

## 國立體育大學 100 學年度第 2 學期全英語授課申請表

教師姓名	衛沛文	教師所屬單位	運動與健康科學 學院 運動科學研究 學系(所)		
專 兼 任	<input checked="" type="checkbox"/> 專任 <input type="checkbox"/> 兼任	職 稱	<input type="checkbox"/> 教授 <input checked="" type="checkbox"/> 副教授 <input type="checkbox"/> 助理教授 <input type="checkbox"/> 講師		
開課單位	運動與健康科學 學院 運動科學研究 學系(所)				
課程名稱	中 文	應用運動生理學研究 (英語授課)			
	英 文	Advanced Applied Exercise Physiology (Lecture in English)			
課 號	SS406	班 別	1A	選 修 別	<input type="checkbox"/> 必修 <input checked="" type="checkbox"/> 選修
申請人請簡述 課程擬以全英 語授課緣由 (附教學大綱)	This course is a continuation of course “Advanced Physical Activity and Public Health (Lecture in English)” with the objective of development of student’s English proficiency in both academic and practical subjects among various selected topics for the prevention and management of non-communicable diseases. Competence in this course encourages students to pursuit international exposure and recognition.				
開課單位 課程委員會 審查意見			授課教師簽名		
			開課單位主管		
			開課單位院長		
教務處 會簽意見	承辦人		單位主管	教務長	

說明：

- 1.全英語授課所開授課程內容必須全程以英語方式教學授課，包括採用英語教材、講授、討論、報告及成績評量皆採用英語方式為之。申請全英語授課課程需經各級課程委員會審查通過。
- 2.本申請表適用對象為各開課單位（不含推廣教育班）所開設之課程，惟各系所自行開設之語言類課程、個別指導課（含研究指導、畢業製作...等）及外籍授課教師不適用。
- 3.依本校教師授課時數標準及規範辦法第六條之規定：全英語授課(英文課程除外)之課程，其授課時數得以 1.5 倍核計，但須受每人每週超支四小時之限制。如為二位以上教師合授之課程應按其實際授課時數比例支給。
- 4.各開課單位應對全英語教學課程適時評估成效，並請授課教師提供授課經驗及建議事項之報告表，送開課單位課程委員會作為推動英語授課課程規劃及檢討改進之參考；教務處亦得不定期對教師授課情形及學生反應進行課程評鑑。

## 國立體育大學授課教學大綱 (Teaching Plan)

科目中文名稱 Chinese Course Title	應用運動生理學研究
科目英文名稱 English Course Title	Advanced Applied Exercise Physiology
授課老師 Instructor	Jackson Pui Man Wai 衛沛文
修課條件 Prerequisite	Students are required to pass course “Advanced Physical Activity and Public Health (Lecture in English)”, or course “Advanced Literature (English) in Physical Activity and Health I (lecture in English)”. Other prerequisites include undergraduate level courses in anatomy, human physiology, and exercise physiology. Students with deficiency in prerequisite courses are required to obtain permission from the course instructor.
教學目標 Objective	At the end of this semester, student will be able to construct knowledge model of a special issue in exercise physiology by extensive and in-depth literature review for the study of physical activity in prevention and management of chronic non-communicable diseases.
先修科目 Pre Course	“ see prerequisite”
教材內容 Outline	<p><b>Bone growth and modeling:</b> Hormonal regulation of calcium and phosphate balance, bone resorption and deposition, 1,25-dihydroxyvitamin D<sub>3</sub> and bone mineral, mechanical loading on bone growth and mineral content.</p> <p><b>Assessment of bone mineral content and density:</b> ultrasound method, dual x-ray absorptometry method.</p> <p><b>Osteoporosis criteria:</b> WHO’s definition of osteoporosis for postmenopausal women, criteria for premenopausal women and for men.</p> <p><b>Exercise and osteoporosis:</b> Prevalence of osteoporosis, epidemiological and intervention (randomized controlled trial) studies of physical activity, resistance exercise training, weight-bearing activity, impact exercise, grip strength, adipose tissue, and bone mineral density, among men, women, youth, and the elderly.</p> <p><b>Physical activity for glycemic control among type 2 diabetes:</b> Prevalence of diabetes, epidemiological and intervention (randomized controlled trial) studies of aerobic exercise, walking, resistance exercise programs.</p> <p><b>Chronic kidney disease (CKD):</b> Prevalence of CKD, etiology of CKD, physical inactivity and CKD, physical activity and renal cell cancer, association of physical activity and mortality among CKD.</p>
教學方式 Teaching Method	Classroom instructions and in-class discussions

