

## 4<sup>th</sup> PBC

### 4<sup>th</sup> Plasma Basics Course

The British University in Egypt  
13- 23 August 2023



Prof. Dr. Waleed Moslem  
The British University in Egypt  
Port Said University

Prof. Dr. Amr El-Zant  
The British University in Egypt

## Day 1 Sunday, 13 Aug 2023

Time	Title	Speaker
12:00 – 12:30	Opening	Waleed Moslem
12:30 – 01:30	Introduction to plasma physics	Ibraheem Elkamash
01:30 – 02:00	Break	
02:00 – 03:00	Plasma theories (SPM)	Mohamed Shihab
03:00 – 04:00	Assignments & problems	Plasma Team

## Day 2 Monday, 14 Aug 2023

10:00 – 11:00	Uniform E and B fields	Mohamed Shihab
11:00 – 11:10	Break	
11:10 – 12:10	Waves 1	Ibraheem Elkamash
12:10 – 12:40	Coffee Break	
12:40 – 01:40	Group work	Plasma Team
01:40 – 04:00	Experimental plasma	Azza Talab

## Day 3 Tuesday, 15 Aug 2023

10:00 – 11:00	Plasma as a fluid	Mohamed Shihab
11:00 – 11:10	Break	
11:10 – 12:10	Waves 2	Ibraheem Elkamash
12:10 – 12:40	Coffee Break	
12:40 – 01:40	Electron plasma waves	Waleed Moslem
01:40 – 04:00	Assignments & problems	Plasma Team

## Day 4 Wednesday, 16 Aug 2023

10:00 – 11:00	Ion plasma waves	Waleed Moslem
11:00 – 11:10	Break	
11:10 – 12:10	Low temperature plasma experiments	Mohamed Shihab
12:10 – 12:40	Coffee Break	
12:40 – 01:40	Waves 3	Ibraheem Elkamash
01:40 – 04:00	Assignments & problems	Plasma Team

## Day 5 Sunday, 20 Aug 2023

Time	Title	Speaker
12:00 – 01:00	Waves 4	Ibraheem Elkamash
01:00 – 01:30	Coffee Break	
01:30 – 02:30	Laser plasma interaction	Mohamed Shihab
02:30 – 04:00	Assignments & problems	Plasma Team

## Day 6 Monday, 21 Aug 2023

10:00 – 11:00	Electrostatic electron oscillations perpendicular to B	Waleed Moslem
11:00 – 11:10	Break	
11:10 – 12:10	Plasma heating	Mohamed Shihab
12:10 – 12:40	Coffee Break	
12:40 – 01:40	Two stream instability	Ibraheem Elkamash
01:40 – 04:00	Experimental plasma	Azza Talab

## Day 7 Tuesday, 22 Aug 2023

10:00 – 11:00	Electrostatic ion waves perpendicular to B	Waleed Moslem
11:00 – 11:10	Break	
11:10 – 12:10	Bounded plasma	Mohamed Shihab

12:10 – 12:40	Coffee Break	
12:40 – 01:40	Korteweg–de Vries Equation	Ibraheem Elkamash
01:40 – 02:40	Mid-course exam	Plasma Team
02:40 – 04:00	Assignments & problems	Plasma Team

## Day 8 Wednesday, 23 Aug 2023

10:00 – 11:00	Sagdeev potential	Ibraheem Elkamash
11:00 – 11:10	Break	
11:10 – 12:10	Dense plasma	Mohamed Shihab
12:10 – 12:40	Coffee Break	
12:40 – 01:40	Dusty plasma	Waleed Moslem
01:40 – 04:00	Assignments & problems	Plasma Team