

SWE121-2 : ENGINEERING MATHEMATICS II

COURSE INSTRUCTOR: JAFF LAWRENCE ASUIYI

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PERIOD: FRIDAY: 10:15 AM-12:15 PM

COURSE OUTLINE FOR PROBABILITIES

SECOND SEMESTER

III. PROBABILITY: 2 CREDITS (30 HOURS); L, T, SPW

COMBINATORY ANALYSIS

III.1 Calculation of probabilities

III. 1.1 Kolmogorov axioms

III. 1.2 Conditional and independent probabilities

III. 1.3 Bayes theorem and axiom on total probability

III. 2. Random variables

III. 2.1. Definition

III. 2. 2. Moment of a random variable

III. 2. 3. Joint law and marginal laws of a pair

III. 2. 3. Bienaymé-Tchebychev Inequality

III. 2. 4. Basic laws on large numbers

III. 2. 5. TCL

III. 3. Probability Laws

References:

1. Advanced Modern Engineering Mathematics Fourth Edition Glyn James 2011
2. Advanced Engineering Mathematics Erwin Kreyszig. 10th Edition 2011
3. **Schaum's Outline of Probability**