參考書目  
References

## References

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### Exercise intervention on glycemic control among type 2 diabetes

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	<p>people with type 2 diabetes. <i>PTJ</i> 88(11): 1345 – 1353, 2008.</p> <ol style="list-style-type: none"> <li>4. <b>Negri C, Bacchi E, Morgante S, Soave D, Marques A, Menghini E, Muggeo M, Bonora E and Moghetti.</b> Supervised walking groups to increase physical activity in type 2 diabetic patients. <i>Diabetes Care</i> 33(11):2333-5.</li> <li>5. <b>Praet SF, van Rooij ES, Wijtliet A, Boonman-de Winter LJ, Enneking T, Kuipers H, Stehouwer CD and van Loon LJ.</b> Brisk walking compared with an individualised medical fitness programme for patients with type 2 diabetes: a randomised controlled trial. <i>Diabetologia</i> 51(5):736-46, 2008.</li> <li>6. <b>Signal RJ, Kenny GP, Boule NG, Wells GA, Prudhomme D, Fortler, Reld RD, Tulloch H, Coyle D, Phillips P, Jennings A and Jaffey J.</b> Effects of aerobic training, resistance training, or both on glycemic control in type 2 diabetes: a randomized trial. <i>Ann Intern Med</i> 147(6): 357 – 369, 2007.</li> <li>7. <b>Trenell MI, Hollingsworth KG, Lim EL and Taylor R.</b> Increased daily walking improves lipid oxidation without changes in mitochondrial function in type 2 diabetes. <i>Diabetes Care</i> 31(8):1644-9, 2008.</li> <li>8. <b>Umpierre D, Ribeiro PAB, Kramer CK, Leitão CB, Zucatti ATN, Azevedo MJ, Gross JL, Ribeiro JP, Schaan BD.</b> Physical activity advice only or structured exercise training and association with HbA1c lLevels in type 2 dDiabetes: a systematic review and meta-analysis. <i>JAMA.</i> 305(17):1790-1799, 2011.</li> <li>9. <b>Walker KZ, Piers LS, Putt RS, Jones JA and O'Dea K.</b> Effects of regular walking on cardiovascular risk factors and body composition in normoglycemic women and women with type 2 diabetes. <i>Diabetes Care</i> 22(4):555-61, 1999.</li> <li>10. <b>Yates T, Davies M, Brady E, Webb D, Gorely T, Bull F, Talbot D, Sattar N and Khunti K.</b> Walking and inflammatory markers in individuals screened for type 2 diabetes. <i>Prev Med</i> 47(4):417-21, 2008.</li> <li>11. <b>Yates T, Davies MJ, Gorely T, Talbot D, Bull F, Sattar N and Khunti K.</b> The effect of increased ambulatory activity on markers of chronic low-grade inflammation: evidence from the PREPARE programme randomized controlled trial. <i>Diabet Med</i> 27(11):1256-63, 2010.</li> </ol> <p><b>Chronic kidney disease and physical activity</b></p> <ol style="list-style-type: none"> <li>1. <b>Beddhu S, Baird BC, Zitterkoph J, Neilson J, and Greene T.</b> Physical activity and mortality in chronic kidney disease (NHANES III). <i>Clin J Am Soc Nephrol.</i> 2009. doi: 10.2215/CJN.01970309</li> <li>2. <b>Bergstrom A, et al.</b> Physical activity and risk of renal cell cancer. <i>Int. J. Cancer:</i> 92, 155–157 (2001)</li> <li>3. <b>Biruh T Workeneh and William E Mitch.</b> Review of muscle wasting associated with chronic kidney disease. <i>Am J Clin Nutr.</i> 91: 1128S-1132S, 2010.</li> <li>4. <b>Wen CP, et al.</b> All-cause mortality attributable to chronic kidney disease: a prospective cohort study based on 462 293 adults in Taiwan. <i>The Lancet.</i> 371: 2173-82, 2008.</li> <li>5. <b>White SL, Dunstan DW, Polkinghorne KR, Atkins RC, Cass A, Chadban SJ.</b> Physical inactivity and chronic kidney disease in Australian adults: The AusDiab study. <i>Nutr Metab Cardiovasc Dis.</i> Nov 24, 2009.</li> </ol>
<p>教學進度 Syllabi</p>	<p>請詳載 18 週授課內容 (Teaching contents in 18 weeks)</p> <p>Week 1-3: Bone growth and modeling</p> <p>Week 4-5: Assessment of bone mineral content and density, osteoporosis criteria</p> <p>Week 6-9: Exercise and osteoporosis</p> <p>Week 10: Mid-term examination</p> <p>Week 11-14: Physical activity for glycemic control among type 2 diabetes</p> <p>Week 15-17: Physical activity and chronic kidney disease (CKD)</p> <p>Week 18: Final examination</p>
<p>評量方式 Evaluation</p>	<p>評量方式與百分比 (Method and percentage)</p> <p>In class discussion (20%)</p> <p>Mid-term examination (30%)</p> <p>Final examination (50%)</p>

