University of the West of England
BRISTOL

ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data						
Module Title	Introduction to Radiotherapy and Oncology					
Module Code	UZYS1V-30-1		Level	1	Version	1
Owning Faculty	Health and Applied Sciences		Field	Allied Health Professions		
Contributes towards	BSc (Hons) Radiotherapy and Oncology					
UWE Credit Rating	30	ECTS Credit Rating	15	Module Type	Standard	
Pre-requisites	None		Co- requisites	None		
Excluded Combinations	Principles of Radiotherapy and Oncology UZYSDP-40-1 Radiotherapy and Oncology 1 UZYSHR-20-1		Module Entry requirements	N/A		
Valid From	September 2015		Valid to	September 2020		

CAP Approval Date	30 April 2015

Part 2: Learning and Teaching	
Learning Outcomes	On successful completion of this module students will be able to: • Explain the molecular basis of cancer development and progression (Component A) • Describe the fundamental principles of external beam radiotherapy, including the radiobiological principles that underpin radiotherapy prescriptions (Component A) • Explain the main treatment modalities used to treat cancer (Component A) • Describe the role of imaging modalities utilised in oncology (Component A) • Describe the principles of oncology and cancer management strategies, for a range of common anatomical sites (Component B) • Demonstrate an understanding of the application of scientific, technical and toxicity management principles in common cancers treated with external beam radiotherapy (Component B)
Syllabus Outline	**Study skills** How to retrieve information, using sources of evidence effectively **Principles of Oncology** Epidemiology and aetiology of cancers. Characteristics of tumours, classification of malignant tumours, staging and grading. The biological basis of cancer formation, routes of spread. **Pre-treatment work up** Role of clinical investigations in diagnosis. Basic imaging principles, the role of imaging (including cross sectional imaging) in diagnosis, radiotherapy planning and

<table>
<tr><td></td><td>treatment monitoring. Introduction to radiotherapy treatment planning tools and protocols.

Aim of cancer management tools
Radiotherapy modalities and overview of radiotherapy equipment, concept of radical, palliative, prophylactic and adjuvant treatments. Overview of the role of surgery, chemotherapy and hormone therapy. Basic principles of pharmacology and the role of pharmaceuticals in managing radiotherapy side effects.

Radiotherapy procedures
Oncological principles related to anatomical sites for common cancers. Treatment models for radical and palliative applications in cancer sites commonly treated with external beam radiotherapy.

Radiobiology
Principles of radiobiology and fractionation, concept of tolerance doses.

External beam dosimetry
Isodose charts, applied dose, mid-plane dose, multifield techniques, electrons, methods of beam modification, immobilisation devices.</td></tr>
<tr><td>Contact Hours</td><td>Students will engage in approximately 102 hours of contact time including key note lectures and practical sessions in small groups on the VERT system and radiotherapy planning computers (max 7-8 students per group). Students also attend a clinical visit to a local radiotherapy department (in small groups). Students are timetabled 36 hours of self study for completion of tasks, workbooks and virtual patient simulation scenarios throughout the module, but are expected to do additional self study within their own time. In addition, email contact with staff is available throughout the module and during scheduled tutorial time.</td></tr>
<tr><td>Teaching and Learning Methods</td><td>Scheduled learning includes lectures and seminars, practical sessions on the VERT system and radiotherapy planning computers, and a visit to a local radiotherapy department.

Independent learning includes hours engaged with essential reading, completion of workbooks and interactive online learning materials, assignment preparation, presentation preparation, revision etc.

Formative assessment presentations student led presentations which will be formatively assessed and linked to the component B assessment</td></tr>
<tr><td>Key Information Sets Information</td><td>Key Information Sets (KIS) are produced at programme level for all programmes that this module contributes to, which is a requirement set by HESA/HEFCE. KIS are comparable sets of standardised information about undergraduate courses allowing prospective students to compare and contrast between programmes they are interested in applying for.

