

Validation and Accreditation Handbook

of the

Consortium for the Accreditation of Sonographic Education

March 2009

Member Organisations:

British Medical Ultrasound Society
British Society of Echocardiography
College of Radiographers
Institute of Physics and Engineering in Medicine
Royal College of Midwives
Society for Vascular Technology of Great Britain and Ireland



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All matters relating to CASE activities should be directed through the CASE Co-ordinator at the following address: -

The CASE Co-ordinator
c/o Institute of Physics and Engineering in Medicine
Fairmount House
230 Tadcaster Road
York
YO24 1ES
Tel: 01904 610821
Fax: 01904 612279
e-mail: case@ipem.ac.uk
<http://www.case-uk.org/>

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1.0 CONSORTIUM for the ACCREDITATION of SONOGRAPHIC EDUCATION

The Consortium for the Accreditation of Sonographic Education (CASE) was formed in 1993 and consists of six member organisations, drawn together by a common desire to ensure that the education and training of sonographers in the United Kingdom is delivered at an appropriate level to ensure 1st-post competency to practise and trainees exiting relevant programmes or courses are fit for purpose.

The philosophy and principle aim of the Consortium, through the accreditation of outcome-based high quality training programmes and courses, is to promote best ultrasound practice and ensure that ultrasound practitioners are safe and competent to practise, whilst taking into account informed views of service needs.

Individual ultrasound practice through personal accreditation is not a process that falls within the remit of CASE.

Policy is decided by its members that are constituted by a maximum of two nominees, known as CASE representatives, from each organisation on an annual basis. The Consortium normally meets three times a year to review, discuss and further the provision of ultrasound education in the United Kingdom and to approve those programmes and courses seeking CASE accreditation or re-accreditation.

The roles of CASE are:-

- To identify and review policy to ensure that the validation and accreditation process addresses the needs of clinical competency and professional development in medical ultrasound
- To identify best clinical and professional practice and ensure that this is reflected within the programmes and courses it accredits
- To ensure the accreditation and re-accreditation (review) processes are rigorous and equivalent for all programmes and courses

- To undertake quality assurance through the annual monitoring of all accredited programmes and courses in order to ensure that the quality of the learning experience is appropriate
- To maintain dialogue with and in support of programme leaders and course organisers in relation to their ultrasound education and training provision
- To provide current documentation which clearly outlines the requirements of CASE for successful accreditation to be achieved
- To publish and annually update a directory of CASE-accredited programmes and courses
- To advise the Member Organisations on all aspects of CASE activities through their representation at its meetings
- To invite each of its Member Organisations to nominate annually a maximum of six suitably experienced individuals to act as accreditors on behalf of CASE
- To accept self-nominations from suitably experienced individuals to act as accreditors on behalf of CASE
- To appoint individuals with appropriate experience and expertise from the list of accreditors to act in an advisory and lead capacity at validation and accreditation events
- To disseminate its views and seek those of others relative to ultrasound education and training on a regular basis through the provision of open forums and newsletters.

Open Forums are normally held once a year. These interactive meetings are designed primarily to provide a means of direct communication between the ultrasound education and training providers and CASE. Individuals with an interest in sonographic education and training are also welcome to attend.

CASE activities are funded through the annual fees paid by each member organisation and the education and training providers delivering CASE-accredited programmes and courses.

MASTER

2.0 INTRODUCTION TO THE HANDBOOK

This handbook has been published to assist all those involved in the provision of high quality, outcome-based ultrasound education and training during the development, delivery and review of their respective programmes and courses.

In particular it may be of benefit to the following: -

- Academic staff in Higher Education Institutions (HEIs) intending to provide a programme of postgraduate education in ultrasound
- Course faculties that are seeking to develop training courses appropriate to service need and professional development
- Programme and course leaders, with their teams, developing and delivering ultrasound education and training
- Any agency which has an interest in commissioning, managing, funding or in the quality of ultrasound education and training
- Those clinical departments which are, or intend to be, associated with the clinical education component of ultrasound programmes and courses
- Those individuals nominated by CASE to act as advisors and/or accreditors at validation and accreditation events
- CASE, its Member Organisations and their representatives and those who may be called upon to implement CASE procedures.

During the revision period for this publication in 2008-09, consultative workshops were held to elicit expert information from a wide range of sources that would inform the process. Although a recommendation was made and considered by the authors to publish two separate guides for accreditors and educationalists, it was decided to maintain the original format to ensure transparency across the validation and

accreditation process. Individuals who access and utilise this document are advised to select the most appropriate information from the sections that suit their purpose.

This policy has not changed. Further information can be obtained from CASE lead accreditors by contacting the Co-ordinator.

In May 2009, CASE introduced a new approval process for the accreditation of shorter, focused ultrasound courses. (Appendix 3 - Focused Course Template, 2009). Reference has been made to focused courses where applicable in this revision. Focused course leaders are advised to contact the Co-ordinator before commencing course development in order to access the most relevant information from a focused course accreditor.

The authors of this revision would like to thank the workshop participants, member organisations of CASE, their representatives, the CASE Co-ordinator and other ultrasound and educational experts for their assistance.

Authors:

Rosemary Lee + Wendy Williams

CASE Accreditors

March 2009

Minor Revisions – March 2010

Minor Revisions – March 2011

3.0 DEFINITIONS

The processes of validation, accreditation and review are defined below.

Validation

The validation of a programme is the process whereby a judgement is reached by a peer group of university staff (and in terms of medical ultrasound, clinical teams) as to whether its design and delivery meet the requirements for the award. This will be determined by the awarding body's charter and statutes and by its established regulations.

(For the purposes of this Handbook the term validation normally refers to a joint process between CASE and the Higher Education Institution.)

Revalidation

The revalidation of a programme is the process whereby a judgement is reached as to whether its design and delivery leading to an award by a statutory awarding body continues to meet the requirements for that award. This will be determined by the awarding body's charter and statutes and by its established regulations.

Accreditation

Accreditation is the acceptance of a programme or course by CASE when its representatives are satisfied that the programme or course meets the professional and educational criteria established by the member organisations of CASE.

Re-Accreditation

Re-accreditation is the continuing acceptance of a programme or course by CASE when its representatives are satisfied that it continues to meet the professional and educational criteria established by the member organisations of CASE.

Review

A review is a process whereby the progress of an existing programme or course is critically appraised at intervals. This is normally no more than six years and is carried out by a group including a peer group and CASE. During the review process, any plans for change are considered in order to confirm that the programme or course remains academically and professionally valid and continues to meet the conditions for an award laid down by the awarding body and by CASE.

Single Event Validation

A single event validation is identified as a single calendar event that typically takes one working day to complete and involves the programme team and the validation panel.

Joint Event Validation

See note under Validation

Internal Monitoring

Internal monitoring is the regular, normally annual, process by which the HEI and its external examiners critically appraise the procedures of the programme or course between reviews and ensures that appropriate standards are maintained.

External Monitoring

This is its regular scrutiny of a programme or course, normally carried out annually by an external body, leading to the issuing of a report by the monitoring team. This report may instigate a monitoring visit or a request for further information.

4.0 VALIDATION AND ACCREDITATION

4.1 Introduction to the CASE Validation and Accreditation Process

CASE supports innovation in development and flexibility of delivery for all medical ultrasound related educational programmes and training courses, actively encouraging the utilisation of an outcome-based approach throughout the process. Educational and training paradigms promote the philosophy of student-centred learning supported by appropriate and robust tutor provision, replacing the traditional method of lecture-based delivery. This places the responsibility of learning jointly on the student and the tutor. During the validation and accreditation process, the CASE accreditors will expect to see evidence in suitable documentation that supports this learning approach both in the classroom and workplace.

It will look to university teams, programme leaders and course organisers to embed originality of thought and evidence-based practice within the curricula, mode of delivery and the assessment process whilst complying with current international, national and local legislation, healthcare policy and professional guidelines such as *Occupational Standards for Diagnostic Ultrasound*¹ and *Skills for Health Benchmarks*² to ensure that practitioners meet the required standards of practice. Particularly, it will support those programmes and courses that offer learning in such a way as to suit the workforce for whom they are developed, whilst ensuring that a competency to practise outcome is paramount either in an extensive or focused approach in all learners.

CASE accredits Masters-level programmes which normally include Clinical Ultrasound or Medical Ultrasound in the named award. Individual award titles (eg: Postgraduate Certificate in Obstetric Ultrasound) are still recommended for accreditation by CASE. However, in recognition of current university practice, a more general award (eg: Postgraduate Certificate in Medical Ultrasound) will be considered. Institutions are advised that if the latter more general award is to be accredited, CASE will request that all students and trainees on successful completion of their learning are provided with a suitable transcript that reflects the clinical modules studied.

