



# SISP 1117

## A First Step to Probability

### **Course description**

The course aims to cover the materials about the fundamental concepts of counting, probability theory and random variables. Students will study counting techniques such as permutation and combination, probability theory with some famous problems such as birthday problem, etc. The course assignments will provide students with some hands-on experience to have a better understanding of probability.

Completion of this course will give students access to a wide range of probabilistic skills and techniques to solve real problems.

### **Topics**

The key topics are permutation, combination, sample spaces, conditional probability, random variables, independence, discrete distributions, expectation, and some results related to statistics.

### **Grading Scheme**

Assignments: 30%

Final Exam: 70%

### **Teaching mode**

The course will be delivered face-to-face

### **Attendance Requirement Class**

Attendance is expected and required. The minimum attendance required is 70%. Attendance for the assessment activities [e.g group presentation and final exam] is mandatory.

### **Instructor(s) Profile**

#### **Dr. Chi Wai YU**

Dr. Yu is currently working as a lecturer in the Department of Mathematics, HKUST. He obtained his Ph.D. in Statistics at the University of British Columbia. He has more than 10-year extensive experience in working with statistics and in teaching probability and statistics with different computer software like R, SAS, and Python at undergraduate and postgraduate levels.