| Faculty | **Management and Social Science** |
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| **Department** | **Economics** |
| **Course Title** | **Introduction to Statistics 1** |
| **Year of Study** | **1** |
| **Course Code** | **ECN 105** |
| **Credit Hours** | **2** |
| **Contact Hours** | **30** |
| **Mode of Delivery** | **Classroom Lectures** |

| Mode of Assessment | | Weight |
|---|---|---|
| Continuous Assessment<br>Final Examination | | 30%<br>70% |
| Total | | 100% |
| Course Lecturer | MR D.O. AKINBODE | |
| Course Description | Introduction to Statistics is designed to provide undergraduate students with a foundational understanding of statistical concepts and methods. This course covers essential topics such as data collection, organization, and analysis of data using descriptive techniques. Through a combination of lectures, practical exercises, and real-world examples, students will learn how to interpret and communicate statistical findings effectively. | |
| Course Objectives | This course would help student to:<br>1. Help student develop the ability to analyze various types of data using appropriate statistical techniques, including descriptive statistics, inferential statistics, and regression analysis.<br>2. Equip students with the skills to make informed decisions based on statistical evidence and analysis, considering factors such as confidence intervals, hypothesis testing, and effect sizes.<br>3. Provide students with the knowledge and tools to critically evaluate statistical claims encountered in academic literature, professional reports, media, and everyday contexts, including identifying sources of bias, misleading interpretations, and logical fallacies.<br>4. Foster an understanding of ethical practices in data collection, analysis, and reporting, emphasizing the importance of transparency, integrity, and accountability in statistical research and communication.<br>5. Strengthen students' quantitative reasoning and analytical skills to effectively interpret and draw meaningful insights from data, enabling them to address complex problems and make evidence-based decisions across various domains. | |
| Learning Outcomes | By the end of the course, students will be equipped and able to:<br>(i)    analyze data,<br>(ii)    make informed decisions, and | |

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| | (iii) evaluate statistical claims encountered in academic, professional, and everyday contexts.<br>(iv) Cultivate ethical practices in data collection, analysis, and reporting, including awareness of biases, limitations, and assumptions inherent in statistical analysis.<br>(v) Enhance quantitative reasoning and analytical skills necessary for making evidence-based decisions and solving complex problems. |
| Teaching and Learning | The class will meet for two hours every week for a combination of both the lecture hours and tutorials. |
| Detailed Course Content | The course begins with meaning, definition and scope of statistics, concepts of population, sample and sampling techniques, variables and different categories of variables, data: sources, types, techniques of data collection and data presentation, frequency distribution and charts, quartile, deciles and percentile, measure of central tendencies, spearman rank correlation analysis |

| | Course Content Sequencing | |
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| Weeks | Detailed Course Outline | Allocated Time |
| Week 1 | *Meaning, Definition and Scope of statistics<br>• Overview of the Course<br>• Importance of Statistics in Various Fields<br>• Meaning and Definition of Statistics<br>• Understanding Statistics as a Discipline<br>• Definition of Statistics<br>• Scope and Applications of Statistics<br>• Distinction Between Descriptive and Inferential Statistics | |
| Week 2 | *Concepts of population, sample and sampling techniques<br>• Brief Overview of Population and Sample<br>• Definition and Characteristics of Population<br>• Definition of Sampling and Importance of Sampling<br>• Types of Populations and Types of Sampling Techniques<br>• Comparison and Selection of Sampling Techniques | |

| Week 3,4 | *Variables and different categories of variables<br>• Introduction to Variables<br>• Types of Variables<br>• Continuous and Discrete Variables<br>• Categorical Variables<br>• Measurement Scales | |
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| Week 5 | *Data: sources, types, techniques of data collection and data presentation<br>• Introduction to Data<br>• Sources of Data<br>• Types of Data<br>• Techniques of Data Collection<br>• Data Presentation Techniques<br>• Data Analysis and Interpretation | |
| Week 6, 7 | *Frequency distribution and charts<br>• Introduction to Frequency Distribution<br>• Construction of Frequency Distribution<br>• Types of Frequency Distributions<br>• Frequency Charts<br>• Ogive (Cumulative Frequency Curve)<br>* Continuous Assessment I | |
| Week 8 | *Deciles and percentile<br>• Introduction to Deciles and Percentiles<br>• Deciles: Definition and Calculation<br>• Percentiles: Definition and Calculation<br>• Calculation Methods<br>• Grouped Data and Percentiles<br>• Interpretation and Application | |
| Weeks 9, 10 | *Measure of central tendencies<br>• Introduction to Measures of Central Tendencies<br>• Mean: Definition and Calculation Methods<br>• Median: Definition and Calculation Methods<br>• Mode: Definition and Calculation Methods<br>• Relationship between Central Tendencies<br>*Continuous Assessment II | |
| Week 11 | *Spearman rank correlation analysis<br>• Introduction to Correlation Analysis<br>• Understanding Spearman Rank Correlation<br>• Calculation of Spearman Rank Correlation Coefficient | |

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| | • Interpreting Spearman Rank Correlation Coefficient<br>• Assumptions and Conditions of Spearman Rank Correlation | |
| Week 12 | Revision | |
| Week 13, 14 | Examinations | |

Recommended Reading Material
1.  Nwabuokei P.O (1986). Fundamentals of Statistics, Koruna Books, Enugu, NG
2.  Bluman, A.G (2004). Elementary statistics: A step by step approach. McGraw-Hill Companies Inc, New York, USA
3.  Wheelan, C. (2013). Naked Statistics: Stripping the Dread from the Data. W. W. Norton & Company.