In terms of focused courses, CASE will need to be assured at the time of accreditation that the title evidenced on the competency certificate, issued on successful completion of learning, is fit for purpose.

CASE will normally accredit a postgraduate programme for a period not exceeding six years. Shorter periods of accreditation not less than two years may be awarded in certain circumstances, especially in relation to focused courses and where a new postgraduate pathway has been introduced into a current programme.

Accreditation will only be given to a programme or course that incorporates the assessment of clinical competency skills within its portfolio.

An annual fee for each entry and retention on the CASE register of accredited programmes and courses will be charged to the Institution or Course Faculty. Any expenses incurred by the CASE accreditors attending the event (and any interim visits that are required) will be met directly by each Institution except for those accreditors undertaking a shadowing role (see Section 5.2.3), where these expenses will be met by CASE.

4.1.1 Summary List for Entry and Retention onto the CASE Register

- Successful accreditation or re-accreditation
- Receipt of relevant programme documentation
- Receipt of satisfactory annual reports
- Payment of the annual fees and all accreditors' expenses

4.2 Aims

The primary aim of CASE is to secure for students and trainees a high quality, educational experience and to ensure that on completion of a pathway of learning they are competent to undertake medical ultrasound examinations within an evidence-based environment. It also aims to stimulate curriculum development by empowering staff to evaluate their provision through the external peer review process.

4.3 Objectives

The validation and accreditation process must ensure that: -

- medical ultrasound programmes and courses meet the requirements for the relevant award or certification and that the standards are appropriate to that award or certificate

- the student and trainee learning experiences are of a standard appropriate and relevant to their needs and aspirations
- resources available both in the academic and clinical environments, including staffing and equipment, within which the programme or course is offered are appropriate and satisfactory
- standards and quality of teaching in the relevant subject areas are maintained and, wherever possible, enhanced
- standards and quality of the overall provision are maintained and, wherever possible, enhanced.

1. The University of Hertfordshire and Prime Research and Development Ltd. (1998). *Occupational Standards for Diagnostic Ultrasound*. The College of Radiographers and South & West Regional Office of the NHSE.
2. <http://www.skillsforhealth.org.uk/page/competences>

5.0 ROLE OF CASE IN VALIDATION & ACCREDITATION PROCEDURES

CASE will, if appropriate conjointly with Higher Education Institutions or Course Faculties: -

- consider all postgraduate programmes and courses which include the assessment of clinical ultrasound skills
- periodically review such programmes and courses
- receive proposals for major changes to those programmes and courses already accredited and consider these changes within the framework of the validation arrangements existing between the Institutions, course organisers and CASE.

CASE, in fulfilment of its obligations to monitor and maintain standards, will require the Institutions or Course Faculties to review the programme or course according to their quality procedures. The procedures to be adopted for review will normally follow those described for validation.

CASE recognises that there is no common pattern for validation and accreditation although a consensus is likely to be reached over the agenda, discussion points, conditions and recommendations and the event report. It will seek to work with Institutions and Course Faculties during the process to ensure that a successful and timely outcome is achieved.

5.1 Timetable of Events

Institutions which propose to develop a programme, make substantive changes to an approved programme, or review an accredited programme will be expected to contact the CASE Co-ordinator twelve months before the intended validation or review date. A calendar of events leading to and following a single event validation is given in Table 1.

Similarly, organisers requesting CASE accreditation or re-accreditation for a focused course should adhere wherever possible to the timetable as given in Table 1.

Table 1: Calendar for an Accreditation

Time	Action
12 months prior to anticipated event	Institution informs CASE of intention to seek accreditation / validation CASE Co-ordinator issues appropriate proforma for completion CASE appoints an advisor and accreditors as appropriate
4 months prior to anticipated event	Institution confirms event date with CASE
2 months prior to event	Institution sends 3 copies of final programme / course documentation to CASE Co-ordinator for circulation to accreditors
Not less than 1 week prior to event	Issues raised by the accreditors are made available prior to the event
Validation Event	Attended by lead accreditor and one co-accreditor, also 1 shadow accreditor
Within 1 week following event	Headline Report outlining major issues issued
Within 1 month after event	Full written report (to include the issues raised by the CASE accreditors) from the Panel including the conditions and recommendations issued CASE independent report on a specific proforma from the lead accreditor (signed by co-accreditor) submitted to CASE office
No later than 3 months following event	Documentation addressing conditions submitted by programme team to the Panel and CASE lead accreditor
CASE meeting following event	Lead accreditor submits report for CASE endorsement Institution formally notified of CASE approval by letter from the Chair to include the lead accreditor's report on an appropriate proforma.

Please Note: If Institutions and Course Faculties fail to comply with this timetable CASE may reserve the right to withhold accreditation of a programme or course and take no further action in the validation and accreditation process.

5.2 Appointment and Roles of the CASE Accreditors

The CASE Co-ordinator will inform the programme or course leader of the names and contact details of the lead and co-accreditors as soon as possible after their appointment.

5.2.1 The CASE Lead Accreditor

The lead accreditor, who will normally act as an advisor to the programme/course team, will be appointed by CASE together with the co-accreditors. He/she will contact the programme/course team and the accreditors as early as possible following appointment. It is the programme/course team's responsibility to inform CASE of the advice that they require when submitting the pro-forma. The lead accreditor will advise the team on matters and aspects of the programme/course content which relate to CASE accreditation.

The CASE lead accreditor is normally familiar with educational and training procedures and has broad experience of the CASE accreditation process. The role is extensive and he/she is responsible for ensuring that all CASE procedures are implemented. Also included in the tasks are: -

- to ensure familiarity with CASE, Institution and programme/course documentation relevant to the event
- to request additional documentation from the Institution or course organisers
- to ensure all nominated accreditors have received and reviewed the documents and reports
- to request and receive written reports from all nominated accreditors
- to approve the event agenda
- to receive all questions to CASE posed by the Institution and course faculty prior to and at the event and delegate them where appropriate
- to report verbally or in writing, using the relevant proforma, on the event at the next CASE meeting

5.2.2 The CASE Accreditors

The CASE accreditors are normally experienced ultrasound practitioners and can be either from an academic or clinical background. They have, together with the lead

accreditor, a joint responsibility for ensuring that all CASE procedures are implemented. CASE normally appoints a maximum of three representatives from the list of nominated accreditors to act with the lead accreditor to examine the postgraduate programme documentation prior to the event.

In the case of a focused course accreditation, a maximum of two accreditors (lead accreditor and co-accreditor) only will be appointed to fulfil an identical role.

The expertise of each appointed accreditor normally reflects the content of the clinical specific modules or focused course clinical content offered for accreditation and complements that of the lead accreditor. One of these accreditors together with the lead accreditor will serve on the joint panel at the event. Also included in the tasks are: -

- to ensure familiarity with the CASE documentation relevant to the event
- to liaise with the lead accreditor on event agenda items and to ensure all the documents and reports have been received
- to submit a written commentary on the documentation to the lead accreditor no less than four weeks prior to the event
- to attend the event if requested and participate in discussions as delegated by the lead accreditor.

5.2.3 The CASE Shadow Accreditor

To ensure that there is a constant number of suitably trained accreditors, new accreditors will be appointed to shadow the validation and accreditation procedures during a specific process. They will contribute to every stage apart from participating in the event discussions. This is to ensure quality of the procedures.

It is normal that a shadow accreditor will participate in two training sessions prior to being selected for an accreditor role.

Any expenses incurred by the shadow accreditor during this training period will be met by CASE.

5.3 The Validation Event Leading to Accreditation

The event is generally an opportunity for the programme or course team to offer evidence in support of the curriculum, delivery and assessments to a panel of experts.

In terms of a postgraduate Masters programme, these experts will be from the Institution together with the CASE accreditors. A postgraduate programme validation may be a single or multiple event. On some occasions the medical ultrasound pathway may be embedded within a suite of similar programmes and a multiple event is scheduled. This sometimes complex method of validation and accreditation is becoming increasingly popular. A secretariat to minute proceedings is normally arranged by the faculty.

A focused course accreditation meeting is likely to be a smaller event but of no less rigour and attendees will represent the course organising faculty and CASE accreditors. A secretariat to minute proceedings is normally arranged by the faculty.

Prior to the event, CASE advises that internal scrutiny of the programme or course should be undertaken. This should ensure that the team has prior knowledge of any issues that might be discussed. Internal scrutiny may be done by a panel from the Institution or if a focused course, a panel of ultrasound experts convened specially for the internal review.

