Program Specification

(Bachelor)

Program:	**Bachelor of Science in Applied Statistics**
Program Code (as per Saudi university ranking):	**054201**
Qualification Level:	**6**
Department:	**Mathematics and Statistics**
College:	**Science**
Institution:	**Imam Mohammad Ibn Saud Islamic University**
Program Specification:	New ☐ updated* ☒
Last Review Date:	**2 October 2024**

*Attach the previous version of the Program Specification.

Table of Contents

A. Program Identification and General Information

1. Program's Main Location :

Main Campus for the Male Section.

2. Branches Offering the Program (if any):

Branch 1. King Abdullah City for the Female Section.

3. Partnerships with other parties (if any) and the nature of each:

N.A.

4. Professions/jobs for which students are qualified

- **121117 – Statistics Manager.**
- **212003 – Statistician.**
- **212004 – Data Analyst.**
- **235906 – Academic Researcher**
- **33140404 – Practitioner Statistical Assistant.**
- **33140104 – Practitioner Statistical Controller.**
- **33140602 – Medical Statistical Technician.**

See the attached file (Appendix A) for the report on the professions for which the "Bachelor of Science in Applied Statistics" program qualifies, according to the Unified Saudi Occupational Classification Guide issued by the Ministry of Human Resources and Social Development.

5. Relevant occupational/ Professional sectors:

- **Banking.**
- **Insurance.**
- **Public Health.**
- **Telecommunications**
- **Financial Services.**
- **Market research.**
- **Operational research.**
- **Agriculture.**
- **Education.**

6. Major Tracks/Pathways (if any):

Major track/pathway	Credit hours (For each track)	Professions/jobs (For each track)
1. N.A.		

7. Exit Points/Awarded Degree (if any):

exit points/awarded degree	Credit hours
1. **The awarded degree is a Diploma in Statistics.**	**66** **After completing at least 66 credit hours.**

Professional Occupations/Jobs

- **331404 – Practitioner Statistical Assistant.**
- **331401 – Practitioner Statistical Controller.**
- **331406 – Medical Statistical Technician.**

See the attached file (Appendix B) for the report on the professions for which the Exit point of the "Bachelor of Science in Applied Statistics" program qualifies, according to the Unified

Saudi Occupational Classification Guide issued by the Ministry of Human Resources and Social Development.

8. Total credit hours: (……)

136 Credit Hours

B. Mission, Objectives, and Program Learning Outcomes

1. Program Mission:

The mission of the undergraduate program in Applied Statistics is to prepare students for participating in the economic and social development of the Kingdom of Saudi Arabia, and leading innovation in higher education in the field of Statistics and its applications.

2. Program Goals:

PG1. Exhibit positive attitudes and national and institutional values toward the applied statistics to contribute to an increasingly dynamic society.
PG2. Think critically, master problem-solving skills, and communicate clearly applied statistical concepts and their impact on solving real-life problems.
PG3. Maintain an essence of statistical knowledge in line with technological changes to provide a solid foundation for lifelong learning in the future.
PG4. Have an appropriate package of professional skills to ensure a productive career that uses statistics.
PG5. Develop the creative potential of the students through research.

3. Program Learning Outcomes*

Knowledge and Understanding **Students graduating with a Bachelor of Science in Applied Statistics degree will demonstrate competence to:**	
K1	Demonstrate a thorough understanding of key statistical theories, principles, and concepts involved in applied statistics needed to enter the job force.
K2	State statistical modeling and the omnipresent role of variability, and efficient design of studies and construction of effective sampling plans.
K3	Describe exploratory data analysis and formal inference process.
Skills **Students graduating with a Bachelor of Science in Applied Statistics degree will demonstrate competence to:**	
S1	Apply the concepts, principles, and theories involved in addressing issues and problems in a range of complex contexts.
S2	Develop complex knowledge and use it to provide innovative solutions to contemporary issues and problems in applied statistics.
S3	Practice statistical methods and analysis in investigating complex issues and case study research.
S4	Communicate in different ways, demonstrating an understanding of theoretical knowledge, transferring knowledge and specialized skills, and sharing complex ideas within a variety of audience.
S5	Choose and use a variety of digital technology, information, communication technology tools, and appropriate statistical software to process, analyze and produce data and information; to support and promote specialized research and projects.

