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| **A** | **Justification for introducing / Replacing the Course** | **:** | Expansion of the course |
| **B** | **Name of the Course** | **:** | Logic andScientific Method |
| **C** | **Course Code** | **:** | SUPE 104 |
| **D** | **Number of Credits** | **:** | 03 |
| **E** | **Degree Programme** | **:** | Bachelor of Arts General (External) Degree |
| **F** | **Core/Supplementary Course** | **:** | Supplementary |
| **G** | **Prerequisites** | **:** | None |
| **H** | **Aim of the Course** | **:** | This course aims at giving the student knowledge of the processes and techniques of rational inference. |
| **I** | **Intended Learning Outcomes** | **:** | At the end of the course the student will be able to practice of techniques by which formal validity of arguments could be determined. The student will also be able to use the reasoning process and methodology in the establishment of scientific knowledge. |
| **J** | **Number of Hours** | **:** | 45 |
| **K** | **Course Content** | **:** | The Mature of Science, Science and Scientific Method, Concepts in Traditional Aristotelian logic, syllogism and Inductive reasoning, Laws of Thought, Terms & Propositions, Natural languages and formal languages Developing a symbolic language, Wk 3 Logical constants, variables and symbolic sentences, Translations from natural languages to symbolic language and vice versa, Mathematical logic : Introduction to Quantification, Proof of validity by derivation, Rules of inference for arguments involving logical constants of negation and implication, Introduction to the method of truth tables for testing for validity, Direct method of truth tables, Indirect method of truth tables, Further applications of truth tables, Universals & Particulars, Extension & Intension, The Mature of Science, Science and Scientific Method, Science and Non-Science –Karl Popper's view, Classifications of Science, Introduction to Scientific hypotheses, Construction of hypotheses, Statistics, probability and Scientific Method. |
| **L** | **Assessment Scheme:**<br>i. Time of Assessment - End of the Year<br>ii. Assessment Methods - Written examination<br>iii. Assigned Percentage of Marks for each Component – 100% | | |