The Chair of the panel will be selected by the awarding Institution or an independent expert for a focused course. The programme or course leader is normally invited to organise a team to attend. A short presentation given by a member of the programme or course faculty is expected.

A draft copy of the event agenda should be circulated for comment. Generally, an agenda might include the following:-

- presentation from the programme lead on behalf of the team
- period of discussion amongst the panel when questions to be asked of the programme/course team are allocated amongst the panel
- debate between panel and team on the programme/course documentation
- review of conditions and recommendations.

Institutions and course organisers are advised that CASE may require individual sessions with the programme team or course faculty and other smaller group meetings which may include:-

- interviews with other staff, including practice educators and managers
- interviews with students (past or present) where appropriate.

CASE may also request visits to: -

- Specific buildings and facilities associated with the programme e.g. skills laboratories, student resource centres
- Clinical placements where appropriate.

There will normally be a plenary session of the validation panel at the end of the event at which the conditions and recommendations will be made clear to the programme or course team, including the dates and mechanisms by which these will be met. The decision on accreditation and re-accreditation taken by the CASE accreditors at the event is a recommendation only. The CASE representatives who attend the validation event are not empowered to give an immediate decision regarding accreditation of the programme by CASE.

After a validation event, it is strongly advised that a written report of the proceedings, stating the outcome of the meeting, including the conditions and recommendations where applicable, will be issued to the Panel. An independent report on a specific proforma, compiled by the CASE lead accreditor for consideration and action by CASE at its next meeting is submitted to the CASE Co-ordinator. A letter of ratification together with the CASE report from the event is sent to the Panel Chair after all conditions have been met.

Institutions and course organisers may wish to consider the timing of CASE meetings when identifying a date suitable for the validation/accreditation event. These can be obtained from the CASE Co-ordinator.

CASE will: -

- formally approve full, conditional or unsuccessful CASE accreditation based on the written report and discussion with the lead accreditor, for an agreed period of time, for those programmes/focused courses which have fulfilled all the CASE criteria
- require the CASE Chair to formally notify the relevant Institution or course organiser of CASE's decision, within two weeks of the CASE meeting
- receive an annual programme or course monitoring report from the programme leader or course organiser and formally approve continuing accreditation
- retain the right to visit the Institution or focused course centre if there is evidence to suggest that the quality of the programme can be questioned
- remove CASE accreditation from the programme or focused course within the accredited period if it is found to be wanting in the extent, quality, provision or assessment for which it is accredited or if the annual fee for retention on the register is not received.

5.4 Rejection of Submission by Validation Panel

Should a proposal for a programme or focused course be found by CASE to be unacceptable for validation and accreditation, then CASE will give reasons for its unacceptability and make suggestions for its improvement. While it is not in the interests of the programme, focused course nor CASE to allow a proposal to remain unaccredited, CASE retains the right not to proceed with considerations of submissions that are deemed unsuitable.

5.5 Information Required by CASE for an Event

5.5.1 Information Required for a New Programme or Focused Course Event

The information required will include: -

- a Definitive Programme or Focused Course Document

- evidence of Institution and/or service approval (if appropriate) to develop and deliver the programme or focused course to reflect current service provision
- evidence from stakeholders of a service need to train sonographers (if appropriate)
- evidence of support for student funding (where appropriate)
- evidence of clinical support for the skills-based training.

5.5.2 Information Required for Changes to an Accredited Programme or Focused Course

CASE strongly suggests that programme and course leaders inform the Co-ordinator electronically of **any** changes in their education and training provision as soon as possible in order that appropriate and accurate records are maintained. CASE is aware that this process above may differ from some Institutions regulations.

CASE recommends that where a **major** change is required such as a re-design of clinical training, the substitution of an entire assessment, the addition of new curriculum material or entire module, a re-modelling of the delivery pattern such as blended learning, learning delivered at another educational or training site, new programme leader or external examiner appointments, CASE must be informed as soon as possible. A decision made concerning a visit or request for additional, explanatory documentation will be taken by the most recent lead accreditor or other appropriate person.

Information that may be required for a review of major changes might include: -

- relevant background information that has led to the substantive changes (Institutional plans, service changes or new provision, professional policy) including a written rationale for change
- details of the proposal for change that may include information related to the syllabus, teaching and learning methods, assessment strategy, resources, curriculum vitae.

Also, it recommends that where such changes are relatively *minor* such as timetabling issues, university calendar modifications, changes to university regulations, amalgamation of educational Schools or Faculties, these should be documented, incorporated into the programme or focused course immediately, added to the definitive documentation as a dated addendum and identified clearly in the next CASE monitoring exercise. They should always be referred to specifically at the next re-accreditation event.

5.5.3 Information Required for Re-validation or Course Review

The information required for programme re-validation or focused course review will include: -

- a critical appraisal of current delivery to include the views of the programme or course team, current and past students and trainees, practice educators or mentors, clinical assessors, service managers and other stakeholders
- any intermediate changes that have been made since the original validation and accreditation, major programme or course changes proposed with a critical appraisal for the re-validation and any plans for future developments
- reports from the external examiners (if applicable) covering the validation and accreditation period with statements of any action taken in response
- reports from CASE monitoring procedures (if applicable) covering the validation and accreditation period with statements of any action taken in response
- information on current and proposed additional resources (including library and technological resources), staff changes
- current Curriculum Vitae for all members of the faculty
- full set of revised programme or course documentation in which is incorporated all the above information.

5.5.4 Guidelines for Contents of the Postgraduate Programme Document

CASE recognises that each Institution will have its own method and style of presenting the relevant information, defined by local practice, for a programme validation or accreditation event. Although it is becoming increasingly the custom to provide this in electronic format, CASE will require at least three appropriately bound copies of all relevant documentation to be delivered to the Co-ordinator, two months prior to the date, to facilitate the process for its accreditors. In the event of additional documentation being needed, the Co-ordinator will contact the Institution or course faculty.

CASE reserves the right to return any documentation to the programme or course leader that is not fit for the purpose of providing information for the validation and accreditation event. This may delay the accreditation of the programme.

Information that may be included in the programme document is identified in Table 2. This list, accessible to programme and faculty teams, is for guidance purposes only and is not a prescriptive catalogue of mandatory information.

Following successful accreditation, a definitive set of programme documentation suitably amended if necessary must be forwarded to the CASE Office. This may be in electronic format.

5.5.5 Guidelines for Contents of a Focused Course Document

Course faculties are advised to access the Template for Focused Courses in addition to using any relevant information included in Table 2.

Table 2 Information: May Be Included in a Programme Document

General Information <ul style="list-style-type: none"> • Institution • Faculty or Department • Socio-geographic Outline 	Programme Organisation <ul style="list-style-type: none"> • Management • Financing including budget proposals • Structure of committees • Arrangements for staff to discuss educational policy • Arrangements for consultation between academic, clinical staff and students
Programme Review (if appropriate)	Programme Philosophy <ul style="list-style-type: none"> • Rationale • Aims and Outcomes
Programme Syllabus <ul style="list-style-type: none"> • Rationale, aims, objectives, learning outcomes • Content • Timetables for each level • Integration of academic education with clinical practice 	Programme Specification Document
Learning Methods <ul style="list-style-type: none"> • Rationale. • Core teaching, team approaches • Clinical education 	Module Specification Documents <ul style="list-style-type: none"> • Mapping exercise to include a programme flow chart • Mapping exercise to learning outcomes
Assessments <ul style="list-style-type: none"> • Rationale for methods • Types of academic and clinical assessment. • Marking + assessment criteria • Schedule and weighting • Examples • Regulations 	Students <ul style="list-style-type: none"> • Funding • Admissions procedure • Health/welfare facilities available • Personal tutoring system. • Equal opportunities system • Handbooks
Clinical Education <ul style="list-style-type: none"> • Aims and objectives • Length of placement/hours/availability • Criteria for accrediting clinical placements • Quality assurance procedure • Criteria for selection and appointment of practice educators and assessors • Teaching and learning resources, including personnel • Ultrasound and ancillary equipment • Practice Handbooks 	Staffing <ul style="list-style-type: none"> • Programme team • Numbers of staff in post. • Curriculum Vitae • Staff/student ratio. • Policy for staff development
Course Resource Provision <ul style="list-style-type: none"> • Teaching/lecturing/practical provision • Library facilities • Technological resources • Clinical and laboratory facilities • I.T. provision 	Support Mechanisms for Students + Staff
Regulations	Internal Course Monitoring <ul style="list-style-type: none"> • Arrangements for programme review • Evidence of appropriate involvement from academic staff, clinician • Quality assurance processes

6.0 CASE CRITERIA FOR SUCCESSFUL ACCREDITATION

There are seven principles of particular importance with which accreditors, programme and course leaders, clinical teams should be aware in order to secure CASE accreditation.

