

## Module Specification

### KEY FACTS

Module name	Obstetric Ultrasound
Module code	RDM031
School	School of Health Sciences
Department or equivalent	Division of Applied Biological, Diagnostic and Therapeutic Sciences
UK credits	30
ECTS	15
Level	7

### MODULE SUMMARY

#### Module outline and aims

This module will develop your knowledge and clinical skills in obstetric ultrasound procedures and allow you to critically evaluate professional issues relating to ultrasound practice in this emotive area.

You will develop your knowledge and understanding to perform, interpret and report a wide range of clinical ultrasound examinations in obstetrics in a competent and professional manner, whilst being able to respond to changes in working practice and apply new techniques after critically evaluating them. You will develop the skills to be able to critically review management options for a range of common anomalies and situations.

The module will facilitate the extended role of the practitioner by encouraging the skills of reflection and analysis so that you can critically appraise current practice, propose and develop improvements in practice and so improve the service to the patient and the effectiveness of the ultrasound department.

#### Content outline

The module will cover the anatomy, embryology, physiology and ultrasound appearances of normal and abnormal obstetric ultrasound appearances, throughout all three trimesters. Ultrasound assessment of early pregnancy complications and as a screening tool in on-going pregnancies will be included within the module. The role of obstetric ultrasound in relation to other diagnostic and screening tests will be discussed.

A range of pathological conditions will be considered and how they relate to clinical practice, equipment selection and ultrasound technique, communication and a wide range of relevant current issues. Obstetric related gynaecological pathology will be considered within tutorials.

Additionally the module will address any current issues in ultrasound that are relevant to the development of the practitioner in the field of obstetric ultrasound. You will be expected to participate in work-based learning in the clinical departments and undertake a wide range of obstetric ultrasound examinations, which will be evidenced in your clinical portfolio.

**Co-requisites:**

For the ultrasound programme, this module can only be chosen if the Fundamental Principles of Ultrasound Practice and Developing Advanced Practice modules have already been studied/will also be studied.

**WHAT WILL I BE EXPECTED TO ACHIEVE?**

**On successful completion of this module, you will be expected to be able to:**

Knowledge and understanding:

- Demonstrate an understanding of the normal and abnormal ultrasound appearances and critically analyse clinical pathways of common pathologies in obstetrics and how the advanced practitioner role can be developed in the clinical setting.
- Demonstrate knowledge of appropriate preparation and care suitable to the ultrasound procedure and clinical history and show an ability to critically evaluate ultrasound in relation to advances in ultrasound technology, other diagnostic tests and procedures.

Skills:

- Perform, discuss, interpret and report on normal and abnormal obstetric ultrasound appearances, including B-mode, spectral and colour Doppler in a competent manner. This includes selecting and operating the equipment in a safe and appropriate manner according to the client's clinical condition. Critically analyse the findings in the context of the client's condition, demonstrating the effect on the management of the pregnancy.
- Demonstrate effective communication skills with clients throughout the ultrasound procedure, liaise with clinical colleagues and seek advice when required.
- Take responsibility for your own learning needs, by reflecting on your clinical and academic practice and apply problem solving skills to a variety of theoretical and clinical situations
- Critically evaluate current clinical practice within the ultrasound department in relation to national guidelines and evidence based practice.

Values and attitudes:

- Take responsibility for delivery and management of high quality client care, demonstrating the ability to critically analyse situations and resolve problems.
- Critically evaluate the ethical issues related to obstetric ultrasound and clinical care

**HOW WILL I LEARN?**

A blended learning approach is used, including key note lectures, seminars and tutorials, student led sessions, work-based clinical experience and reflective practice to cover the material within this module, in addition to on- line learning and on-line case discussions. Contact hours include directed study and on-line lectures.

The module runs across terms 1, 2 and 3. In addition to academic study you are

expected to undertake clinical canning sessions within a recognised clinical department to achieve first post competency.