Values, Autonomy, and Responsibility Students graduating with a Bachelor of Science in Applied Statistics degree will demonstrate competence to:	
V1	Demonstrate integrity, professional and academic ethics, participation in finding constructive solutions to some societal issues, and a commitment to responsible citizenship.
V2	Judge the level of learning and performance, insist on achievement and excellence, and make logical decisions supported by evidence and arguments independently.
V3	Operate in teamwork with functional flexibility and effectiveness, and take responsibility for professional development, participating in developing the group's performance, and enhancing the quality of life.

* Add a table for each track or exit Point (if any)

Exit Point Program Learning Outcomes

Knowledge and understanding Students graduating with a Diploma of Science in Statistics will demonstrate competence to:	
K1	Reproduce principles, and concepts involved in applied statistics needed to enter the job force.
K2	Outline the knowledge and understanding of processes, tools, methods, and practices based on some developments in applied statistics.
Skills Students graduating with a Diploma of Science in Statistics will demonstrate competence to:	
S1	Apply the concepts, principles and theories involved in addressing issues and problems in a range of real life contexts.
S2	Critically evaluate knowledge and use it to provide solutions to some issues and problems in applied statistics.
S3	Practice statistical methods and analysis in investigating issues and case study research.
S4	Choose and use digital technology, information, communication technology tools, and appropriate statistical software to process, analyze and produce data and information.
Values, Autonomy, and Responsibility Students graduating with a Diploma of Science in Statistics will demonstrate competence to:	
V1	Demonstrate integrity, professional and academic ethics, participation in finding constructive solutions to some societal issues, and a commitment to responsible citizenship.
V2	Show self-assessments of learning and performance by establishing specific, quantifiable goals for achievement and excellence, and provide examples of independent, evidence-based decisions that showcase clear logical reasoning and structured arguments.
V3	Operate in leader teamwork with functional flexibility and effectiveness and take responsibility for professional development.

C. Curriculum

1. Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	2	4	2.9%
	Elective	10	16	11.8%
College Requirements	Required	5	16	11.8%
	Elective	0	0	0.0%
Program Requirements	Required	23	78	57.4%
	Elective	2	6	4.4%
Capstone Course/Project		1	4	2.9%
Field Training/ Internship		1	6	4.4%
Residency year		0	0	0.0%
Others		0	6	4.4%
Total		44	136	

* Add a separate table for each track (if any).

2. Program Courses

Level	Course Code	Course Title	Required or Elective	Pre-Requisite/ Co-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
Level 1	MAT 1101	Calculus (1)	Required		4	College
	STA 1101	Probability & Statistics (1)	Required		3	Program
	MAT 1153	Foundations of Mathematics	Required		3	Program
	ENG 1140	English (1)	Required		2	College
	CHM 1101	General Chemistry (1)	Required		4	College
	QUR 1001	Quran Kareem - University Requirement 1	Required		2	Institution
Level 2	STA 1102	Probability & Statistics (2)	Required	STA 1101	4	Program
	MAT 1107	Calculus (2)	Required	MAT 1101	4	Program
	PHY 1101	General Physics (1)	Required		4	College
	ENG 1195	English (2)	Required		2	College
		University Requirement 2	Elective		2	Institution
	ARB 1001	Linguistic Skills - University Requirement 3	Required		2	Institution
Level 3	STA 1203	Mathematical Statistics	Required	STA 1102	4	Program
	STA 1261	Nonparametric Statistics	Required	/ STA 1203	3	Program
	MAT 1204	Multivariable calculus	Required	MAT 1107	3	Program
	MAT 1222	Linear Algebra	Required	MAT 1153	4	Program
		University Requirement 4	Elective		2	Institution
		University Requirement 5	Elective		2	Institution