These are:-

- programme or course learning material
- programme or course and module learning outcomes
- theoretical and clinical assessments
- academic and clinical teaching teams
- academic learning environment
- clinical skills placements
- quality assurance procedures.

The contents of this section are appropriate for both accreditation and re-accreditation and should be suitably adapted if accreditation or re-accreditation of a focused course is requested.

CASE recognises that there are a variety of paradigms that are able to meet its primary aim of promoting the optimum and most relevant ultrasound education and training. Also, CASE would not like to stifle or restrict in any way innovative ideas on programme development or unique ways of delivery of learning. However, it will expect the above criteria to be embedded appropriately throughout the programme and used as a basis for the compilation of the documentation and discussion points at the event.

The following comments are general and if there are any individual queries related to a specific programme in respect of these criteria, they should be referred to the lead accreditor appointed as the advisor.

6.1 Programme or Course Learning Material

CASE will consider the programme or course learning material in terms of core and specific clinical topic areas. Although the names of comparative modules and learning

components may vary between Institutions and Faculties, the learning material will contain essential knowledge that is common to all.

CASE requires the Institution or Faculty to clearly evidence that the programme seeking accreditation delivers this core material effectively. Its accreditors will expect to see evidence in the documentation of learning theory related to practice in all modules where appropriate.

6.1.1 Core Topic Areas

For purposes of accreditation, CASE divides the core material into two components: -

- *Science and Technology*

Typical subject areas may include: - Principles of Ultrasonic Imaging, Ultrasound and its Propagation in Tissue, Image Generation, Ultrasound Artifacts, Principles of Doppler Ultrasound, Development of Ultrasound Imaging Technology, Equipment Choice and Manipulation, Equipment Appraisal and Evaluation, Image Recording, Ultrasound Bio-effects, Quality Assurance.

- *Professional Studies*

Typical subject areas may include: - Patient Communication, Care, Safety and Management, Ergonomics with Health and Safety, Image Appraisal, Examination Reporting, Audit, Evidence-based Practice and Clinical Governance, National and Local Healthcare Policies and Ethics, Self-development and Critical Appraisal Skills.

In order to fit within a locally-designed modular programme or pathway, the professional studies learning material may be more conveniently embedded within either the science and technology or appropriate clinical module.

6.1.2 Specific Clinical Areas

All CASE accredited courses are required to provide specific clinical topics in addition to the core material. Generally these areas are: -

- *General Medical*

Typical subject areas may include: - Applied Abdominal, Pelvic and Systemic Anatomy and Patho-physiology, Embryology and Physiology of the Reproductive Process,

Scanning Methods and Techniques for Pelvic and General Medical Ultrasound (to include small parts), Ultrasound appearances of gastrointestinal system, male and female genitourinary system, retroperitoneal structures, superficial structures, Common Gynaecological Pathologies, Ultrasound Directed Procedures in Ultrasound Practice, Use and Applications of Ultrasound Contrast Agents, Complementary Imaging.

- *Gynaecology*

Typical subject areas may include: - Applied Abdominal and Pelvic Anatomy and Patho-physiology, Embryology and Physiology of the Reproductive Process, Scanning Methods and Techniques for Pelvic and Renal Ultrasound, Gynaecological Pathology, Complementary Imaging.

- *Obstetric*

Typical subject areas may include: - Applied Abdominal and Pelvic Anatomy and Patho-physiology, Embryology and Physiology of the Reproductive Process, Prenatal Screening and Counselling, Scanning Methods and Techniques for Obstetric, Pelvic and Renal Ultrasound, Fetal Development, Placental Morphology and Function, Fetal Biometry, Growth Profiles and Well-Being, Antenatal Screening in the 1st and 2nd Trimesters, Early Pregnancy Problems, Multiple Pregnancy, Fetal Anomalies, Ultrasound Directed Procedures in Obstetric Practice.

- *Vascular*

Typical subject areas may include: - Applied Vascular Abdominal, Pelvic and Systemic Anatomy and Patho-physiology, Principles of Continuous and Pulsed Wave Doppler Imaging, Principles of Power Doppler and Colour Flow Mapping, Volume Flow Measurements, Haemodynamics, Scanning Methods and Techniques for Vascular Ultrasound, Clinical Applications (lower limb vasculature, upper limb vasculature, abdominal applications, carotid – intra and extra cranial), Complementary Imaging

Other clinical areas for example:- breast, cardiac, fertility, musculo-skeletal, paediatric and trauma ultrasound could also be considered. This list is not exhaustive.

6.1.3 Negotiated Learning / Focused Practice / Specialist Skills Modules

These mostly independent modules where students negotiate their academic, clinical and personal learning through a specific study contract are increasingly being embedded in postgraduate ultrasound programmes. They provide critical learning opportunities for those students whose practice falls outside the scope of a defined clinical ultrasound practice module. CASE will consider for accreditation an independent practice module

as described above. However, in order for it to align with other clinical modules in the programme, it must include a robust competency assessment scheme that matches wherever possible that integrated into the named clinical ultrasound modules associated with the same pathway or programme.

6.1.4 Theory-only Clinical Modules

CASE may consider the inclusion of a theory-only clinical ultrasound module in a programme as long as student competency in the pathway in which it is embedded can be evidenced by an alternative clinical ultrasound module that reflects the accredited award.

6.1.5 Clinical Combination Modules

CASE may consider a clinical ultrasound module combination, such as obstetrics + gynaecology, in a CASE-accredited pathway. Normally such a module has been developed by programme teams following a specific request from service and contains a basic learning and skills element related to the minor clinical component. Programme teams should ensure that the rationale is robust, learning outcomes match the dual nature of the module profile, the assessments are developed to reflect the learning experience and that the balance between the subject areas is appropriate.

Accreditors will spend some time during the accreditation process to ensure that this type of module aligns with others in the programme and that any double learning and assessing that may arise during students' module selection or progression can be dealt with appropriately by the programme team.

For focused courses, please refer to the CASE Template in Appendix 3 for specific learning areas.

6.2 Programme, Course and Module Learning Outcomes

An Institution seeking CASE accreditation must satisfy it that the learning outcomes for the programme, course or modules can be satisfactorily achieved through its delivery of the learning material and associated assessments. Programme and course organisers are strongly recommended to access current information on learning outcomes^{4,5}.

CASE recognises that M-level learning outcomes have equal standing across the three stages of a postgraduate programme. However, where an advanced practice route has been identified in the documentation, the learning outcomes should reflect this additional depth and breadth of student learning.

Identified below are *examples* of learning outcomes that might be evidenced in the programme or course documentation. Table 3 is provided so that programme teams can map their own module learning outcomes to those that are recommended by CASE. This mapping exercise could be presented at the accreditation event.

6.2.1 Science and Technology

On completion of this component, the student should be able to: -

- demonstrate and apply a thorough knowledge of the physical and technological principles and processes of diagnostic ultrasound describing their relevance to the ultrasound image and the equipment utilised
- demonstrate proficiency in recording ultrasound images and Doppler outputs
- critically evaluate and debate the safety issues related to diagnostic ultrasound to enable optimal use of the equipment within the current, internationally recognised recommendations for safe practice actively reducing any hazard to patient and staff
- critically appraise current ultrasound equipment, latest technology and associated quality assurance procedures for pertinent use in order to identify and select new machines for replacement
- utilise graphical and numerical data commensurate with ultrasound practice

6.2.2 Professional Issues

On completion of this component, the student should be able to: -

- evaluate the emotional impact of the ultrasound examination on the client, patient, carers and relevant healthcare professionals
- critically analyse international, national and local legal, ethical, professional and organisational principles that underpin diagnostic ultrasound practice
- critically discuss the changing national and local health care needs of clients, patients, carers and organisations

- integrate and synthesise diverse knowledge, evidence and concepts to promote understanding in the ultrasound profession
- identify qualitatively and quantitatively the limitations and compromises associated with ultrasound imaging
- evaluate the need for life-long learning in medical ultrasound practice.

6.2.3 Clinical Topic

On completion of this component, the student should be able to: -

- apply and synthesise scientific, ergonomic and safety principles in order to identify, select and manipulate equipment
- critically appraise and utilise all information from various sources to determine the most appropriate ultrasound examination
- analyse the needs of the patient in order to perform all aspects of the ultrasound examination safely and competently
- competently carry out ultrasound examinations according to the evidence base
- critically evaluate the ultrasound findings and where necessary arrange, advise or undertake further investigations appropriate to local policies and practices
- actively demonstrate proficiency in reporting ultrasound examinations to reflect the clinical question raised
- communicate clearly and effectively with clients, patients, carers and other healthcare professionals appropriately
- demonstrate a comprehensive knowledge of the principles of problem solving within the ultrasound profession in order to resolve issues in practice and service delivery
- contribute to case management and service delivery by discussion and debate at all levels in patient diagnosis and prognosis
- critically reflect on personal and professional practice in order to challenge, develop, maintain and enhance local and national professional standards in clinical ultrasound.

