

**CDA4 Programme Design Template  
Module specification**



University of the  
West of England

**CORPORATE AND ACADEMIC SERVICES**

**MODULE SPECIFICATION**

Part 1: Basic Data					
Module Title	Cross-sectional Anatomy for the Nuclear Medicine Practitioner				
Module Code	UZYSQ9-15-M	Level	M	Version	1
Owning Faculty	HLS	Field	Allied Health Professions		
Contributes towards	MSc Nuclear Medicine				
UWE Credit Rating	15	ECTS Credit Rating	7.5	Module Type	Project
Pre-requisites	None		Co- requisites	None	
Excluded Combinations	None		Module Entry requirements		
Valid From	October 2013		Valid to		

<b>CAP Approval Date</b>	9/7/13
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Part 2: Learning and Teaching	
Learning Outcomes	<p>On successful completion of this module students will be able to:</p> <ul style="list-style-type: none"> <li>• Understand the regional anatomy of the head, neck and trunk (component A, element 1)</li> <li>• Identify the major organs, their components, vessels and major lymphatic structures in anatomical cross-section (component A, element 1)</li> <li>• Demonstrate an in-depth understanding of anatomical spatial relationships (component A, element 1)</li> <li>• Critically assess changes to normal anatomy in Nuclear Medicine relevant disease states (component A, element 1)</li> <li>• Relate structure to function and critically explore the effect of disease states on both of these (component A, element 1)</li> <li>• Critically discuss the application of anatomical and pathological knowledge to professional development and service improvement (component A, element 1) Obtain, evaluate and synthesise information from a range of sources and use it to effectively develop understanding of cross-sectional anatomy (component A, element 1)</li> </ul>

Syllabus Outline	<p><b>Regional and Cross-sectional anatomy of the head, neck and trunk</b></p> <p>Main organ and organ components, major lymphatic groups, relevant vascular anatomy</p> <p>Use of computed tomography cross-sectional images to exemplify anatomy</p> <p>Use of SPECT/CT images to illustrate common disease states relevant to Nuclear Medicine</p> <p><b>Using knowledge to support practice, and improve service delivery</b></p> <p>Professional role development</p> <p>Clinical decision-making</p>
Contact Hours	<p>Contact hours will be achieved through a blended learning approach that will include distance based education supplemented by knowledge exchange events. This distance based education will embrace the University's current vision associated with Technology Enhanced learning. Such learning will include but not be limited to, asynchronous delivery of lecture material through narrated presentations, notes and other guided reading, VLE discussion board fora with specific objectives, workplace tasks, and other study tasks deemed appropriate to the development of student knowledge. An approximated breakdown of these contact hours can be seen in the section below.</p> <p>Formative feedback on allocated study tasks will be provided. Contact with the module leader for discussion of module related issues will be facilitated by e-mail, phone conversations and through interaction at the knowledge exchange events.</p>
Teaching and Learning Methods	<p>The learning and teaching strategy for this module has been developed to show achievement of an appropriate level of facility with anatomy in cross-section that gives practitioners more confidence in understanding the images they are producing. Some role developments for Nuclear Medicine Practitioners, particularly in the expanding area of hybrid imaging i.e. SPECT/CT and PET/CT are facilitated by a good knowledge of sectional anatomy and how this has potentially been affected by the presence of disease. It is useful for practitioners to understand how their knowledge of image appearances may help them to improve the efficacy of the patient's diagnosis, through seeking additional information from the patient, from clinical colleagues or through electing to take additional images.</p> <p>This module builds upon the existing anatomical knowledge that imaging practitioners have. Delivery will be notionally divided into 4 sections covering head and neck, chest, abdomen and pelvis anatomy. Review of regional anatomy through narrated presentations will ensure that all learners are familiar with the essential anatomical components of each of the sections. Subsequently, cross-sectional anatomy will be learnt through narrated presentations; tasks that require active engagement, such as image labelling, drawing and answering questions; and image review on provided image series for each of the body areas. Students will also be encouraged to review images produced in their own departments. This strategy builds on experience with another cross-sectional anatomy module successfully delivered for the PGCert in Specialist Practice (CT). Anatomy will also be demonstrated through specific examples of disease that show anatomical structure and how it is changed in the presence of disease.</p>

	<p>To ensure engagement in the module learning opportunities, assessment will be linked to involvement in and contribution to discussion boards where specific tasks will be set. The tasks will be constructed to ensure that the module learning outcomes must be addressed. Contributions to these tasks will form source material from which students may extract content to add to their portfolio for assessment. Experience from other modules using this format indicates the potential for valuable discussion relating to the module content and helps ensure timely engagement as opposed to leaving personal study and revision to the end of the module delivery. The capacity to engage in debate with peers helps to facilitate networking, peer/shared learning and knowledge exchange.</p> <p><b>Scheduled learning</b> includes upto 30 hours engaged with lectures, seminars, tutorials, discussion board entries, project supervision, work based learning.</p> <p><b>Independent learning</b> includes upto 120 hours engaged with essential reading, case study preparation, assignment preparation and completion and reflection of learning</p>
Key Information Sets Information	N/A – Postgraduate programme
Reading Strategy	<p><b>Access and Skills</b> Any essential reading will be indicated clearly, along with the method for accessing it, e.g. students may be required to purchase a set text, be given a printed study pack or be referred to texts that are available electronically. Module guides will also reflect the range of reading to be carried out.</p> <p>All students will be encouraged to make full use of the electronic resources available to them through membership of the University. These include a range of electronic journals and a wide variety of resources available through web sites and information gateways. The University Library's web pages provide access to subject relevant resources and services, and to the library catalogue. Many resources can be accessed remotely. Students will be presented with opportunities within the curriculum to develop their information retrieval and evaluation skills in order to identify such resources effectively. Additional support is available through the iSkillZone available via the Library web pages: <a href="http://iskillzone.uwe.ac.uk/RenderPages/RenderHomePage.aspx">http://iskillzone.uwe.ac.uk/RenderPages/RenderHomePage.aspx</a></p> <p>This includes interactive tutorials on search skills and on the use of specific electronic library resources.</p> <p>Further reading will be required to supplement textbooks and other suggested readings. The purpose of this further reading is to ensure students are familiar with current research, classic works and material specific to their requirements from the academic literature. Students are expected to identify all other reading relevant to their chosen topic for themselves. They will be required to read widely using the library search, a variety of bibliographic and full text databases, and Internet resources.</p> <p>A variety of textbooks on anatomy and pathology are available from the library online.</p>
Indicative Reading List	Available as Online books through UWE library website

