstetrics ultrasound images. This is an attendance-based unit.

*Assessment will consist of 2 critical written accounts of the safe use of second and third trimester ultrasound in clinical practice supported by empirical evidence (1000 words max each in Second and Third Trimester Ultrasound) (60%); 2 case studies (one in Second Trimester and one in Third Trimester) (750 words max each) (40%); a log book of a minimum 75 cases (P/F) and a competency assessment of three cases (2 in Second Trimester and 1 in Third Trimester) (P/F).*

### **General Ultrasound (40 credits)**

#### **Abdominal and superficial structures (scrotum, breast and thyroid)**

This unit aims to develop the knowledge and understanding of abdominal and superficial structures (scrotum, breast and thyroid) ultrasound anatomy and pathology. This is an attendance-based unit.

*Assessment will consist of 2 critical written accounts of the safe use of abdominal and superficial structures ultrasound in clinical practice supported by empirical evidence (2000 words each, one in abdominal and one in superficial structures) (60%); 2 case studies (one in abdominal and one in superficial structures) (1500 words max each) (40%); log book of a minimum of 125 cases (P/F) and a competency assessment of six cases (3 in abdomen, 3 in superficial structures) (P/F).*



## **Musculoskeletal Ultrasound (Upper Limb) (20 credits)**

This unit aims to develop the knowledge and understanding of upper limb musculoskeletal ultrasound anatomy and pathology of the upper limbs, with emphasis on competent interpretation and assessment of ultrasound images. This is an attendance-based unit.

*Assessment will consist of a critical written account of the safe use of upper limb musculoskeletal ultrasound in clinical practice supported by empirical evidence (2000 word max) (60%); 1 case study (1500 words max) (40%); a log book of a minimum 50 upper limb cases (P/F) and a competency assessment of upper limb cases (3) (P/F).*

## **Musculoskeletal Ultrasound (Lower Limb) (20 credits)**

This unit aims to develop the knowledge and understanding of lower limb musculoskeletal ultrasound anatomy and pathology of the lower limbs, with emphasis on competent interpretation and assessment of ultrasound images. This is an attendance-based unit.

*Assessment will consist of a critical written account of the safe use of lower limb musculoskeletal ultrasound in clinical practice supported by empirical evidence (2000 word max) (60%); 1 case study (1500 words max) (40%); a log book of a minimum 50 lower limb cases (P/F) and a competency assessment of lower limb cases (3) (P/F).*

## **Musculoskeletal Ultrasound (Hip and Groin) (20 credits)**

This unit aims to develop the knowledge and understanding of hip and groin musculoskeletal ultrasound anatomy and pathology with emphasis on competent interpretation and assessment of ultrasound images. This is an attendance-based unit.

*Assessment will consist of a critical written account of the safe use of hip and groin musculoskeletal ultrasound in clinical practice supported by empirical evidence (2000 word max) (60%); 1 case study (in hip or groin) (1500 words max) (40%); a log book of a minimum 50 hip and groin cases (P/F) and a competency assessment of hip and groin cases (3) (P/F).*

## **Negotiated Skills Ultrasound (20 credits)**

You can complete this unit up to 5 times basing each unit on a different clinical skill. **For example:** Vascular; Soft Tissue; Breast; Vascular screening (Abdominal Aortic Aneurysm (AAA) or DVT or Carotids); Nuchal Translucency (NT) Screening; Gynaecology Contrast Ultrasound; Guided Injection. Students will attend a facilitation session including tutorials and practical demonstrations. Students will also learn in the workplace setting through supervised clinical placements and negotiated self-directed learning strategies.

**Please note that this is a self-directed learning unit and there are no bespoke skills lectures for this unit.**

*Assessment will consist of a critical written account of the safe use of ultrasound in a negotiated clinical application supported by empirical evidence (2000 word max) (60%); 1 case study (1500 words max) (40%); a log book of a 25 - 50 cases (P/F) and a competency assessment of cases (3) (P/F).*



## Optional Ultrasound Non Skills-based Units

### **Work-based Portfolio (20 credits)**

This unit enables students to compile a portfolio of their work in clinical practice demonstrating critical evaluation and reflective practice.

*Assessment will consist of a portfolio documenting evidence of critical evaluation and reflective practice. In addition to a critical reflective text, evidence of learning through evaluation of the research evidence, clinical audit, case studies and a record of clinical practice may be included. 5000 words plus appendices (100%).*

### **Structured Learning Event (20 credits)**

A feature of continuing professional development is the ability to identify professional learning needs, attend relevant formal learning events, and then apply the acquired learning experiences and outcomes in the workplace setting. This unit develops skills in reflection and critical evaluation of oneself as a learner in the formalised setting, application of new knowledge and skills in the complex and unpredictable professional setting, and reflection-on-action in evaluating change in one's own performance. Students will be required to attend an approved (by the Pathway Leader) seminar, and base their assignment on their learning experiences and learning outcomes in practice.