6.2.4 Negotiated Learning / Focused Practice / Specialist Skills Module

On completion of this component, the student should be able to: -

- formulate a learning contract in order to acquire skills for personal, clinical and professional development
- develop negotiation and time management skills in order to achieve the module learning outcomes
- critically evaluate the normal ultrasound appearances, variations and pathological appearances of the areas of practice as specified in the learning contract.
- competently, safely and accurately undertake clinical ultrasound examinations in the areas specified in the learning contract
- critically reflect on and recognise responsibility for own learning and develop independent study skills.

6.2.5 Advanced Practice Topic

On completion of this component, the student should be able to: -

- demonstrate continuing competent undertaking of medical ultrasound examinations in an identified area of advanced practice
- actively contribute to case management and service delivery by discussion and debate in patient diagnosis and prognosis in an area of advanced medical ultrasound practice
- synthesise, appraise and critically evaluate theory and research relevant to advanced ultrasound practice in order to improve patient care and inform future practice and the profession
- demonstrate skills in critical reflection and evaluation of theoretical concepts in order to inform and enhance personal learning and professional medical ultrasound practice
- plan, negotiate and manage own learning whilst demonstrating a team approach in support of self-directed learning.

6.2.6 Clinical Education Component

CASE accreditors will expect to see evidenced in the documentation, appropriate learning outcomes related to the clinical education component of the programme or course.

On completion of this component, the student should be able to: -

- carry out medical ultrasound examinations and other appropriate actions safely, competently and independently
- critically relate theory to practice in the clinical setting in order to contribute to patient diagnosis, management and service delivery
- identify sources with whom to consult in order to influence patient management and change practice
- critically reflect on self in order to demonstrate continuing professional development within clinical practice
- function independently and as part of a team.

6.2.7 Focused Course Outcomes

Please refer to the CASE template for focused ultrasound course outcomes.

Table 3 Mapping of CASE Learning Outcomes

CASE Learning Outcomes	Mapping of Programme Learning Outcomes						
Science and Technology							
demonstrate + apply a thorough knowledge of the physical + technological principles + processes of diagnostic ultrasound describing their relevance to the ultrasound image + the equipment utilized							
demonstrate proficiency in recording ultrasound images + Doppler outputs							
critically evaluate + debate the safety issues related to diagnostic ultrasound to enable optimal use of the equipment within the current, internationally recognised recommendations for safe practice actively reducing any hazard to patient + staff							
critically appraise current ultrasound equipment, latest technology + associated quality assurance procedures for pertinent use in order to identify + select new machines for replacement							
utilise graphical + numerical data commensurate with ultrasound practice							
Professional Issues							
evaluate the emotional impact of the ultrasound examination on the client, patient, carers + relevant healthcare professionals							
critically analyse international, national + local legal, ethical, professional + organisational principles that underpin diagnostic ultrasound practice							
critically discuss the changing national + local health care needs of clients, patients, carers + organisations							

CASE Learning Outcomes	Mapping of Programme Learning Outcomes						
integrate + synthesise diverse knowledge, evidence + concepts to promote understanding in the ultrasound profession							
identify qualitatively and quantitatively the limitations and compromises associated with ultrasound imaging							
evaluate the need for life-long learning in medical ultrasound practice							
Clinical Topic							
apply + synthesise scientific, ergonomic + safety principles in order to identify, select + manipulate equipment							
critically appraise + utilise all information from various sources to determine the most appropriate ultrasound examination							
analyse the needs of the patient in order to perform all aspects of the ultrasound examination safely + competently							
competently carry out ultrasound examinations according to the evidence base							
critically evaluate the ultrasound findings + where necessary arrange, advise or undertake further investigations appropriate to local policies and practices							
actively demonstrate proficiency in reporting ultrasound examinations to reflect the clinical question raised							
communicate clearly + effectively with clients, patients, carers + other healthcare professionals appropriately							

CASE Learning Outcomes	Mapping of Programme Learning Outcomes						
demonstrate a comprehensive knowledge of the principles of problem solving within the ultrasound profession in order to resolve issues in practice + service delivery							
contribute to case management + service delivery by discussion + debate at all levels in patient diagnosis + prognosis							
critically reflect on personal + professional practice in order to challenge, develop, maintain + enhance local + national professional standards in clinical ultrasound							
Focused Practice Topic							
formulate a learning contract in order to acquire skills for personal, clinical and professional development							
develop negotiation and time management skills in order to achieve the module learning outcomes							
critically evaluate the normal ultrasound appearances, variations and pathological appearances of the areas of practice as specified in the learning contract							
competently, safely and accurately undertake clinical ultrasound examinations in the areas specified in the learning contract							
critically reflect on and recognise responsibility for own learning and develop independent study skills.							
Advanced Practice							
demonstrate continuing competent undertaking of medical ultrasound examinations in an identified area of advanced practice							

actively contribute to case management + service delivery by discussion + debate in patient diagnosis + prognosis in an area of advanced medical ultrasound practice							
synthesise, appraise + critically evaluate theory + research relevant to advanced ultrasound practice in order to improve patient care + inform future practice + the profession							
demonstrate skills in critical reflection + evaluation of theoretical concepts in order to inform + enhance personal learning + professional medical ultrasound practice							
plan, negotiate + manage own learning whilst demonstrating a team approach in support of self-directed learning.							
Clinical Education							
carry out medical ultrasound examinations + other appropriate actions safely, competently + independently							
critically relate theory to practice in the clinical setting in order to contribute to patient diagnosis, management + service delivery							
identify sources with whom to consult in order to influence patient management + change practice							
critically reflect on self in order to demonstrate continuing professional development within clinical practice							
function independently + as part of a team							

6.3 Theoretical and Clinical Assessments

An Institution seeking CASE accreditation must satisfy CASE that the assessment strategies applied both to the academic and clinical components are sufficiently rigorous to enable successful students and trainees to demonstrate such skills as appropriate to a 1st-post competent practitioner. These strategies must be appropriately matched to and measure the learning outcomes for each module or course element. CASE advises that the assessment methods used for the academic component of each module reflect relevant aspects of the clinical or professional role of the competent practitioner and wherever possible are linked to practice.

The fundamental aim of CASE is to ensure that on completion of a period of learning, the exiting students or trainees are clinically competent to undertake ultrasound examinations and are professionally responsible for their own case load. In order to demonstrate competency, clinical assessment must be undertaken in **all programmes and courses**.

CASE strongly advises that clinical assessments should carry a **Pass or Fail criterion**, where Pass is a minimum standard that is equivalent to safe practice or competence as defined by the criterion-referenced assessment documentation. The methods used must be clearly identified and the rationale appropriately justified by the programme team or course faculty. Compensation for a failed clinical assessment is **not** recommended.

Examples of typical theoretical methods of assessment may include objective, structured tests (OST or OSCE), multiple choice questions, case studies, presentations, posters, portfolios, unseen examinations, open book examinations and on-line discussions. Peer or group assessment may be used where appropriate. Electronic assessment will be considered but it must demonstrate an academic rigour for Masters programmes.

For information on focused course assessments, please refer to the CASE template for focused courses.

6.4 Programme Teams

In this context, the programme team is taken to mean those individuals who contribute to delivery of the academic and clinical components of the programme and to its quality assurance.

CASE requires that the programme or faculty leader holds a postgraduate ultrasound qualification or equivalent and has at least two years appropriate clinical experience.

Also CASE strongly recommends that: -

- at least one other member of the academic teaching team holds an ultrasound qualification and has had clinical experience
- at least one member of the academic teaching team holds an ultrasound qualification and has an honorary or permanent contract with a local department, regularly participating in ultrasound sessions
- at least one member of the teaching team is qualified to deliver the science and instrumentation component of the programme
- there is clear evidence of co-operation strategies between the academic and clinical teaching teams
- there is a defined strategy for the selection, training and provision of support mechanisms for practice educators and mentors
- the external examiner or assessor is familiar with medical ultrasound practice in a wide range of healthcare situations, the practitioners who access the programmes and course, its methods of clinical training and assessment and the unique situation in terms of its postgraduate education and training in UK
- teaching teams, practice educators and mentors provide suitable evidence of continuing professional development as defined by appropriate professional bodies.

6.5 Academic Learning Environment

The academic learning environment may refer to an actual or virtual classroom.