Level	Course Code	Course Title	Required or Elective	Pre-Requisite/ Co-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
Level 4	STA 1224	Introduction to Regression	Required	STA 1203	4	Program
	STA 1231	Statistical Inference	Required	STA 1261	4	Program
	STA 1241	Statistical Software	Required	STA 1102	3	Program
	MAT 1255	Introduction to Operations Research	Required	MAT 1107	3	Program
	ECO 1100	Principles of Economy	Required		2	Program
		University Requirement 6	Elective		2	Institution
Level 5	STA 1332	Sampling Methods	Required	STA 1231	3	Program
	STA 1325	Analysis of variance	Required	STA 1224	4	Program
	CS 1249	Computer Programming for Science	Required		3	Program
	MAT 1232	Introduction to Differential Equations	Required	MAT 1107, MAT 1222	3	Program
		Free course*	Elective		3	Institution
		University Requirement 7	Elective		2	Institution
Level 6	STA 1322	Time Series Analysis	Required	STA 1325	4	Program
	STA 1354	Introduction to Stochastic Processes	Required	STA 1203	3	Program
	STA 1356	Introduction to Bayesian Statistics	Required	STA 1325	4	Program
	AFM 1234	Financial Mathematics (1)	Required	MAT 1107	3	Program
		University Requirement 8	Elective		2	Institution
		University Requirement 9	Elective		2	Institution
Level 7		Elective Course (1)	Elective	*Depending on the elective course*	3	Program
		Elective Course (2)	Elective	*Depending on the elective course*	3	Program
	STA 1428	Multivariate Analysis	Required	STA 1322	4	Program
	STA 1426	Experimental Design	Required	STA 1332	3	Program
		Free course*	Elective		3	Institution
		University Requirement 10	Elective		2	Institution
Level 8	STA 1497	Field Training	Required		6	Program
	STA 1499	Graduation project	Required		4	Program

* Include additional levels (for three semesters option or if needed).
** Add a table for the courses of each track (if any)

University Requirements courses from (1) to (10)

University Requirements courses (1)-(10) should be chosen from the following packages and the following appropriate rules indicated inside the table:

Packages	Course Code	Course Name	Credit Hours	Rules
Islamic knowledge and values	QUR 1001	Quran	2	The student chooses two courses, one of which should be the Quran course (QUR 1001).
	HAD 1001	Studies in the Sunnah	2	
	JRS 1001	Objectives of Shariah	2	
	IDE 1001	Creed	2	
	JR 1001	Jurisprudence of Worship and Family	2	
Historical, national, and social knowledge and values	HST 1001	Studies in the Prophet's biography	2	The student chooses two courses.
	HST 1002	National History	2	
	SOS 101	Voluntary Work Skills	2	
	CUL 1001	Jurisprudence of Rights and Duties	2	
	GEO 1011	Environment and Sustainable Growth	2	
Professional skills and labor market	RHB 1001	Work Value and Ethics	2	The student chooses two courses.
	BUS 1001	Innovation and Entrepreneurship	2	
	EDM 1001	Leadership Skills	2	
	FIN 1001	Financial Planning Skills	2	
	ENG 1001	English Language Skills	2	
Communicative and personal skills	BC 1001	Communications Skills	2	The student chooses two courses, one of which should be Linguistic Skills (ARB 1001).
	ARB 1001	Linguistic Skills	2	
	ART 1001	Editing and Speech Skills	2	
	PSY 1001	Mental Health	2	
	BIO 1001	General Knowledge of Health Care	2	
Academic skills	TCM 1001	University Education Skills	2	The student chooses two courses.
	RHE 1001	Reading Skills	2	
	IT 1001	Technical Skills	2	
	EDP 1001	Thinking Skills	2	
	STA 1001	Basics of Statistics	2	

List of Elective Courses (1) and (2) in level 7

Course Code	Course Title	Required or Elective	Pre-Requisite / Co-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
STA 1465	Categorical Data Analysis	Elective	STA 1261	3	Program
STA 1423	Introduction to Econometrics	Elective	STA 1322	3	Program
STA 1434	Survival Analysis	Elective	STA 1325	3	Program
STA 1438	Reliability Theory	Elective	STA 1325	3	Program
STA 1442	Statistical Analysis with R	Elective	STA 1241	3	Program
STA 1452	Introduction to Queueing Theory	Elective	STA 1354	3	Program
STA 1454	Probability theory	Elective	STA 1203	3	Program
STA 1467	Demography	Elective	STA 1231	3	Program
STA 1471	Quality Control	Elective	STA 1332	3	Program

