KING'S College LONDON

Applied Maths: Understanding Engineering through Numbers, Session One

Classroom: BH(S)2.01

	Monday 1 July	Tuesday 2 July	Wednesday 3 July	Thursday 4 July	Friday 5 July
Morning 9am – 12noon	**Introductory class:** Lecture 1: *Introduction and Basic Concepts* Problem Class: *Trigonometry, Logs and Exponentials* Group activity: *Great Mathematicians*	**Academic session:** Lecture 2: *Quantities and Vectors* Problem Class: *Vectors and Newton's Laws* Group activity: *Using King's Library and Online Resources*	**Academic session:** Lecture 3: *Differentiation* Problem Class: *Differentiation* Group activity: *Linear Approximations and Taylor Series*	**Academic session:** Lecture 4: *Application of Differentiation to Engineering* Problem Class: *Problems in Engineering* Group activity: *Analysis of wave signals*	**Academic session:** Guest speaker talks
SKILLS SESSION (Optional)			***SKILLS SESSION*** ***12:30-1:30pm***		
Afternoon	**Enrolment: 12-1pm** Room: FWB 2.49 **Welcome Talk: 4:00-4:45** Room: FWB B5				
	Monday 8 July	Tuesday 9 July	Wednesday 10 July	Thursday 11 July	Friday 12 July
Morning 9am – 12noon	**Academic session:** Lecture 5: *Integration* Problem Class: *Integration* Group activity: *Area under a curve*	**Academic session:** Lecture 6: *Application of Integration to Engineering* Problem Class: *Problems in Engineering* Group activity: *Cardiac output calculation*	**Academic session:** Lecture 7: *Complex Numbers* Problem Class: *Complex Numbers* Group activity: *Finding the treasure*	**Academic session:** Lecture 8: *Ordinary Differential Equations (first order)* Problem Class: *First order ODEs* Group activity: *The Windkessel blood flow model*	**Academic session:** Excursion: Visit to the *Mathematics Winton Gallery* [London Science Museum]
SKILLS SESSIONS(Optional)			***SKILLS SESSION*** ***12:30-1:30pm***		

This timetable is subject to change.

Afternoon					
	Monday 15 July	**Tuesday 16 July**	**Wednesday 17 July**	**Thursday 18 July**	**Friday 19 July**
Morning 9am – 12noon	**Academic session:** Lecture 9: *Ordinary Differential Equations (second order)* Problem Class: *Second order ODEs* Group activity: *Skydiving*	**Academic session:** Lecture 10: *Periodic Motion* Problem Class: *Problems in Engineering* Group activity: *Simple harmonic motion*	**Academic session:** Lecture 11: *Functions of Multiple Variables* Problem Class: *Functions of Multiple Variables* Group activity: *The wave equation*	**Academic session:** Revision Class	**Academic session:** Conclusions and wrap up **Students to complete online feedback survey**
SKILLS SESSIONS(Optional)				*SKILLS SESSION* *12:30-1:30pm*	
Afternoon					