*Assessment will consist of a 5000 word (max) critical review with supporting evidence.*

### **Current Advances in Practice (20 credits)**

The professional knowledge base moves at an alarming rate, and it is incumbent on practitioners to keep abreast of developments in all aspects of professional practice. This unit develops skills in finding and retrieving relevant information, and in the synthesis of complex and conflicting information to create useful and relevant knowledge. In this unit, individuals will identify an area of particular need or interest, and disseminate information at the forefront of knowledge in that topic area.

*Assessment will consist of a 5000 word (max) critical review of the literature with supporting evidence.*

### **Evidence-based Practice (20 credits)**

In today's healthcare environment, practitioners must not only keep abreast of current research evidence, but also incorporate it where appropriate into clinical practice. In this unit, skills will be developed in the search and retrieval for research evidence, critical appraisal of research evidence, and how research findings can be applied to an individual patient. This is an attendance-based unit.

*Assessment will consist of a 2500 word Evidence-based Case Report (50%) and a 2500 word critical appraisal of a given published research paper(s) (50%).*



## Masters Stage (mandatory units)

### **Research Methods (20 credits)**

To fully appreciate and implement evidence-based practice, practitioners must understand different types of clinical research designs, and the best designs to answer particular types of clinical questions. This unit not only develops skills in clinical research designs, data collection and data analysis, but prepares the individual to identify potential areas for research inquiry and systematically plan a research investigation. This is an attendance-based unit.

*Assessment is through a reflective research Protocol (approximately 5000 words) (100%).*

### **Dissertation (40 credits)**

At Masters level, practitioners must have completed a research investigation in an area applicable to professional practice. In many cases, the investigation will be carried out in the professional practice setting, collecting and analysing real-time clinical data. Facilities are also available at the institution for those wishing to conduct experimental investigations. The individual will be supported throughout his/her dissertation work by expert research supervision and with access to institutional research facilities and ethics approval boards.

*Assessment is through a Research Dissertation (approximately 10000 words) (100%).*

**or**

### **Audit Methods (20 credits)**

To fully appreciate and implement evidence-based practice, practitioners must understand clinical audit and the role in clinical governance. This unit develops skills in data collection and data analysis based on audit findings, and ways to improve clinical practice. This is an attendance-based unit.

*Assessment is through a reflective audit protocol, (approximately 5000 words).*

### **Clinical Audit (40 credits)**

For many healthcare professionals a clinical audit is very relevant to professional practice, allowing recommendations to be made to improve professional practice.

*Assessment is through a Clinical Audit (approximately 10000 words) (100%).*

Normally, students will take a total of 60 credits in each year (3 units). However students can proceed at their own pace and do more or less units in any one year. Fees are paid annually irrespective of the number of units completed.



## CENTRE FOR ULTRASOUND STUDIES

### **Teaching and Learning:**

This will take the form of tutorials, workshops, practical clinical skills classes, seminars, small group work and lectures, as required within individual units. Students will be required to undertake private study, reading, research, and prepare presentations and assignments, and should expect to spend, on average, 8 hours per week study time.

Formal attendance is required on the ultrasound clinical application units and some non-clinical units.

For all units, students will have identified contact with unit tutors through email/phone and pre-arranged, mutually convenient one-to-one tutorial sessions at the institution. Arrangements for submission of assignments and feedback on performance and progression will be provided throughout the programme through these tutor links.

Students will have ready access to web-based resources, including electronic databases and gateways, on-line journals and links to relevant web sites. A dedicated and secure website will house all relevant documentation for students enrolled on the programme, as well as up-to-date information and notices, details of deadlines for assignments, and a discussion forum for students to network amongst themselves.

**Assessment:** Each unit will be individually assessed with methods appropriate to the unit of study. Assessment methods used on the course will normally consist of written assignments (approximately 2000-5000 word per 20 credit unit) or a combination of written work and practical examinations.



# CENTRE FOR ULTRASOUND STUDIES

## MSc Medical Ultrasound Seminars 2017-18

**All dates are subject to change.**

Although all seminar dates are listed below, each student will attend only those seminars required for their chosen units per year.