CASE strongly recommends that: -

- suitable accommodation is available for the delivery of lectures, skills workshops, group sessions, tutorials for the anticipated maximum number of students

- suitable audio visual and information technology equipment is available for delivery of an illustrative ultrasound programme both at the learning centre and clinical placements
- a virtual learning environment is available for those students who are remote from the classroom environment
- library facilities are available to support ultrasound students working at postgraduate level.

6.6 Clinical Skills Placements

A Clinical Skills Placement is a provider of high quality medical ultrasound education and undertakes medical ultrasound examinations that reflect the current evidence and are appropriate to the student's academic and clinical needs. Its staff, from whom are normally selected practice educators and mentors to support trainees, must be committed to the training programme's philosophy.

A Placement will normally provide: -

- protected student learning time where an appropriate and sufficient range of relevant clinical practice opportunities and fit-for-purpose equipment will be made available
- an identified and dedicated practice educator or mentor for each student.

6.7 Practice Educators and Assessors

Ultrasound practitioners in the placements identified as Practice Educators or Mentors are responsible for the delivery, integration and quality of the clinical learning episodes and ensure that they match those of the theoretical knowledge acquired in the classroom. It is expected that the practice educator or mentor will work closely with the student, facilitating the clinical training and ensuring that learning outcomes and competencies are achieved.

Practice educators or mentors should be able to demonstrate that they are involved in ultrasound practice in the relevant clinical module as chosen by the student based at the clinical placement unit on a regular basis and can provide evidence if necessary of on-going continuing professional development as defined by a relevant professional body.

Practice Assessors are responsible for conducting the clinical assessment if this role is not the responsibility of the practice educator or mentor. Practice assessors must be able to demonstrate that they are involved in ultrasound practice in the relevant clinical module as chosen by the student and can provide evidence if necessary of continuing professional development, defined by a professional body.

Clinical Co-ordinators may be identified as relevant to some programmes to ensure that equivalent standards of clinical experience are offered to all students irrespective of their clinical skills placement.

CASE strongly recommends that contracts between the Institution or Course Faculty and students' employers are in place, in support of the clinical training to be undertaken by the placement unit. In addition, that Institutions or Course Faculties retain a register of appropriately trained staff participating in the mentoring and assessment scheme.

CASE will expect, both in documentation and on programmed visits to placements, a clear demonstration of the quality, nature and range of clinical facilities, including equipment and staffing, necessary to support the trainees in their clinical education and practice.

Managers and ultrasound practitioners have requested that a definition for the number of hours of student clinical practice should be included in this Handbook. The number is difficult to quantify and can have an adverse effect on student learning. The issue is the competency of a student on successful completion of a period of learning which may not be of the same length for all students and trainees.

However, in respect of this concern and to ensure that appropriate clinical time is made available for students and trainees by their employers, it is recommended that at least **14 hours per week** for students undertaking **part-time** study, for the entire duration of the learning period should be spent in the clinical placement undertaking ultrasound examinations with the support of a practice educator or mentor.

It is the responsibility of the programme team to satisfy the CASE accreditors that their proposed practice hours for clinical training are enough to ensure that the students' learning outcomes in clinical training are not compromised and that each exiting,

successful student is competent to undertake those ultrasound examinations identified in their university transcript.

MASTER

3. <http://www.qaa.ac.uk/>
4. <http://www.scqf.org.uk/>

7.0 GUIDANCE NOTES FOR VALIDATION EVENT PANEL MEMBERS

These brief notes are provided for guidance purposes only for CASE accreditors, programme and course teams and other staff at the Institutions or Faculties. They are not exhaustive and it should be recognised that a wider range of issues may lead to further probing at accreditation events to satisfy the CASE criteria for a successful outcome. They should be used in conjunction with the information in Table 2.

Tagged to these notes are a small number of outline questions identified in *italics* that might be used as introductions to the discussions at an event. They can also be used as a check-list prompt for accreditors during the documentation review stage.

They equally apply to postgraduate programmes and focused courses.

7.1 The Programme or Focused Course

7.1.2 Rationale

The philosophy and rationale is appropriate for the programme or course outline.

Question

- *How does the rationale for programme/course development meet the needs of the ultrasound profession and service development?*

7.1.3 Aims and Outcomes

The aims are related to the purpose of the programme or course. The objectives are related to the capabilities and competencies the students will be expected to demonstrate on successful completion.

Questions

- *How will the students achieve the programme/course/module outcomes?*
- *How will the students evidence these outcomes in the study that they undertake?*

7.1.4 Admission Policy

The criteria for admission in relation to the learning outcomes, teaching methods and assessments, including where necessary consideration of issues relating to equal

opportunities, international applications and distance learners are likely to be the main points for discussion.

Questions

- *How might the team address the issue of no healthcare registration of an otherwise suitable applicant?*
- *How is the student intake compatible with the Admissions Policy?*
- *What is the attrition rate for the programme or course - has it altered since the last review?*
- *What has been the trend in pass rates and is this satisfactory?*
- *How are clinical placements chosen and assessed as being fit-for-purpose?*

7.1.5 Structure

The programme or course structure includes a rationale for the approaches to the learning framework and how it might integrate with other similar programmes or courses e.g. modular structure, shared learning, common teaching, blended learning, web-based delivery to the benefit of the students and the ultrasound service. A flow-chart to demonstrate the student pathway through each level and how it integrates with other learning is very useful.

Learning and Teaching Strategy

Issues may be discussed on the following:

- Relevance of the programme or course content to its title, aims and outcomes; the appropriateness of the sequence and progression of content
- Learning and teaching strategies proposed
- Aspects of learning delivery
- Feasibility of any proposals for inter-professional learning
- Provision for clinical education and its proposals for integration into the learning model
- Proposals for the dissertation or written project, including the approval of chosen topics and the arrangements for supervision.

Questions

- *How is the learning strategy appropriate for the achievement of the programme or course learning outcomes?*

- *To what extent do lectures and other forms of tutor-led presentations stimulate learning? Can it be identified in the documentation*
- *How are students encouraged to take responsibility for their own learning?*
- *How does the programme team respond positively to student feedback?*

Assessment Strategy

The rationale for assessment, the proposed scheme including the examination schedule is likely to be thoroughly reviewed. Specimen examples with assessment and marking criteria give the panel an appreciation of the appropriateness of the strategy and whether they are valid assessments to demonstrate successful completion of the learning outcomes. CASE recommends that these examples are provided. Regulations for unsuccessful students and the support mechanisms for further study should be provided either web-based or a review of the critical points that are relative to the programme or course.

Questions

- *How does the assessment scheme match the learning outcomes of the clinical modules?*
- *Are the assessment regulations clearly and unambiguously drafted, including provision for the re-assessment of students where appropriate?*
- *What are the arrangements for the involvement of External Examiners in the assessment process?*
- *What are the arrangements for double marking by internal examiners and/or internal moderation across subjects?*
- *Where practical/clinical performance is to be assessed, what are the arrangements for the recordings of such?*
- *What is the assessment loading and, is there a balance of submissions across the learning period?*
- *What compensation strategy is adopted by the programme team?*

7.1.6 Student Support and Resources

There must be at least the minimum number of appropriately qualified staff to ensure that student learning is not compromised. Staff, student number ratios will be explored. This applies equally to academic, clinical and support staff; the quality of the staff, both academic and clinical is crucial. The programme or course team will need to

demonstrate a commitment to professional development. Institutions and faculties must have policies for staff development and research to support the teaching.

The physical resources that are required to sustain the students on the programme or course including clinical equipment, skills laboratories and library and I.T provision

Consideration will need to be given to:

- The appropriateness of the accommodation available
- The existence of related programmes or courses and whether there is or will be competition for resources
- The suitability of common teaching if proposed
- The opportunities for students to mix with other students and to engage in group activities
- The arrangements for clinical education.

Questions

- *Are there enough ultrasound qualified staff at the Institution or faculty to support the student numbers expected on the programme or course?*
- *If learning is delivered off-campus, how do the students obtain peer support?*
- *Is this peer support adequate for successful learning?*
- *What are the arrangements for visiting student placements?*
- *Is there evidence of on-going professional development at the placements?*

7.1.7 Programme or Course Management

- The overall workload on both students and staff
- The arrangements of the management operation and monitoring of the course, including provision for student representation and tutorial guidance.