注意事項：

- 1.課程之中英文名稱請依各開課單位學分科目表填寫。
- 2.本表各欄位如有不足，請自行增列後填寫。

### Core Ability Rubric

Core ability	%	Course objectives	Level of skill	Teaching strategy	Evaluation method
1.具備運用運動生理、運動營養與運動科技知識的能力	0				
2.具備分析與解決運動科學相關問題的能力	30	<ul style="list-style-type: none"> <li>Can identify problem types</li> <li>Understands the level of complexity of a problem</li> <li>Develop, evaluate, and test possible solutions</li> </ul>	Analytical skill	<ul style="list-style-type: none"> <li>Classroom instructions</li> <li>In-class oral discussions</li> </ul>	<ul style="list-style-type: none"> <li>Situational simulation test</li> <li>In-class oral assessment</li> <li>Written examinations on construction of knowledge models</li> </ul>
3.具備運動科學專業文獻(含外語)之閱讀、寫作及發表(含外語)的能力	30	<ul style="list-style-type: none"> <li>Able to search, identify, screen, and implement research literatures</li> <li>Able to construct an evidence-based knowledge model</li> </ul>	Integrative skill	<ul style="list-style-type: none"> <li>Classroom instruction on methods of review of literatures</li> <li>In-class oral discussions</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of evidence-based oral discussion</li> <li>Written examination on construction of knowledge models</li> </ul>
4. 具備運動科學研究之團隊合作與溝通能力	20	<ul style="list-style-type: none"> <li>Joins a group cooperatively</li> <li>Acknowledge and listens attentively to other members</li> <li>Be prepared and reliable</li> <li>Contribute to the end product</li> <li>Respect differing points of view</li> <li>Can take an active position</li> </ul>	Practical and social skill	<ul style="list-style-type: none"> <li>Guidance and encouragement of queries and exchange of concepts and opinions in class discussions</li> </ul>	<ul style="list-style-type: none"> <li>Participation and performance of group discussions</li> </ul>
5.具備國際運動科學概念與學術發表的能力	20	<ul style="list-style-type: none"> <li>Expression and implementation of acquired knowledge</li> </ul>	Integrative skill	<ul style="list-style-type: none"> <li>Classroom instruction on methods of review of literatures</li> <li>in-class oral discussions</li> </ul>	<ul style="list-style-type: none"> <li>In-class oral assessments</li> <li>Written examinations on construction of knowledge models</li> </ul>

### In-Class Discussion Rubric (20% of course evaluation)

Objectives	Low Performance	At or Below Average	At or Above Average	Exemplary Performance	Earned Points
	<b>1-3 points</b>	<b>4-5 points</b>	<b>6-7 points</b>	<b>8-10 points</b>	
Student responds to other students in the discussion group. (20%)	Student seems distracted or engages in unrelated conversations while other students speak.	Student often interrupts other students' comments and opinions by insulting them or by forcefully adding their own opinions.	Student occasionally interrupts other students, but generally adds a related argument or opinion.	Student waits until the speaker is done speaking before contributing and integrates past comments into their own statement.	
Student is prepared for discussion. (30%)	Student is unable to discuss due to not completing the assignment or activity leading to the discussion.	Student makes random comments that repeat what others have said without contributing anything new or randomly adds opinions that are off topic.	Student is engaged in the discussion, occasionally using references from the preparatory assignment or activity.	Student is engaged in the discussion, and often cites specific references to the preparatory assignment or activity and clearly connects the references to main opinions.	
Student demonstrates understanding of topic being discussed. (50%)	Student does not engage in the discussion.	Student offers opinions that are only occasionally related to the topic.	Student connects the topic to life experiences and previous knowledge.	Student uses examples to help struggling students see the ways the topic connects to life experiences and previous knowledge, and student is able to answer group members' questions with ease.	
				<b>Score (max 100):</b>	