Course Code	Course Title	Required or Elective	Pre-Requisite / Co-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
STA 1473	Network Analysis	Elective	STA 1354	3	Program
STA 1481	Selected Topics in Applied Statistics (1)	Elective		3	Program
STA 1483	Selected Topics in Applied Statistics (2)	Elective		3	Program
AFM 1335	Financial Mathematics (2)	Elective	AFM 1234	3	Program
AFM 1345	Actuarial Mathematics	Elective	AFM 1234	3	Program
MAT 1242	Math Software	Elective	MAT 1107, MAT 1222	3	Program
MAT 1465	Discrete Simulation	Elective	STA 1203	3	Program
CS 1449	Object-Oriented programming for science	Elective	CS 1249	3	Program

3. Course Specifications:

Insert hyperlink for all course specifications using NCAAA template (T-104)

- **Attached with this document.**
- **Visit the following link to download all files concerning the program.**

4. Program learning Outcomes Mapping Matrix:

Align the program learning outcomes with program courses' according to the following desired performance levels *(I = Introduced & P = Practiced & M = Mastered).*

Course code & No.	Program Learning Outcomes										
	Knowledge and understanding			Skills					Values, Autonomy, and Responsibility		
	K1	K2	K3	S1	S2	S3	S4	S5	V1	V2	V3
MAT 1101	I			I		I	I		I	I	I
STA 1101	I	I	I	I	I	I	I	I	I	I	I
MAT 1153	I			I			I		I	I	I
ENG 1140									I	I	
CHM 1101				I			I		I	I	I
QUR 1001									I	I	
STA 1102	I	I	I	I	I	I	I	I	I	I	I
MAT 1107	I			I			I		I	I	I
PHY 1101				I			I		I	I	I
ENG 1195									I	I	I
UR (2)									I	I	I
ARB 1001									I	I	I
STA 1203	P	P	P	P	P	I	I	I	P	P	P
STA 1261	P	P	P	P	P	P	P	P	P	P	P
MAT 1204	I			I		I	I		I	I	I
MAT 1222	I			I		I	I		I	I	I
UR (4)									I	I	I
UR (5)									I	I	I

Course code & No.	Program Learning Outcomes										
	Knowledge and understanding			Skills					Values, Autonomy, and Responsibility		
	K1	K2	K3	S1	S2	S3	S4	S5	V1	V2	V3
STA 1224	P	P	P	P	P	P	P	P	P	P	P
STA 1231	P	P	P	P	P	P	P	P	P	P	P
STA 1241	P	P	P	P	P	P	P	P	P	P	P
MAT 1255	I			I		I	I		P	P	P
ECO 1100	I			I		I	I		I	I	I
UR (6)									I	I	I
STA 1332	P	P	P	P	P	P	P	P	P	P	P
STA 1325	P	P	P	P	P	P	P	P	P	P	P
CS 1249	I			I		I	I		I	I	I
MAT 1232	P			P		P	P		P	P	P
UR (7)									I	I	I
STA 1322	P	P	P	P	P	P	P	P	P	P	P
STA 1354	P	P	P	P	P	P	P	P	P	P	P
STA 1356	P	P	P	P	P	P	P	P	P	P	P
AFM 1234	P			P		P	P		P	P	P
UR (8)									I	I	I
UR (9)									I	I	I
STA 1428	M	M	M	M	M	M	M	M	M	M	M
STA 1426	M	M	M	M	M	M	M	M	M	M	M
UR (10)									I	I	I
STA 1497	M	M	M	M	M	M	M	M	M	M	M
STA 1499	M	M	M	M	M	M	M	M	M	M	M
STA 1465	M	M	M	M	M	M	M	M	M	M	M
STA 1423	M	M	M	M	M	M	M	M	M	M	M
STA 1434	M	M	M	M	M	M	M	M	M	M	M
STA 1438	M	M	M	M	M	M	M	M	M	M	M
STA 1442	M	M	M	M	M	M	M	M	M	M	M
STA 1452	M	M	M	M	M	M	M	M	M	M	M
STA 1454	M	M	M	M	M	M	M	M	M	M	M
STA 1467	M	M	M	M	M	M	M	M	M	M	M
STA 1471	M	M	M	M	M	M	M	M	M	M	M
STA 1473	M	M	M	M	M	M	M	M	M	M	M
STA 1481	M	M	M	M	M	M	M	M	M	M	M
STA 1483	M	M	M	M	M	M	M	M	M	M	M
AFM 1335	M			M		M	M		M	M	M
AFM 1345	M			M		M	M		M	M	M
MAT 1242	M			M		M	M		M	M	M
MAT 1465	M			M		M	M		M	M	M
CS 1449	M			M		M	M		M	M	M

* Add a separate table for each track (if any).