Questions

- *What system has the programme team in place to receive student feedback?*
- *What strategies are in place to ensure that students are achieving their learning goals on a regular basis?*
- *How is programme or course feedback obtained especially comments from previous students who have successfully completed?*
- *What support is there for students who live remotely from the Institution or Faculty base?*

- *How does the programme take advantage of the services of the library, laboratory and I.T department?*
- *What training and support mechanisms are in place for practice educators and assessors?*
- *How do the CPD activities of the tutors actively underpin the programme?*
- *How do the tutors from a variety of backgrounds form a balanced and cohesive team? How do the tutors support one another?*
- *What is the support for the programme team?*

MASTER

8.0 PROGRAMME OR COURSE MONITORING

CASE identifies programme or course review reports as a critical source of qualitative information about the programme or course design, development, monitoring and evaluation. This evidence complements the factual information available through definitive programme or course documentation. Reports may be used by CASE to provide an overview of standards being achieved, changing patterns of curricular provision and innovative practices. These reports should be considered as constructive and helpful to programme and course teams as may be any interim visits made to an Institution or course faculty during the period of accreditation.

8.1 Postgraduate Programmes

Institutions are required to send an annual report of their programme's recruitment, achievements and challenges to CASE providing data by completing the appropriate monitoring proforma. Normally, a small committee reviews the returns in the autumn semester and compiles an overall annual report for discussion at CASE.

8.2 Focused Courses

Please refer to the CASE template for information on the monitoring of focused ultrasound courses.

CASE undertakes to provide a response to all monitoring reports, normally within three months of receipt.

CASE reserves the right to nominate a representative to visit Institutions or Course Faculties to fulfil its monitoring role.

Receipt and approval of the annual report will be necessary for retention on the register of accredited programmes and courses.

Appendix 1

Member Organisations

British Medical Ultrasound Society

36 Portland Place
London
W1B 1LS
Tel: 020 7636 3714

British Society of Echocardiography

Docklands Business Centre
10-16 Tiller Road
London
E14 8PX
Tel: 020 7345 5185

College of Radiographers

207 Providence Square
Mill Street
London
SE1 2EW
Tel: 020 7740 7200

Institute of Physics and Engineering in Medicine

Fairmount House
230 Tadcaster Road
York
YO24 1ES

Royal College of Midwives

15 Mansfield Street
London
W1M 0BE
Tel: 020 7312 3535

Society for Vascular Technology of Great Britain and Ireland

c/o The Vascular Society of Great Britain and Ireland
Royal College of Surgeons
35-43 Lincolns Inn Fields
London
WC2A 3PE
Tel: 0207 9730306

Appendix 2

Memorandum of Agreement

CONSORTIUM FOR THE ACCREDITATION OF SONOGRAPHIC EDUCATION (CASE)

MEMBER ORGANISATIONS

British Medical Ultrasound Society
British Society of Echocardiography
College of Radiographers
Institute of Physics and Engineering in Medicine
Royal College of Midwives
Society for Vascular Technology of Great Britain and Ireland

MEMORANDUM OF AGREEMENT

1. PREAMBLE

Each member organisation maintains a rigorous national overview of its own professional concerns. The Consortium for the Accreditation of Sonographic Education (CASE) focuses those concerns to ensure the appropriate and relevant perspective on sonographic education in all of its aspects.

CASE was formed in 1993 following a meeting at which the member organisations were represented. Members share common concerns that education continues to develop to meet changing service requirements and technology. All recognise the need to collaborate closely on education and training matters to optimise education and training provision, ensure its relevance and quality, and make validation and accreditation procedures as robust as possible.

It is recognised that each member organisation is independent, with its own particular obligations to its membership. CASE provides a forum for the interchange of ideas, establishment of standards and dissemination of best practice relative to education and training programmes.

Throughout this document 'CASE' refers to the committee of those appointed by the member organisations. 'CASE members' refers to these aforementioned organisations.

2. PURPOSE

2.1 The purpose of CASE is to promote the best and most relevant sonographic education and training, taking account of the widest and most informed views of service needs and to accredit education and training provision that meets the standards it sets.

3. TERMS OF REFERENCE

- 3.1 To facilitate collaboration with regard to developments which will affect education and training in sonography.
- 3.2 To identify common themes and good practice at all levels of sonographic education and training and to encourage and promote their development.
- 3.3 To establish a co-ordinated approach to setting, maintaining and enhancing standards of education and training in sonography.
- 3.4 To establish mechanisms for the joint validation and periodic review of all courses in sonography.
- 3.5 To establish and maintain a register of accredited courses in sonography of those successfully validated.
- 3.6 To maintain records of CASE meetings and any sub groups.
- 3.7 To maintain effective financial control of CASE and appropriate records.
- 3.8 To advise and inform member organisations of CASE activities through their representatives to CASE.
- 3.9 To call meetings of members of the governing bodies of the member organisations where CASE is considering a matter of importance which it is unable to undertake as outlined in these Terms of Reference

4. MEMBERSHIP REQUIREMENTS

- 4.1 Organisations in membership shall normally be drawn from those which have direct responsibilities and interests in the practice of sonography and consequent education and training.
- 4.2 A new member organisation may be admitted to membership of CASE subject to the unanimous agreement of the existing members.

5. CO-OPTION AND OBSERVER STATUS

- 5.1 There shall be no facility for co-option but individuals or organisations with specific interests in matters under discussion may be invited to meetings of CASE, or a sub-group of CASE.
- 5.2 CASE may extend observer status to organisations it considers appropriate. Observers may attend and participate in meetings but are not entitled to vote.

6. TERMINATION OF MEMBERSHIP

An organisation shall cease to be a member of CASE:

- 6.1 If the organisation resigns from CASE giving three months notice in writing.
- 6.2 If the organisation ceases to exist or is wound up.

- 6.3 If a member organisation's financial contribution becomes more than three months overdue, it shall be suspended from participation in CASE until such time as the arrears are settled.
- 6.4 If a member organisation fails to be represented at three successive ordinary meetings of CASE, the member organisation will be notified and replacement representation sought from that member organisation.

7. REPRESENTATION

- 7.1 Each member organisation shall normally be represented at CASE by two representatives.
- 7.2 It is the responsibility of each organisation's representatives to keep their member organisation informed of CASE's business and activities.
- 7.3 CASE shall decide how it is to be represented at meetings with external bodies.

8. MEETINGS

- 8.1 At least four weeks notice shall be given of a meeting except for an emergency meeting, when the organisations in membership shall be canvassed, and the approval of two-thirds obtained to hold such a meeting.
- 8.2 A quorum shall be a simple majority of member organisations present at a properly constituted meeting.
- 8.3 Meetings shall normally be held three times per year but not less than once a year.

9. VOTING

- 9.1 Each member organisation shall have only one vote regardless of the number of representatives attending for it. Proxy votes are not acceptable where an organisation is unable to attend a meeting.
- 9.2 In a case where representatives of an organisation cannot agree, that organisation must abstain.
- 9.3 Voting at CASE shall be by simple majority.

10. SUB GROUPS

- 10.1 CASE has the authority to form sub groups when necessary to fulfil its functions. Membership of sub groups shall be decided by CASE.
- 10.2 A sub committee will exist for specific purposes defined by CASE in the terms of reference established for the sub committee.
- 10.3 At least one member of a sub committee must be a current representative on CASE.

- 10.4 CASE may appoint such working groups it considers necessary to carry out specific, time-limited tasks.
- 10.5 Working group members need not necessarily be drawn from CASE or its member organisations, but the Chair of any working groups must be from CASE.
- 10.6 It is the duty of a sub group Chair to keep proper records and to keep CASE abreast of its activities.
- 10.7 The work of a sub committee or working group will not be regarded as the work or policy of CASE in any formal sense until it has been approved by CASE at a properly constituted meeting.

11. **ADMINISTRATIVE SUPPORT**

- 11.1 The arrangements for the administrative support of CASE shall be reviewed annually.

12. **CHAIRMAN AND HONORARY OFFICERS**

- 12.1 The officers of CASE shall be:

- Chairman (*two year term*)
- Vice Chairman (*two year term*)
- Honorary Treasurer (*two year term, renewable for two years*)

- 12.2 The position of Chair shall normally be held for two years. Individuals are not normally expected to hold office for a period in excess to two consecutive years. The exception to this is the position of Honorary Treasurer, which may be extended for up to two further years if agreed by CASE.

- 12.3 The office of Vice Chair shall be held by the past chair and chair elect in alternate years, and they shall be referred to by these titles.

13. **FUNDING**

- 13.1 The CASE Treasurer will be responsible for ensuring the submission of accounts, which have been independently inspected, to CASE annually. Such accounts, when approved, will be sent to each of the member organisations.

- 13.2 Funding for CASE is derived from an annual fixed contribution from each member organisation and from charges for accreditation activities. Additional income may arise from other activities undertaken by CASE.

- 13.3 CASE will approve an annual financial plan with recommendations on charges to be levied, to be prepared by the Treasurer.

