

## MSc Medical Ultrasound

### Science and Instrumentation pre-seminar information

In order to enhance learning experience it is recommended that you carry out some preliminary preparation prior to attending seminars. Students are advised to familiarise and gain some understanding of the following key subject areas:

- basic principles of ultrasound physics
- ultrasound equipment and controls to optimise ultrasound images
- ultrasound quality assurance criteria for safe practice
- ultrasound safety guidelines

Students are also advised to access the following websites to inform themselves and expand their knowledge and understanding of the topics highlighted above. These are:

American Institute of Ultrasound in Medicine (AIUM) <http://www.aium.org/>

BMUS Safety Guidelines <http://www.bmus.org/policies-guides/pg-safetystatements.asp>

European Federation of Societies for Ultrasound in Medicine and Biology (EFSUMB)  
<http://www.efsumb.org/intro/home.asp>

National Physical Laboratory (NPL) <http://www.npl.co.uk/>

Health Effects of Exposure to Ultrasound and Infrasound (2010).

Report of the independent Advisory Group on Non-ionising Radiation. Health Protection Agency (HPA). [http://www.hpa.org.uk/webc/HPAwebFile/HPAweb\\_C/1265028759369](http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1265028759369)

Quality Assurance of Ultrasound Imaging Systems:

<http://www.ipem.ac.uk/Publications/QualityAssuranceofUltrasoundImagingSystems.aspx>

The Society of Radiographers: <http://www.bmus.org/policies-guides/SoR-Professional-Working-Standards-guidelines.pdf>

Ter Haar, G. and Duck, F.A., 2000. *The safe use of ultrasound in medical diagnosis*. British Medical Ultrasound Society (BMUS) and British Institute of Radiology (BIR).

Where possible students are also advised to have access to the indicative textbooks to aid in their preparation and certainly use the text books to consolidate their knowledge and understanding of ultrasound.

These are:

Hoskins, P., Thrush, A., Martin, K., and Whittingam, T., 2010. *Diagnostic Ultrasound: Physics and Equipment*. 2nd ed. Cambridge: Cambridge University Press.

Dudley, N., Evans, T., Hoskins P., Watson, A., Starritt, H., 2010. *Quality Assurance of Ultrasound Imaging Systems IPEM Report No 102*. York: IPEM.