Enrolment & Induction (08:45 – 16:00)	02 Oct 2017
Science and Instrumentation of Ultrasound (3.5 days)	02-05 Oct 2017
<b>Practice Educator Induction 13:00 – 16:00</b> <i>(students need not attend, please inform your Practice Educator)</i>	<b>27 Nov 2017</b>
Clinical application seminars are dependent on sufficient student enrolments:	
Musculoskeletal Ultrasound (Upper Limb)      2 days	18-19 Oct 2017
Gynaecology Ultrasound                              2 days	01-02 Nov 2017
Musculoskeletal Ultrasound (Lower Limb)      2 days	08-09 Nov 2017
Musculoskeletal Ultrasound (Hip and Groin)    2 days	15-16 Nov 2017
General Ultrasound                                      3 days	20-22 Nov 2017
1 <sup>st</sup> Trimester Obstetrics Ultrasound                2 days	28-29 Nov 2017
2 <sup>nd</sup> and 3 <sup>rd</sup> Trimester Obstetrics Ultrasound    2 days	30 Nov-1 Dec
Evidence-based Practice                                3 days	05-07 Oct 2017
Audit Methods (normally in Year 2)                1 day	11 Oct 2017
Research Methods (normally in Year 2)            3 days	12-14 Oct 2017
Clinical Competency Assessments <i>Musculoskeletal practical assessments will take place at the Centre for Ultrasound Studies, Bournemouth. Whenever possible a student will be assessed on one day. You will be notified of your assessment date by early April.</i> <i>All other skills-based units (Obstetrics, Gynaecology, General and all Negotiated Skills other than MSK Soft Tissue) will be assessed at the student's workplace with your Practice Educator in attendance and a CUS moderator.</i>	May/June 2018
Clinical Competency Re-sits/Re-assessments	11&12 Sept 2018

**Programme Leader:** Dr Pervez 'Budgie' Hussain [bhussain@aecc.ac.uk](mailto:bhussain@aecc.ac.uk)

For a complete list of teaching faculty please visit  
<http://www.aecc.ac.uk/undergraduate/mchiro/aecc-teaching-faculty/>



## CENTRE FOR ULTRASOUND STUDIES

### Accommodation while attending seminars:

Bournemouth has accommodation to suit everyone. Please visit [www.aecc.ac.uk/cpd/accommodation.aspx](http://www.aecc.ac.uk/cpd/accommodation.aspx) for details. The closest B&B is The Clarendon Lodge although Mory House, Woodlands House and The Woodside are also a short walk away.

The closest train station is Pokesdown for Boscombe, a short 10 minute walk to the college. Bournemouth main train station is a short taxi journey.

### Fees:

The \*annual cost of the course (October 2017-September 2018) is:

	<b>Annual fee if paid in full by 31<sup>st</sup> October</b>
<b>EU nationals</b> who currently <b>do not</b> hold any Masters or other level 7 degree (PgCert/PgDip) or higher	£2973
<b>EU nationals</b> who hold any Masters or other level 7 degree (PgCert/PgDip) or higher	£3613
<b>EEA (non-EU) or Swiss nationals</b>	£3613
<b>All other applicants</b>	£4766

*\*Course fees may be subject to change and annual increases. Fees are paid annually irrespective of the number of units completed.*

### **AECC Graduate Loyalty Discount for AECC alumni:**

**For all new enrolments starting in 2017: we offer a 10% discount, to AECC alumni, on the annual tuition fee for the duration of your part-time MSc programme.**

Three termly instalments may be arranged with the Finance Department. A surcharge of 5% is made for termly instalments.

The course organisers reserve the right to make alterations to course fees and arrangements and dates for teaching and learning sessions, including the decision to run any or all parts of the course in the light of demand.

AECC reserves the right to charge an additional fee for clinical competency assessments depending on location of assessment.



## CENTRE FOR ULTRASOUND STUDIES

### **Additional Costs:**

Students with external musculoskeletal clinical placements are offered mock assessment near the date of their final assessment at the Centre for Ultrasound Studies (CUS) to assess their progress and familiarise them with the CUS machine controls which will be used for their final assessment. This is optional and will take place in CUS. Those students who wish to attend will be charged a fee of £107. The programme team will provide a feedback on strengths, weaknesses and advice on any remedial training.

### **What you need to do:**

For further details please contact:

AECC Admissions  
[admissions@aecc.ac.uk](mailto:admissions@aecc.ac.uk)  
44 (0)1202 436 200  
Admissions Department  
AECC, 13-15 Parkwood Road, Bournemouth, BH5 2DF.

To discuss your specific learning requirements please contact [msc@aecc.ac.uk](mailto:msc@aecc.ac.uk)

**The final deadline for receipt of complete applications for enrolment in  
October 2017 is**

**31 July 2017**

All applications will be considered on or before 1 September 2017.