5. Teaching and learning strategies applied to achieve program learning outcomes.

Describe teaching and learning strategies and curricular and extra-curricular activities adopted to achieve the Program's learning outcomes in all areas.

To achieve program learning outcomes in Applied Statistics (and related fields), a comprehensive approach that combines various teaching and learning strategies—both curricular and extra-curricular—can be highly effective. Below is a detailed description of these strategies:

A. Curricular Activities

1. **Lectures and Interactive Seminars:**
   - **Description:** Deliver foundational knowledge on statistical theories, methodologies, and applications in real-world contexts. Interactive elements, such as discussions and Q&A sessions, can enhance engagement.
   - **Outcome**: Students gain a solid understanding of key statistical principles and their relevance.
2. **Hands-On Laboratory Sessions:**
   - **Description**: Conduct practical sessions where students use statistical software (e.g., IBM-SPSS, R-Project, Python) to analyze datasets and conduct simulations.
   - **Outcome**: Develop proficiency in statistical tools and applied data analysis skills.
3. **Mini-Project-Based Learning:**
   - **Description**: Assign group projects that require students to tackle real-world problems using statistical methods. Projects may involve data collection, analysis, and reporting.
   - **Outcome**: Foster collaboration, critical thinking, and the ability to apply theoretical knowledge in practical situations.
4. **Case Studies and Problem-Solving:**
   - **Description**: Analyze specific case studies that illustrate the application of statistical methods in various fields (e.g., healthcare, business, environmental science).
   - **Outcome**: Enhance problem-solving skills and contextual understanding of statistical applications.
5. **Fieldwork and Data Collection Exercises:**
   - **Description**: Engage students in field studies to gather data for analysis, allowing them to experience the data collection process firsthand.
   - **Outcome**: Strengthen understanding of data collection methods and their implications for analysis.
6. **Special courses on Advanced Topics:**
   - **Description**: Offer some special courses focusing on specialized topics, such as machine learning, Bayesian statistics, or data visualization techniques.
   - **Outcome**: Provide deeper knowledge and skills in targeted areas of applied statistics.
7. **Guest Lectures and Industry Panels:**
   - **Description**: Invite professionals and researchers from the field to share insights and real-world applications of statistics.
   - **Outcome**: Broaden students' perspectives and enhance their understanding of the industry landscape.

B. Extra-Curricular Activities

1. **Statistics Clubs and Study Groups:**
   - **Description**: Encourage participation in student-led clubs focused on statistics, facilitating peer learning and collaboration.
   - **Outcome**: Promote teamwork and enhance problem-solving skills through shared learning experiences.

2. **Competitions and Hackathons:**
   - **Description**: Organize or participate in data analysis competitions and hackathons that challenge students to apply their skills in time-sensitive scenarios.
   - **Outcome**: Build confidence and enhance practical skills in a competitive environment.
3. **Internships and Co-op Programs:**

Description: Facilitate internships with organizations that utilize applied statistics, providing students with practical experience and exposure to professional environments.
Outcome: Develop industry-specific skills and professional networks.

4. **Networking Events and Career Fairs:**
   - **Description**: Organize events where students can connect with alumni, professionals, and potential employers in statistics.
   - **Outcome**: Foster professional relationships and mentorship opportunities that can support career development.
5. **Community Engagement Projects:**
   - **Description**: Involve students in community-based projects that require statistical analysis for local initiatives or research.
   - **Outcome**: Promote social responsibility and apply statistical knowledge to benefit the community.
6. **Workshops:**
   - **Description**: Encourage students to attend or present at the workshop, enhancing their exposure to current research and networking opportunities.
   - **Outcome**: Build presentation skills and engage with the broader academic community.
7. **Study abroad Program:**
   - **Description**: Offer opportunities for students to study at other institutions, broadening their academic and cultural perspectives.
   - **Outcome**: Enhance global awareness and cross-cultural communication skills.

