# University of Asia Pacific

## Department of Basic Sciences and Humanities

### MTH 301: Statistics and Probability

(CSE, Semester: 3-1, Section A, B and C, Spring 2018, 2.0 Credits)

Course Teacher : Dr. Md. Abdul Alim
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**Lecture Time** : 2:00 – 3:15pm (Sec A), 3:30 – 4:45pm (Sec B), Thursday, Room: RhH603;

5:00 – 6:15pm (Sec C), Thursday, Room: RhH 606.

Office Room : 2<sup>nd</sup> floor, UAP City Campus; (Consultation/Contact: 12:30-2:00pm; Thu)

#### **Syllabus**

**Statistics:** Frequency distribution. Mean, median, mode and other measures of central tendency. standard deviation and other measures of dispersion. Moments, skewness and kurtosis.

**Marks Distribution** 

: 10%

: 20%

: 20%

: 100%

50%

Attendance

Mid Term I

Final Exam

TOTAL

Quizzes (best 2)

**Probability:** Elementary probability theory and discontinuous probability distribution, e.g. binomial, Poisson and negative binomial. Continuous probability distributions, Hypothesis testing, Correlation and regression analysis. Sampling Methods.

#### **Reference Books:**

- 1. Schaum's Outlines Statistics Murray R. Spiegel and Larry J. Stephens
- 2. Probability and Statistics for Engineers and Scientists (Ninth Edition) Walpole, Myers, Myers and Ye.

#### **Lecture Plan**

| No. of Lectures | Topics                                                                             |           |
|-----------------|------------------------------------------------------------------------------------|-----------|
|                 | Statistics ( 6 Lectures)                                                           | Chapter   |
| 2               | Frequency distribution. Mean, median, mode and other measures of central tendency. | 2-3       |
| 1               | Standard deviation and other measures of dispersion.                               | 4         |
| 1               | Moments, skewness and kurtosis.                                                    | 5         |
| 2               | Correlation and regression analysis.                                               | 13,14     |
|                 | Probability (7 Lectures)                                                           |           |
| 2               | Elementary probability theory.                                                     | 6         |
| 1               | Discontinuous probability distribution (Binomial, Poisson and Negative binomial).  | 7         |
| 1               | Continuous probability distributions (Normal distribution).                        | 7         |
| 3               | Hypothesis testing. Sampling Methods.                                              | 8,9,10,12 |
| 1               | Review classes                                                                     |           |