14. **EXPENSES**

- 14.1 Member organisations will pay travelling and other costs associated with the attendance of their own representatives at meetings of CASE.

- 14.2 Direct costs for validation and advisory purposes will be met by the awarding University or institution running the course being accredited.
- 14.3 Working group expenses will be paid from CASE funds with the prior agreement of the CASE Treasurer.
- 14.4 CASE may approve the use of its funds for purposes which are consistent with the purpose of CASE (see section 2)

15. ACCREDITATION, VALIDATION AND REVIEW

- 15.1 CASE shall publish a handbook on accreditation, validation and review, setting out its criteria for accreditation of courses and its procedures and mechanisms for validation, review and monitoring of programmes and courses.
- 15.2 CASE shall maintain a register of approved accreditors and other groups that CASE deems appropriate to the pursuance of its aims.
- 15.3 CASE shall maintain a register of programmes and courses which are CASE accredited, contingent upon ongoing payment of the relevant fees (see 15.4).
- 15.4 Accreditation fees for entry and retention on the CASE register of approved programmes and courses will be determined and payable annually.

16. INTELLECTUAL PROPERTY RIGHTS

- 16.1 CASE shall retain the intellectual property of all its publications.

17. AMENDMENTS TO THIS MEMORANDUM

- 17.1 Amendments to this memorandum require the written support of all of the member organisations.

Appendix 3

Focused Course Template

for the

**Consortium
for the
Accreditation
of
Sonographic Education**

(CASE)

May 2009

Members of the Working Party

Gail Johnson
Rosemary Lee - Lead
Crispian Oates
Wendy Williams

CASE shall retain the copyright of all publications it may publish.

Preamble to CASE Focused Course Template

With the ever increasing demand for ultrasound training in specialist areas of application, the Consortium for the Accreditation of Sonographic Education (CASE) was asked by its parent bodies to consider what would be required for the Consortium to accredit short focused courses.

CASE accredits programmes leading to competence to practise and any new programme or course seeking accreditation must fulfil this criterion. Short focused courses are those designed to train someone to scan in a limited area of specialty and usually fall below the breadth and academic rigour of an M-level programme. However, although the requirements for an M-level programme would not be met in some respects, any courses accredited by CASE would have to be in line with the same clinical practice standards found in an M-level programme that CASE accredits to ensure a national standard across all training programmes and courses, albeit in a well-defined and restricted area of practice.

This Template outlines the criteria a focused course must fulfil in order to be considered for accreditation by CASE. The emphasis of the Template is twofold. Firstly to ensure that there is sufficient theory and background knowledge delivered to underpin safe and effective practice and secondly to ensure there is appropriate supervised and monitored practice experience, with clinical assessment of the student, to ensure competence to practise is achieved by the end of the course. Defined in this way, lecture-based teaching courses lasting from one to a few days are not eligible for CASE accreditation, although they may still qualify for CPD/CME points from the professional bodies. Focused courses that are accredited by CASE may also qualify for CPD/CME points and may in some instances also qualify for academic credits, if they are delivered by an academic institution.

In order to maintain accreditation by CASE, these focused courses will be required to undergo periodic review and revalidation. By setting this high standard for focused course accreditation, it will ensure that the participants who successfully complete the training will be competent sonographers in their particular field of ultrasound practice, thereby maintaining the professional standards and competency in ultrasound investigations expected by patients, NHS employers and the public.

Template

Characteristics

Definition

A focused course in medical ultrasound is a robust, stand-alone and discrete training package shorter than that of the CASE-accredited Masters programme. It may not necessarily be at postgraduate level but must include a clinical **competency element**.

Rationale

These training courses are normally developed to address a service requirement in order to ensure that the practitioner on completion of training is competent to undertake safe focused ultrasound examinations in a specific and named area of practice.

Course Design

The course duration should normally last no more than 12 months from participant enrolment. The design of the competency element of the course should reflect the guidelines issued by CASE in its current Handbook (2009).

This can be accessed on the website: <http://www.case-uk.org/>

(Academic credits may be attached to the course).

Course Syllabus

The course syllabus should reflect the critical areas of learning that a trainee will have to study in order to ensure that they are competent to practise on completion of the course.

- *fundamental scientific principles of ultrasound*
- *image generation, interpretation and recording*
- *equipment components, selection and manipulation*
- *ultrasound ergonomics and bio-effects*
- *operator, patient and client safety issues*
- *healthcare ethics*
- *clinical governance and practice limitation issues*
- *ultrasound techniques and practice in the named clinical specialty*

As an example: -

The syllabus below might be a typical one for a focused course in early pregnancy scanning and would include all the learning areas identified in the list above and in addition,

- *ultrasound practice in the named clinical specialty of preconception and early pregnancy ultrasound to include:*
 - morphological changes through the normal and assisted reproductive cycle,
 - early pregnancy confirmation, dating and fetal screening,
 - early pregnancy acute presentation,
 - confirmation and identification of multiple pregnancies,
 - confirmation and identification of ectopic pregnancies,
 - ovarian hyperstimulation syndrome,
 - abnormal endometrial changes and common gynaecological pathologies.

Learning Structure

The course must include: -

- 30 hours of classroom teaching to reflect the knowledge required to undertake a specific area of ultrasound practice (may include practical workshops),
- 120 hours* of clinical skills learning in a recognised placement, 50 hours must be directly supervised by a named mentor (these hours may include trainee self-directed periods of study related to practice).

Course Assessment

The assessment **must** include: -

- a structured clinical competency scheme, **(in order to ensure a standard level of competency across UK practitioners, it is strongly advised that course organisers ensure that the final clinical assessment matches that of the local CASE-accredited PgC programme as evidenced in the CASE Handbook)**
- a log of practical evidence that includes: -
 - evidence of 120 hours of ultrasound practice*, of which a minimum of 50 hours must be mentored, **(these are advisory hours but may be used to ensure that trainees have adequate training time to become competent in the practice)**
 - a minimum of 50 normal cases,

- 10 abnormal cases, 2 of which must be extended case reports related to the clinical specialty.

(* This is a recommended average timescale to achieve focused competency in medical ultrasound practice.)

The assessment may include a theoretical component.

Course Accreditation

CASE Council will appoint at least 1 accreditor to review the course prior to accreditation. Information on course accreditation is explained in the current Handbook. Fees will be fixed by the Council and information on these can be obtained from the CASE Co-ordinator.

Course Monitoring

CASE Council will appoint an external assessor to review the course on a 2-yearly basis for re-accreditation purposes. CASE Council may request an annual report from course organisers and request an opportunity to carry out an annual review of the trainees' log of clinical evidence.

Course Fees for 2010/11

Training Providers with CASE-accredited Postgraduate Programmes

There will be no independent fee chargeable to the training provider who currently has a suite of CASE-accredited programmes.

If a training provider, with a current CASE-accredited postgraduate ultrasound programme, requests accreditation for their additional focused courses, a fee of **£600** (reviewed on an annual basis), will be levied at the next invoice point to cover the retention of the existing postgraduate ultrasound programme and up to **three focused training courses** on the *CASE Directory of Courses*.

If a site visit is required, all costs shall be met by the training provider.

Training Providers with NO CASE-accredited Postgraduate Programmes

A non-returnable fee currently of **£50** (for administration costs) will accompany the application for accreditation of a focused ultrasound course.

On acceptance of the focused ultrasound course onto the *CASE Directory of Courses*, a fee of **£400** (reviewed on an annual basis), will be chargeable to training providers with **NO** CASE-accredited programmes.

An annual retention fee of **£200** (reviewed on an annual basis), will be levied on the training provider for retention of the accredited focused ultrasound course on the CASE Directory of Courses.

A fee of **£400**, (reviewed on an annual basis), will be chargeable for re-accreditation to these training providers, normally after 2 years.

If a site visit is required, all costs shall be met by the training provider.

(Fee covers professional and administrative charges in relation to re-accreditation and on-going review)

Please Note

A request to accredit a course that does not reflect the minimum guidelines as outlined above nor includes a clinical competency assessment will be declined. The course organiser will be advised to contact an appropriate professional body or society for continuing professional development credits.

Acknowledgements: Society + College of Radiographers for sight of their accreditation document
Responders to the CASE enquiry on current courses in UK

All matters relating to CASE activities should be directed through the CASE Co-ordinator at the following address: -

The CASE Co-ordinator
c/o Institute of Physics and Engineering in Medicine
Fairmount House
230 Tadcaster Road
York
YO24 1ES
Tel: 01904 610821
Fax: 01904 612279
e-mail: case@ipem.ac.uk
<http://www.case-uk.org/>