By integrating these curricular and extra-curricular activities, the program can create a well-rounded educational experience emphasizing academic rigor and practical application. This holistic approach ensures that students are equipped with the necessary skills, knowledge, and experiences to succeed in the field of Applied Statistics.

6. Assessment Methods for program learning outcomes.

Describe assessment methods (Direct and Indirect) that can be used to measure the achievement of program learning outcomes in all areas.
The Program should devise a plan for assessing Program Learning Outcomes (all learning outcomes should be assessed at least twice in the bachelor program's cycle and once in other degrees).

A combination of direct and indirect assessment methods should be implemented to measure the achievement of program learning outcomes (PLOs) in a Bachelor of Science in Applied Statistics. Here's a detailed description of both types of assessment methods, along with a plan for assessing PLOs throughout the program cycle:

I. Assessment Methods

A. Direct Assessment Methods

1. **Examinations:**
   - **Description:** Use mid-term and final exams to assess students' understanding of statistical concepts, methodologies, and applications.
   - **Frequency:** Administered at least twice during the program (e.g., in core courses such as Introduction to Statistics and Advanced Statistical Methods).
2. **Project-Based Assessments:**
   - **Description**: Evaluate student projects that require the application of statistical techniques to real-world data. This includes both individual and group projects.

- **Frequency**: Conducted in various courses, such as Data Analysis and Statistical Modeling, ensuring assessment at least twice during the program.

3. **Capstone Projects:**
   - **Description**: In the final year, students complete a comprehensive capstone project that demonstrates their ability to integrate and apply their statistical knowledge and skills.
   - **Frequency**: Assessed once as a culmination of the program learning outcomes.
4. **Laboratory Practical Assessments:**
   - **Description**: Assess students' proficiency in using statistical software during lab sessions through practical exams or assignments.
   - **Frequency**: Conducted in courses with a lab component, such as Statistical Computing.
5. **Presentations**:
   - **Description**: Evaluate students' ability to communicate statistical findings effectively through presentations at the end of projects or courses.
   - **Frequency**: Conducted at least twice in different contexts (e.g., project presentations in Data Analysis and seminars).

B. Indirect Assessment Methods

1. **Surveys and Questionnaires:**
   - **Description**: Use anonymous surveys to gather student feedback on their perceived learning and the relevance of course content to their learning objectives.
   - **Frequency**: Administered periodically (e.g., at the end of each semester) to gauge student satisfaction and self-reported learning.
2. **Exit Interviews:**
   - **Description**: Conduct interviews with graduating students to understand their experiences, perceived knowledge gains, and preparedness for the job market or further studies.
   - **Frequency**: Conducted for all graduating students once, typically during the final semester.
3. **Alumni Feedback:**
   - **Description**: Gather feedback from alumni regarding how well the program prepared them for their careers or further education.
   - **Frequency**: Conducted every few years to assess the long-term impact of the program.
4. **Course Evaluations:**
   - **Description**: Collect student evaluations of courses to assess teaching effectiveness and the perceived value of course content in achieving learning outcomes.
   - **Frequency**: Conducted at the end of each course for continuous improvement.

II. Assessment Plan

To ensure that all program learning outcomes are assessed at least twice during the bachelor's program cycle and once in other degrees, the following assessment plan can be implemented:

- ***Year 1***
  - **Courses:** STA 1101 & STA 1102
  - **Direct Assessments:** Mid-term and final exams, lab practical assessments.
  - **Indirect Assessments:** Course evaluations and student surveys.
- ***Year 2***
  - **Courses**: STA 1203, STA 1221, STA 1241
  - **Direct Assessments:** Mid-term and final exams, project-based assessments, presentations.
  - **Indirect Assessments:** Alumni feedback, student surveys.
- ***Year 3***
  - **Courses**: STA 1363, STA 1325, STA 1322, STA 1354.

- **Direct Assessments:** Mid-term and final exams, lab practical assessments, group projects.
- **Indirect Assessments**: Exit interviews for students nearing graduation, course evaluations.

- ***Year 4***
  - **Courses**: STA 1428, STA 1426, STA 1497, STA 1499
  - **Direct Assessments:** Capstone project evaluation, presentations, Mid-term and final exams, lab practical assessments, group projects.
  - **Indirect Assessments**: Alumni feedback, exit interviews.

