

<b>Course Title/Code:</b>	<b>Advances in Cardiovascular Physiology (MMPH6019)</b>
<b>Department:</b>	School of Biomedical Sciences
<b>Objective:</b>	To present students with an overview of the structure and function of the heart and vascular system, with a particular focus on vascular regulation, cardiac regeneration, and the responses of the cardiovascular system to hypoxia; to enhance students' ability to evaluate and compare published research papers; to improve students' skills in preparation and oral presentation of research findings.
<b>Content:</b>	Topics include structure, function and control of the heart; hypoxia and cardiac function; vascular responses to systemic hypoxia; chemoreflex in cardiopulmonary functions; vascular responses to exercise; regulation of the vasculature by the endothelium; introduction to stem cells; heart regeneration; how a research seminar is prepared and presented, and one-on-one tutorial on research seminar preparation. In addition, students will prepare a seminar presentation.
<b>Learning outcomes:</b>	On completion of the course, students are expected to: <ul style="list-style-type: none"> <li>• understand the basic structure and function of the cardiovascular system as a whole</li> <li>• describe the important control mechanisms regulating cardiac output</li> <li>• describe the role of the endothelium as a regulator of vascular tone</li> <li>• describe the responses of the heart and blood vessels to hypoxia, and understand the mechanisms for those changes</li> <li>• understand the basis for stem cell therapy in the heart and describe its potential application in disease states</li> <li>• evaluate in detail the published literature on one of the above topics; and present the findings in both verbal and written formats</li> </ul>
<b>Duration:</b>	1 semester; 2 hours/week; 24 contact hours
<b>Continuous assessment/ examination ratio:</b>	Seminar presentation (50%) Literature review (50%)
<b>Examination method/ duration:</b>	30 min seminar presentation and literature review paper with ~3000 words
<b>Class size:</b>	Minimum 5 students