*Teaching pattern:*

Teaching component	Teaching type	Contact hours (scheduled)	Self-directed study hours (independent)	Placement hours	Total student learning hours
First trimester, early pregnancy and obstetric related gynaecology	Lectures	9	50	On-going - until competent	59
Second Trimester screening and pathology	Lectures	15	100	On-going	115
Third trimester, high risk pregnancy and Doppler	Lectures	8	50	On-going	58
Screening	Tutorial	4	10	On-going	14
On-line lectures and case discussions	On-line	5	30	On-going	35
Clinical pathways	Tutorial	4	15	On-going	19
<b>Totals</b>		<b>45</b>	<b>255</b>	<b>On-going</b>	<b>300</b>

**WHAT TYPES OF ASSESSMENT AND FEEDBACK CAN I EXPECT?**

Assessments

Knowledge and understanding is assessed by an objective structured examination (OSE) to examine your comprehension and understanding of a variety of clinical applications, ultrasound findings and the role of ultrasound in the management of obstetric clients; a clinical portfolio to examine your ability to evaluate the literature and relate it to the clinical setting and reflect on clinical practice; and clinical assessments to assess your ability to perform a range of different examinations in a competent and professional manner.

*Assessment pattern:*

Assessment component	Assessment type	Weighting	Minimum qualifying mark	Pass/Fail?
Clinical Assessments	Practical skills	0	0	Yes
Case study	Written	70	50	N/A

	assignment On-line			
Clinical Portfolio	Written assignment including essay	0	0	Yes
OSE	Written Exam	30	50	N/A

### Assessment criteria

Assessment Criteria are descriptions of the skills, knowledge or attributes you need to demonstrate in order to complete an assessment successfully and Grade Related Criteria are descriptions of the level of skills, knowledge or attributes you need to demonstrate in order to achieve a certain grade or mark in an assessment.

### Feedback on assessment

Following an assessment, you will be given your marks and feedback in line with the Assessment Regulations and Policy. More information on the timing and type of feedback that will be provided for each assessment will be available from the module leader.

If you fail the module you may be offered a resit opportunity. If you successfully complete a resit you shall be awarded the credit for the module. The mark used for the purposes of calculation towards the award shall be the greater of the minimum pass mark for the module or the original mark obtained at the first attempt, as specified in the programme structure.

### Assessment Regulations

The Pass mark for the module is 50%. Any minimum qualifying marks for specific assessments are listed in the table above. The weighting of the different components can also be found above. The Programme Specification contains information on what happens if you fail an assessment component or the module.

## **INDICATIVE READING LIST**

### **Essential:**

Chudleigh, P. Thilaganathan, B. (2004) *Obstetric Ultrasound: How, Why and When*, 3<sup>rd</sup> edition, Churchill Livingstone

Loughna, P. Chitty, L. Evans, T. Chudleigh, T. (2009) Fetal size and dating: Charts recommended for clinical obstetric practice, *Ultrasound*, 17: 3: 161-167 Available at: <http://www.bmus.org/policies-guides/pg-home.asp>

National Screening Committee (2009) *National Occupational Standards and National Workforce Competencies*. NSC. Available at: <http://fetalanomaly.screening.nhs.uk/>

Nicolaides, K. (2004) *The 11- 13+6 week scan*. Fetal Medicine Foundation <http://www.fetalmedicine.com/fmf>

Nicolaides, K. (2004) Rizzo G, Hecher K, Ximenes R, *Doppler in Obstetrics*, Fetal Medicine Foundation. Available at <http://www.fetalmedicine.com/fmf>

Pilu, G. Nicolaides, K. Ximenes, R. Jeanty, P. (2002) *The 18 – 23 week scan*. ISUOG & Fetal Medicine Foundation <http://www.fetalmedicine.com/fmf>