## MSc Medical Ultrasound

### Stage 3/Level 7

#### Core units (Compulsory)

Research Methods (20)  
Dissertation (40)  
or  
Audit Methods (20)  
Clinical Audit (40)

#### Exit qualification:

**MSc Medical Ultrasound**  
Requires 180 Level 7 credits

### Stage 2/Level 7

#### Option units

\*Gynaecology Ultrasound (20)  
\*Obstetrics First Trimester Ultrasound (20)  
\*Obstetrics Second and Third Trimester Ultrasound (20)  
\*General Ultrasound (40)  
\*Musculoskeletal Ultrasound (Hip and Groin) (20)  
\*Musculoskeletal Ultrasound (Upper Limb) (20)  
\*Musculoskeletal Ultrasound (Lower Limb) (20)  
\*Negotiated Skills Ultrasound (20) <sup>+</sup>  
Work-based Portfolio (20) <sup>++</sup>  
Evidence-based Practice (20)  
Structured Learning Event (20)  
Current Advances in Practice (20)

**Progression requirements**  
**120 Level 7 credits**

**Exit qualification:**  
**PG Dip Medical Ultrasound**  
Requires 120 Level 7 credits

### Stage 1/Level 7

#### Core units

Science and Instrumentation of Ultrasound (20)  
and  
at least ONE application-specific unit (\*) from the Option unit list

#### Option units

\*Gynaecology Ultrasound (20)  
\*Obstetrics First Trimester Ultrasound (20)  
\*Obstetrics Second and Third Trimester Ultrasound (20)  
\*General Ultrasound (40)  
\*Musculoskeletal Ultrasound (Hip and Groin) (20)  
\*Musculoskeletal Ultrasound (Upper Limb) (20)  
\*Musculoskeletal Ultrasound (Lower Limb) (20)  
\*Negotiated Skills Ultrasound (20) <sup>+</sup>  
Work-based Portfolio (20) <sup>++</sup>  
Evidence-based Practice (20)  
Structured Learning Event (20)  
Current Advances in Practice (20)

**Progression requirements**  
**60 Level 7 credits**

**Exit qualification:**  
**PG Cert Medical Ultrasound**  
Requires 60 Level 7 credits

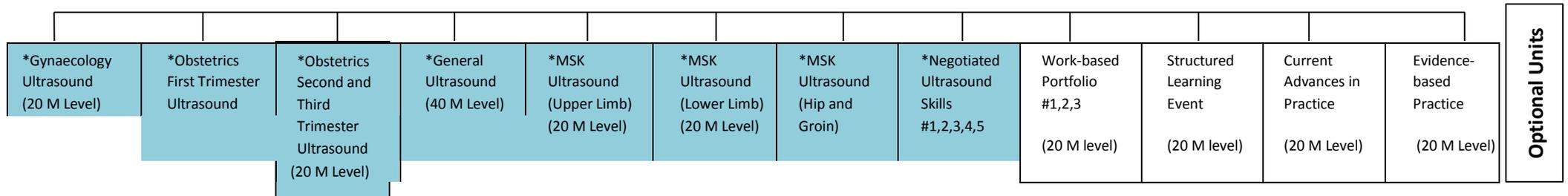


# CENTRE FOR ULTRASOUND STUDIES

## MSc Medical Ultrasound Unit Diagram

Science and Instrumentation (20 M Level) core unit

Plus an additional 40 credits to include at least one of the following **clinical application units\***



Post Graduate Certificate Medical Ultrasound (60 M Credits)

PgCert Exit  
Award

Plus an additional 60 level 7 credits from the optional units list

Post Graduate Diploma Medical Ultrasound (120 Level 7 Credits)

PgDip Exit  
Award

Audit  
Methods  
(20 M Level)

Research  
Methods  
(20 M Level)

OR

Clinical Audit  
(40 M Level)

Dissertation  
(40 M Level)

MSc Medical Ultrasound (180 Level 7 Credits)

MSc Exit Award

A student wishing to concentrate on Musculoskeletal Ultrasound would normally complete the following units.

1

**In Year 1**

1. Science and Instrumentation
2. Musculoskeletal Ultrasound (Upper Limb)
3. Musculoskeletal Ultrasound (Lower Limb)

2

**In Year 2**

1. Musculoskeletal Ultrasound (Hip and Groin)
2. Negotiated Ultrasound Skill in Soft Tissue
3. One of the non-clinical application units (Evidence-based Practice, Work-based Portfolio, Current Advances in Practice or Structured Learning Event)

3

**In Year 3**

1. Research Methods or Audit Methods
2. Dissertation or Clinical Audit

**A student wishing to concentrate on Obstetrics and Gynaecology Ultrasound would normally complete the following units.**

**1**

**In Year 1**

1. Science and Instrumentation
2. Obstetrics 1<sup>st</sup> Trimester Ultrasound
3. Obstetrics 2nd and 3rd Trimester Ultrasound

**2**

**In Year 2**

1. Gynaecology Ultrasound
2. Negotiated Ultrasound Skill in an Ob/Gyn topic
3. One of the non-clinical application units (Evidence-based Practice, Work-based Portfolio, Current Advances in Practice or Structured Learning Event)

**3**

**In Year 3**

1. Research Methods or Audit Methods
2. Dissertation or Clinical Audit