Bridge, P. and Tipper, D.J. (2011) *CT Anatomy for Radiotherapy*. [online] Keswick: M and K Publishing Ltd. [Accessed 15 April 2013].

Butler, P., Mitchell, A. and Healy, J. (2012) *Applied Radiological Anatomy*. [online] 2nd ed. Cambridge: Cambridge University Press. [Accessed 15 April 2013].

Delbeke, D. and Israe, I O. (2010) *Hybrid PET/CT and SPECT/CT Imaging: A teaching file*. [online] New York: Springer. [Accessed 15 April 2013].

Fanti, S., Farsad, M. and Mansi, L. (2011) *Atlas of SPECT-CT*. [online] New York: Springer. [Accessed 15 April 2013].

Kim, E. (2007) *Sectional anatomy: PET/CT and SPECT/CT*. [online] New York: Springer. [Accessed 15 April 2013].

Stenhouse, L. (2012) *Anatomy Crash Course*. [online]. 4<sup>th</sup> ed. Edinburgh: Mosby Elsevier. [Accessed 15 April 2013].

The following electronic resource is very useful: An@tomy.TV  
To use it go through the library website <http://www.uwe.ac.uk/library> click onto Electronic resources A-Z. Log in. Click on "A" and then select An@tomyTV.

Under Speciality Titles you can select Radiology: Thorax, Trunk. This feature allows you to move through the thorax, abdomen and pelvis in axial, coronal and sagittal planes and locate important anatomical features.  
(N.B. There are many searchable databases available through Electronic resources A-Z where you will find journal articles and other literature.

A helpful site for regional and sectional anatomy.  
[http://www.meddean.luc.edu/lumen/meded/Radio/curriculum/Structure/Les3\\_f.htm](http://www.meddean.luc.edu/lumen/meded/Radio/curriculum/Structure/Les3_f.htm)

Go to this page and click on the anatomical regions right at the bottom of the page. Good quality images, self tests.

Also see  
[http://www.med.wayne.edu/diagradiology/Anatomy\\_Modules/Page1.html](http://www.med.wayne.edu/diagradiology/Anatomy_Modules/Page1.html)

Useful for Head and Neck Anatomy  
<http://www.anatomywiz.com/#>

The following websites are also useful:

British Journal of Radiology (The British Institute of Radiology) – a searchable archive of past issues with downloadable articles (N.B. some articles may not be available without subscription)  
<http://bjr.birjournals.org/contents-by-date.0.shtml>

Radiology (Radiological Society of North America) – a searchable archive of past issues with downloadable articles (N.B. some articles may not be available without subscription)  
<http://radiology.rsna.org/content/by/year>

Articles available from eMedicine on specific pathologies:  
<http://emedicine.medscape.com/radiology>

University of Cleveland Pathology Case Files  
 Neuroradiology teaching files <http://www.uhrad.com/mriarc.htm>  
 Body Teaching Files <http://www.uhrad.com/ctarc.htm>

**Part 3: Assessment**

Assessment Strategy	<p>A 2500 word portfolio will demonstrate achievement of the learning outcomes.</p> <p>The Portfolio comprises of:          Clinical case study detailing a specific patient case and identifying key anatomy and pathological changes (1000 words)          Discussion of professional development and service improvement with respect to the practitioner's understanding of cross-sectional anatomy (500words)          Extracts from discussion boards contributions relating to the set tasks (1000 words)          10 labelled cross-sectional images from each of the 4 anatomical regions.</p> <p>The portfolio will assess all of the module learning outcomes. Inclusion of extracts from discussion board contributions ensures student engagement with the module content but also with peers for shared learning and debate.</p> <p>Formative assessment will be achieved by feedback on discussion board contributions from the module team, indicating where good understanding has been achieved or where there is scope for further exploration and development.</p>
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Identify final assessment component and element	<b>Component A, element 1</b>	
% weighting between components A and B (Standard modules only)	A:	B:
<b>First Sit</b>		
<b>Component A</b> Description of each element	<b>Element weighting</b>	
1. 2500 word portfolio	100%	
2.		
<b>Component B</b> Description of each element	<b>Element weighting</b>	
1.		
2.		

<b>Resit (further attendance at taught classes is not required)</b>	
<b>Component A</b>	<b>Element weighting</b>

Description of each element	
1.2500 word portfolio	100%
2.	
Component B Description of each element	Element weighting
1.	
2.	
<p>If a student is permitted an <b>EXCEPTIONAL RETAKE</b> of the module the assessment will be that indicated by the Module Description at the time that retake commences.</p>	