**Recommended background reading material:**

- Abramsky, L. Chappel, J. (2003) *Prenatal Diagnosis, The Human Side* 2nd edition. Nelson Thomas
- Allan, L. Cook, A. Huggon, I. (2009) *Fetal Echocardiography – a practical guide*. Cambridge Medicine
- Baker, P. and Kenny, L. (2011) *Obstetrics by Ten Teachers*. 19<sup>th</sup> Edition. Hodder Arnold
- Benacerraf, B.(2008) *Ultrasound of Fetal Syndromes*, 2<sup>nd</sup> edition, Churchill Livingstone
- Callen, P. (2008) *Ultrasonography in Obstetrics and Gynaecology*, 5<sup>th</sup> Edition. W.B Saunders Company Ltd
- Collins, S. Sabaratnam, A. Hayes, K. Jackson, S. Impey, L. (2008) *Oxford Handbook of Obstetrics and Gynaecology*, 2<sup>nd</sup> edition. Oxford University Press, Oxford.
- Craig, M. (2012) *Essentials of Sonography and Patient Care*. 3<sup>rd</sup> edition. Elsevier
- Fredouille, C. Develay-Morice, J. Lombardi, C. (2014) *Fetal Heart Ultrasound*, 2<sup>nd</sup> edition. Elsevier
- Lees, C Albaigues, G. Deane, C. (2003) *Making Sense of Obstetric Doppler Ultrasound*. Arnold
- Magowan, B. Owen, P. Drife, J. (2009) *Clinical Obstetrics & Gynaecology - 2<sup>nd</sup> edition*, Saunders/Elsevier
- Moore, L. Persaud, T. Torchia, M. (2012) *Before We Are Born. Essentials of Embryology and Birth Defects*, 8th edition. Saunders
- Mitchell, B. Sharma, R. (2009) *Embryology*. Churchill Livingstone.
- Rees, M. Karoshi, M. Keith, L. (2008) *Obesity and Pregnancy*. RSM Press
- Smith, N. Smith, P. (2006) *Obstetric and gynaecological ultrasound made easy*. 2<sup>nd</sup> edition. Churchill Livingstone
- Thilaganathan, B. Sairam, S. Papageorghiou, A. Bhide, A. (2007) *Problem Based Obstetric Ultrasound*. Taylor & Francis Ltd/Informa UK Ltd.
- Twinning, P. McHugo, J. Pilling, D. (2007) *Textbook of Fetal Abnormalities*, 2<sup>nd</sup> edition. Churchill Livingstone
- United Kingdom Association of Sonographers 2008 *Guidelines for Professional Working Standards – Ultrasound Practice*, <http://www.sor.org/>
- Wladimiroff, J.Eik-Nes, S. (2009) *Ultrasound in Obstetrics and Gynaecology European Practice in Gynaecology and Obstetrics*. Elsevier

You should also have access to a range of journals and other reference material i.e.:

American Journal of Obstetrics and Gynaecology  
British Journal of Midwifery  
British Journal of Obstetrics and Gynaecology  
British Journal of Radiology  
British Medical Journal  
Clinical Radiology  
Current Opinions on Obstetrics and Gynaecology  
Journal of Clinical Ultrasound  
Journal of Ultrasound in Medicine  
Radiography  
Radiology  
The Lancet  
Ultrasound  
Ultrasound in Obstetrics and Gynaecology

Web sites such as:

[www.aium.org/](http://www.aium.org/) - American Institute for Ultrasound in Medicine  
[www.bmus.org](http://www.bmus.org) - British Medical Ultrasound Society  
[www.doh.gov.uk](http://www.doh.gov.uk) - Department of Health website for information on policies  
<http://www.e-lfh.org.uk/home/> E-Learning for Healthcare

[www.thefetus.net](http://www.thefetus.net) - Jeanty P  
<http://fetalanomaly.screening.nhs.uk/> - NHS Fetal Anomaly Screening Programme  
[www.isuog.org/](http://www.isuog.org/) - International Society of Ultrasound in Obstetrics and Gynaecology  
[www.ob-ultrasound.net](http://www.ob-ultrasound.net) - Woo J  
[www.rcog.org.uk](http://www.rcog.org.uk) - Royal College of Obstetricians and Gynaecologists  
[www.sor.org](http://www.sor.org) - Society of Radiographers  
<http://www.nmc-uk> - Nursing and Midwifery Council

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**Appendix:** see <http://www.hesa.ac.uk/content/view/1805/296/> for the full list of JACS codes and descriptions

<b>CODES</b>		
<b>HESA Code</b>	<b>Description</b>	<b>Price Group</b>
<b>4</b>	<b>Anatomy and Physiology</b>	<b>B</b>
<b>JACS Code</b>	<b>Description</b>	<b>Percentage (%)</b>
B821	The study of the principles and techniques in the use of radiation to provide medical diagnostic information.	100