University of the West of England
BRISTOL

ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data						
Module Title	Exercise and Biomechanics for Physiotherapy and Sport Rehabilitation					
Module Code	UZYSXW-30-1		Level	1	Version	1
Owning Faculty	Health and Applied Sciences		Field	Allied Health Professions		
Contributes towards	BSc(Hons) Physiotherapy BSc (Hons) Sport Rehabilition					
UWE Credit Rating	30	ECTS Credit Rating	15	Module Type	Standard	
Pre-requisites	None		Co- requisites	None		
Excluded Combinations	None		Module Entry requirements	N/A		
Valid From	September 2015		Valid to	September 2021		

CAP Approval Date	

Part 2: Learning and Teaching	
Learning Outcomes	On successful completion of this module students will be able to: 1. Discuss the benefits of activity in the maintenance of health within a biopsychosocial model and state the recommended levels of activity to maintain health (Component B) 2. Demonstrate skills in organising, delivering, managing and monitoring an exercise programme in healthy populations (e.g. to strengthen, stretch, improve balance, and cardiovascular fitness) (Component B) 3. Define and explain basic biomechanical principles (Component A and B) 4. Analyse and discuss basic functional (and sporting) human movement using biomechanical principles (Component A) 5. Identify and discuss variations from normal human movement using these biomechanical principles (Component A) 6. Prescribe a justified exercise programme to address variations from normal human movement (Component A) 7. Outline factors affecting motivation and adherence to adopting an exercise regimen and active lifestyle. Identify methods to increase motivation and adherence (Component B) 8. Demonstrate an ability to ensure personal, peer and service user safety when

	instructing physical activities (Component A)
Syllabus Outline	**Exercise** Types of exercise (e.g. prevention, therapeutic, conditioning, social) Biopsychosocial benefits of exercise for specific populations (e.g. children, adults, older adults, elite athletes) Goal setting, motivation, adherence Principles of prescription (to include risk assessment and incident reporting) for individual and group exercise Components of fitness (what is it, how is it assessed, exercises to improve): • Cardiovascular fitness • Balance and proprioception • Flexibility • Strength **Biomechanics** Mechanics of movement to include: • Cardinal planes and axes • Torque • Levers • Stress/strain and soft tissue mechanics (e.g. viscoelasticity) • Muscle range (e.g. optimal length, active and passive tension) • Group action of muscles (e.g. neutralisers, stabilisers) • Length-tension relationships **Movement analysis for functional and sporting activities** • Integration of the mechanical principles to analyse: gait, running, sit to stand, jumping, gripping, reaching, throwing • Identification of abnormal movement with subsequent exercise prescription • Use of biomechanical principles to justify progressions/regression of exercises prescribed
Contact Hours	Up to 96 contact hours to include two 2 hour lectures and seminars/practicals over 24 weeks.
Teaching and Learning Methods	Teaching and learning will be shared with the level 1 BSc (Hons) Sport Rehabilitation students. **Scheduled learning** will include lectures, seminars, demonstration, and practical classes and workshops. This accounts for approximately 96 hours. **Independent learning** includes essential reading, case study preparation, assignment preparation and completion. Students will be provided with a module workbook to guide their independent learning. This accounts for approximately 204 hours.
Key Information Sets Information	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.

Key Information Set - Module data

Number of credits for this module 30

Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours
300	96	204	0	300

The table below indicates as a percentage the total assessment of the module which constitutes a -

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:	
Coursework assessment percentage	50%
Practical exam assessment percentage	50%
	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 Further reading is advisable for this module, and students will be encouraged to explore at least one of the titles held in the library on this topic. A current list of such titles will be given in the module guide and reviewed regularly 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. However, as indicated above, CURRENT advice on readings will be available via other more frequently updated mechanisms.

American College of Sports Medicine. (2013) *ACSM'S Guidelines for Exercise Testing and Prescription.* 9th Ed. Oxford: Lippincott Williams & Wilkins.

Corbin, C., Welk, G., Corbin, W., and Welk, K. (2013) *Concepts of Fitness and Wellness: A Comprehensive Lifestyle Approach*. 10th ed. London: McGraw-Hill

Everett, T. and Kell, C. (2010) *Human movement: an introductory text.* 6th ed. [online] Edinburgh: Churchill Livingstone. [Accessed 14 November 2014].

Hamill, J. and Knutzen, K.M. (2009) *Biomechanical Basis of Human Movement*. 3rd ed. Baltimore: Lippincot Williams & Wilkins.

Hardman, A., and Stensel, D. (2009) *Physical Activity and Health: the Evidence Explained* 2nd ed. [online] Oxon: Routledge. [Accessed 14 November 2014].

Marcus, B., and Forsyth, L. (2009) *Motivating People to be Physically Active.* 2nd ed. [online] Leeds: Human Kinetics. [Accessed 14 November 2014].

Nieman, D. (2011) *Exercise testing and prescription: a health related approach*. 7th ed. New York: McGraw-Hill.

Part 3: Assessment	
Assessment Strategy	**Component A (controlled conditions): summative** Structured Oral Practical Exam (SOPE) at the end of semester 2. This approach will enable assessment of systematic movement analysis and the application of this in selecting and teaching appropriate exercises. It will also allow assessment of the learning outcomes related to practical skills. The SOPE will include questions to assess the students' movement analysis skills (based on video clips of movements used within the module) and require students to systematically analyse the movement, describe the dysfunction and prescribe justified exercises to target the dysfunction. **Component B:** 2000 word case report at the end of semester 1. A written case report will allow in depth assessment of a specific aspect of exercise prescription, and allow the assessment of technical writing in preparation for level 2. Students will be assigned a case study relating to a specific aspect of fitness (e.g. cardiovascular, balance and proprioception, strength, flexibility) and will present a written report of an exercise regimen for a given patient/client. This will be based on a proforma provided and will include justification for the inclusion of each exercise using theory and relevant sources.

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. Structured Oral Practical Exam - 45 minutes maximum	100%
Component B **Description of each element**	**Element weighting**
1. Case report (2000 words)	100%

Resit (further attendance at taught classes is not required)	
Component A (controlled conditions) **Description of each element**	**Element weighting**
1. Structured Oral Practical Exam - 45 minutes maximum	100%
Component B **Description of each element**	**Element weighting**
1. Case report (2000 words)	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.	