This comprehensive assessment plan ensures that all program learning outcomes in the Bachelor of Science in Applied Statistics are effectively measured directly and indirectly. By implementing these strategies, the program can continuously improve and adapt to meet the educational needs of students while ensuring they are well-prepared for their future careers or further studies.

D. Student Admission and Support:

1. Student Admission Requirements

Admissions for public universities in the Riyadh region take place only once during the summer vacation through the Unified E-Admission Portal (*The Electronic Admission for Male Students* and The Electronic Admission for Female Students). Students can apply to IMSIU University via this portal, enabling them to complete their applications online and choose their academic major based on their qualifications, grades, and preferences, all without needing to visit the university.

Admission to the program is determined by the student's GPA, and the Deanship of Admission and Registration manages the admissions process. Eligibility requirements are outlined in the IMSIU Undergraduate Study and Examination guidelines.

For further details, please refer to the admission guide provided by the Deanship for Registration, available at the link for University Admission Guide for the Year 1446 AH.

2. Guidance and Orientation Programs for New Students

(Include only the exceptional needs offered to the students of the Program that differ from those provided at the institutional level).

The Applied Statistics Program offers thorough orientation for incoming students. The college conducts an orientation week for incoming students at the commencement of each academic year. Students have the possibility throughout orientation week:

- to engage with other freshman students, existing student leaders, instructors, and staff,
- to navigate the campus,
- to inquire about the comprehensive student services and academic programs offered at Imam Mohammad Ibn Saud Islamic University,
- to meet their specific requirements and obtain responses to their inquiries.

During orientation week, students get manuals and pamphlets that assist them in comprehending and acclimating to the university atmosphere, programs, services, facilities, rights, and responsibilities. Alongside the orientation week, an orientation meeting is conducted for incoming students at the commencement of each semester. During this meeting, incoming students get essential information pertinent to their academic tenure. This meeting is attended by all new students, the College Dean, the Vice Dean for Academic Affairs, and the departmental academic advisor. In this meeting, the department chair, the academic advising coordinator, and the academic affairs coordinator provide new students with essential academic information. Furthermore, they address all inquiries posed by the pupils during the meeting. The University Deanship of Student Affairs offers essential guidance and orientation services for new students.

3. Student Counseling Services

(Academic, professional, psychological, and social)
(Include only the exceptional needs offered to the students of the Program that differ from those provided at the institutional level).

Student counseling services are essential for supporting students in a Bachelor of Science in Applied Statistics program. These services can address various aspects of student well-being, including academic, career, psychological, and social needs. Here's a detailed overview of the counseling services that can be offered:

1. **Academic Counseling**
   - **Description:** Academic counsellors provide guidance on course selection, degree requirements, and academic performance. They help students create study plans and address any academic challenges.
   - **Services offered:**
     - One-on-one meetings to discuss academic goals and challenges.
     - Workshops on study skills, time management, and exam preparation.
     - Tutoring services or referral to peer tutoring programs.
     - Assistance with academic probation and recovery strategies.
2. **Career Counseling**
   - **Description:** Career counsellors help students explore career options, develop job search skills, and prepare for the workforce or further studies.
   - **Services offered:**
     - Career assessments to identify interests and strengths related to applied statistics.
     - Resume writing and interview preparation workshops.
     - Networking opportunities with alumni and industry professionals.
     - Information sessions on internships, job openings, and graduate programs.
     - Guidance on building a professional portfolio, including project work and research.
3. **Psychological Counseling**
   - **Description:** Psychological counsellors provide support for mental health issues, stress management, and personal challenges that may affect academic performance.
   - **Services offered:**
     - Individual counseling sessions for students facing anxiety, depression, or other mental health concerns.
     - Group therapy sessions for topics such as stress management, coping strategies, and peer support.
     - Workshops on mindfulness, emotional intelligence, and resilience.
     - Crisis intervention services for urgent mental health needs.
4. **Social Counseling**
   - **Description:** Social counsellors assist students in navigating social challenges and enhancing their overall well-being, promoting a sense of community.
   - **Services offered:**
     - Support groups for students to discuss social issues, such as cultural adjustment or peer relationships.
     - Activities and events that foster social interaction and networking among students (e.g., study groups, club meetings).
     - Conflict resolution and mediation services for interpersonal issues.
     - Resources for community involvement and volunteer opportunities to enhance social engagement.
5. **Integration of Services**
   - **Holistic Approach:** The counseling services should adopt a holistic approach, recognizing that academic success is interconnected with mental health, career readiness, and social well-being.

