

Course Title/Code:	Advances in Vascular Biology and Therapeutics (MMPH6172)
Department:	Pharmacology and Pharmacy
Objective:	To introduce how different regulatory systems coordinate together the maintenance of vascular tone and vascular integrity, the complications due to dysfunction systemic and pulmonary circulation, and the rationale behind the current and prospective drug treatments for vascular diseases and vascular complications of diabetes, hypertension and dyslipidemia.
Content:	<p>Topics include:</p> <ul style="list-style-type: none"> • Current knowledge and advanced research findings on the neuronal, hormonal and local control of the vascular system under normal and pathological conditions • Functions of the systemic and pulmonary vasculature and the complications due to their dysfunction • Regulatory mechanisms for the maintenance of vascular integrity and tone • Management of vascular disorders and the complications of dyslipidemia, hypertension and diabetes, in particular thrombosis and atherosclerosis
Learning outcomes:	<p>On completion of the module, the students are expected to:</p> <ul style="list-style-type: none"> • discuss the importance of the regulation of the vascular system and integrate the different regulatory systems for the maintenance of vascular functions and integrity • describe the effects of cardiac output, lung volume and hypoxia on pulmonary vascular resistance • explain the underlying mechanisms leading to various pathologies of the vascular system • critically appraise experimental methodologies and findings in vascular biology research • identify the rationale of current and prospective pharmacological treatments for vascular diseases and vascular complications of diabetes, hypertension and dyslipidemia
Pedagogy	Lectures, Essay writing and Literature review
Prerequisite:	Students with biomedical background preferred
Duration:	Second Semester; 2 hours/week, 24 contact hours

**Coursework /
Examination ratio:**

In course assessment (40%) and Final examination (60%)

**Examination method
and duration:**

Written examination / 2 hours

Remarks:

Students with biochemical and biomedical background preferred.