<u>Key Information Set - Module data</u>

Number of credits for this module 30

<table>
<tr><th>Hours to be allocated</th><th>Scheduled learning and teaching study hours</th><th>Independent study hours</th><th>Placement study hours</th><th>Allocated Hours</th></tr>
<tr><td>300</td><td>102</td><td>193</td><td>5</td><td>300</td></tr>
</table>

The table below indicates as a percentage the total assessment of the module which constitutes a -</td></tr>
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	Written Exam: Unseen written exam, open book written exam, In-class test **Coursework**: Written assignment or essay, report, dissertation, portfolio, project **Practical Exam**: Oral Assessment and/or presentation, practical skills assessment, practical exam Please note that this is the total of various types of assessment and will not necessarily reflect the component and module weightings in the Assessment section of this module description: Total assessment of the module: Written exam assessment percentage: 50% Coursework assessment percentage: 50% Practical exam assessment percentage: 0% 100%
Reading Strategy	**Core readings** Any essential reading will be indicated clearly, along with the method for accessing it, e.g. students may be expected to purchase a set text, be given a study pack or be referred to texts that are available electronically, or in the Library. Module guides will also reflect the range of reading to be carried out. **Further readings** All students are encouraged to read widely using the library catalogue and Internet resources. Many resources can be accessed remotely. Guidance to some key authors and journal titles available through the Library will be given in the Module Guide and updated annually. **Access and skills** Formal opportunities for students to develop their library and information skills are provided within the induction period. Additional support is available through the Library Services web pages, including interactive tutorials on finding books and journals, evaluating information and referencing. Sign-up workshops are also offered by the Library.
Indicative Reading List	The following list is offered to provide validation panels/accrediting bodies with an indication of the type and level of information students may be expected to consult. As such, its currency may wane during the life span of the module specification. *Current* advice on additional reading will be available via the module guide or Blackboard pages. Barratt, A., Dobbs, J., Morris, S., and Roques, T. (2009) *Practical Radiotherapy Planning* [online] 4th Ed. London: Hodder Arnold. [Accessed 15 September 2014] Cancer Research UK (2014) *CancerStats: Cancer statistics for the UK*. Available from: http://www.cancerresearchuk.org/cancer-info/cancerstats/. [Accessed 15 September 2014] Department Of Health (2012) *Radiotherapy Services in England.* Available from: https://www.gov.uk/government/publications/radiotherapy-services-in-england-2012. [Accessed 15 September 2014] Department Of Health (2012) *Improving Outcomes: A strategy for cancer*. Available from: https://www.gov.uk/government/publications/improving-outcomes-a-strategy-for-cancer. [Accessed 15 September 2014] Hoskins, P. (2012) *Radiotherapy in Practice: External Beam Therapy* [online] 2nd ed. Oxford: Oxford University Press. [Accessed 15 September 2014] Symonds, P., Deehan, C., Meredith, M., and Mills, J. (2012) *Walter and Miller's Textbook of Radiotherapy* [online] London: Churchill Livingstone. [Accessed 15 September 2014]

Part 3: Assessment	
Assessment Strategy	Component A – 2 hour written examination. Rationale: To allow assessment of a broad syllabus to ensure that students have the underpinning knowledge necessary for clinical practice at level 1. Component B – 2500 word written case study reflecting upon formative assessment of student led group presentations. Rationale: To enable students to demonstrate in-depth knowledge of particular aspects of radiotherapy and oncology management strategies and analyse these in accordance with research literature. Reflecting on learning from their group presentations and developing their written skills, will help prepare students for assessments at level 2.

Identify final assessment component and element	**Component A**	
% weighting between components A and B (Standard modules only)	**A:** **50%**	**B**: **50%**

First Sit	
Component A (controlled conditions) **Description of each element**	**Element weighting**
1. 2 hour written exam	100%
Component B **Description of each element**	**Element weighting**
1. 2500 word written case study	100%

Resit (further attendance at taught classes is not required)	
Component A (controlled conditions) **Description of each element**	**Element weighting**
1. 2 hour written exam	100%
Component B **Description of each element**	**Element weighting**
1. 2500 word written case study	100%
If a student is permitted an **EXCEPTIONAL RETAKE** of the module the assessment will be that indicated by the Module Description at the time that retake commences.	