The Relationship between SSC and PLO Statistics

No	SSC 12- Mathematics	PLO	Module
1.	Structurally oriented basic mathematical course in Analysis and Linear Algebra	[PLO-10]: Students able to apply statistical reasoning to solve practical problems and effectively communicate findings both written and orally across fields such as economics, business, computing, social sciences, healthcare, and environmental studies. [PLO-11]: Students able to understand and apply core statistical concepts and methods relevant to economics, business, computing, social sciences, healthcare, and environmental studies, with particular emphasis on tropical rainforest resources. [PLO-12]: Students able to implement statistical computing techniques proficiently for comprehensive data analysis.	• 210700603W0 Elementary Calculus • 210701603W004 Calculus II • 210701603P018 Calculus III • 210701603W003 Linear Algebra • 210701603P029 Real Analysis for Statistics
2.	Mandatory course in the areas of Mathematics that are important for the applied subject	[PLO-3]: Students able to design and implement statistical methodologies that effectively address real-world societal challenges, including those related to tropical rainforest environments. [PLO-9] and [PLO-10]: Students able to utilize statistical methods and software tools to analyze data and interpret results in a clear, informative manner. Also to apply statistical reasoning to solve practical problems and effectively communicate findings both written and orally across fields such as economics, business, computing, social sciences, healthcare, and environmental studies. [PLO-11]: Students able to understand and apply core statistical concepts and methods relevant to economics, business, computing, social sciences, healthcare, and environmental studies, with particular emphasis on tropical rainforest resources.	• 210701603W008 Introduction to Mathematical Statistics I • 210701603W020 Introduction to Mathematical Statistics II • 210701603P013 Numerical Methods for Statistics • 210701602P014 Financial Mathematics • 210701603P029 Real Analysis for Statistics

3.	Mandatory course from the applied subject, integrally related to Mathematics	[PLO-2] and [PLO-3]: Students able to serve as a center of excellence for statistical research by producing high-quality studies that address the needs of industry, economics and business, social and political sciences, healthcare, and environmental research particularly concerning tropical rainforest ecosystems and contribute to both national and international scientific literature. Also to implement statistical methodologies that effectively address real-world societal challenges, including those related to tropical rainforest environments. [PLO-8] and [PLO-9]: Students able to apply suitable methodologies for gathering and organizing data, ensuring efficiency and reliability. Also utilize statistical methods and software tools to analyze data and interpret results in a clear, informative manner. [PLO-11]: Students able to understand and apply core statistical concepts and methods relevant to economics, business, computing, social sciences, healthcare, and environmental studies, with particular emphasis on tropical rainforest resources.	• 210701602W024 Tropical Rainforest Environmental Statistics • 210701603P027 Biostatistics • 210701602P041 Marketing Research • 210701603P039 Econometrics I • 210701603P047 Econometrics II • 210701603P028 Statistics Quality Control • 210701603P017 Official Statistics • 210701603P015 Introduction to Population and Demography • 210701602P016 Basic Management and Professional Ethics • 210701603P048 Insurance Mathematics • 210701602P052 Risk Analysis

4.	Training standard software; applied Informatics course integrated	[PLO-12]: Students able to implement statistical computing techniques proficiently for comprehensive data analysis. [PLO-9]: Students able to utilize statistical methods and software tools to analyze data and interpret results in a clear, informative manner. [PLO-8]: apply suitable methodologies for gathering and organizing data, ensuring efficiency and reliability. [PLO-10]: apply statistical reasoning to solve practical problems and effectively communicate findings both written and orally across fields such as economics, business, computing, social sciences, healthcare, and environmental studies.	• 210701603W002 Algorithm and Programming I • 210701603P006 Algorithm and Programming II • 210701603W010 Statistical Computing • 210701603W012 Introduction to Data Science • 210701603W022 Database and SQL Querying • 210701603P037 Visual Programming • 210701603W044 Modern Prediction and Machine Learning

5.	Professional internship or similar. Generally mandatory	[PLO-1]: Students able to demonstrate professionalism, ethical integrity, and strong environmental awareness as a statistician. [PLO-4]: Students able to establish and maintain collaborative partnerships with academic institutions, community organizations, and industry stakeholders to support the continuous advancement of the Ba Statistics. [PLO-5]: Students able to work independently and within teams, assume responsibility for achieving specified outcomes, and oversee and evaluate tasks under one's purview. [PLO-10]: apply statistical reasoning to solve practical problems and effectively communicate findings both written and orally across fields such as economics, business, computing, social sciences, healthcare, and environmental studies.	• 210701603W053 Internship • MU0000603W007 Community Service Program • 210701603P043 Statistical Consulting

6.	Final thesis with strong mathematical relation, topic is generally motivated by an applied subject.	[PLO-2]: Students able to serve as a center of excellence for statistical research by producing high-quality studies that address the needs of industry, economics and business, social and political sciences, healthcare, and environmental research particularly concerning tropical rainforest ecosystems and contribute to both national and international scientific literature. [PLO-6]: produce and deliver rigorous scientific research reports in statistics, adhering to principles of academic integrity and avoid plagiarism. [PLO-10]: apply statistical reasoning to solve practical problems and effectively communicate findings both written and orally across fields such as economics, business, computing, social sciences, healthcare, and environmental studies. [PLO-3] and [PLO-11]: Students able to design and implement statistical methodologies that effectively address real-world societal challenges, including those related to tropical rainforest environments. Also to understand and apply core statistical concepts and methods relevant to economics, business, computing, social sciences, healthcare, and environmental studies, with particular emphasis on tropical rainforest resources.	• 210701606W057 Undergraduate Thesis