- **Collaborative** Initiatives: Encourage collaboration among academic, career, psychological, and social counsellors to provide comprehensive support tailored to individual student needs.

6. **Accessibility and Outreach**
   - **Accessibility**: Ensure counseling services are easily accessible, with virtual options available for remote students.
   - **Outreach** Programs: Conduct outreach initiatives to raise awareness about available services, including orientation sessions for new students and workshops throughout the academic year.

Implementing robust student counseling services in the Bachelor of Science in Applied Statistics program is crucial for supporting students' diverse needs. By providing academic, career, psychological, and social counseling, the program can foster a well-rounded educational experience that promotes student success, well-being, and personal growth.

4. Special Support

(Low achievers, disabled, gifted, and talented students).

To ensure that all students in the Bachelor of Science in Applied Statistics program receive the support they need to succeed, tailored services for low achievers, disabled students, and gifted and talented students are essential. Here's a detailed overview of special support strategies for each group:

1. ***Support for Low Achievers***
   - **Academic Advising:**
     - Provide personalized academic advising to identify challenges and develop improvement plans.
     - Regular check-ins to monitor progress and adjust study strategies as needed.
   - **Tutoring Programs:**
     - Establish peer tutoring programs where students can receive help from fellow students who excel in specific subjects.
     - Offer extra curriculum session on study skills, time management, and exam preparation.
   - **Supplemental Instruction:** Implement supplemental instruction sessions for challenging courses, providing additional support through collaborative learning environments.
   - **Motivational Workshops:** Conduct workshops focused on building self-esteem, resilience, and effective learning strategies to empower low-achieving students.
2. ***Support for Disabled Students***
   - **Accessibility Services:**
     - Ensure that all facilities, materials, and online courses are accessible and compliant with disability regulations (e.g., **Center Special Needs Services** (CSNS), APD compliance).
     - Provide assistive technologies (e.g., screen readers, speech-to-text software) to support learning.
   - **Individualized Education Plans (IEPs):** Work with students to create personalized learning plans that accommodate their specific needs (e.g., extended exam time, alternative assessment methods).
   - **Counseling and Support Groups:**
     - Offer counseling services specifically tailored to address the unique challenges faced by disabled students.
     - Facilitate support groups to foster a sense of community and shared experiences among disabled students.
   - **Training for Faculty and Staff:** Provide training for faculty and staff on inclusive teaching practices and how to support students with disabilities effectively.
3. ***Support for Gifted and Talented Students***

- **For the gifted and talented students**, the university has established a department for creativity and talent to identify and to develop the abilities of these students named **Department of Gifted and Talented Care.**
- **Advanced Coursework Options:** Offer advanced courses in applied statistics and related fields to challenge gifted students and deepen their understanding.
- **Independent Study Opportunities:** Allow gifted students to pursue independent research projects or studies that align with their interests, under the mentorship of faculty.
- **Enrichment Programs:** Organize enrichment workshops, seminars, or guest lectures that explore advanced topics in applied statistics, data science, and related fields.
- **Research project Opportunities:** Encourage participation in research projects or internships that provide real-world applications of their skills and knowledge.
- **Networking and Mentorship:** Facilitate connections with professionals and alumni in the field of statistics to provide mentorship and guidance on career paths.

4. General Strategies for All Students

- **Inclusive Learning Environment:** Foster an inclusive and supportive classroom environment that values diversity and encourages collaboration among all students.
- **Feedback Mechanisms:** Implement regular feedback mechanisms (e.g., surveys, focus groups) to assess the effectiveness of support services and identify areas for improvement.

By implementing these special support strategies for low achievers, disabled students, and gifted and talented students, the Bachelor of Science in Applied Statistics program can create an inclusive and supportive educational environment. This approach ensures that all students could thrive academically and personally, contributing to their overall success in the program and their future careers.

E. Faculty and Administrative Staff:

1. Needed Teaching and Administrative Staff

Academic Rank	*Specialty*		*Special Requirements / Skills (if any)*	*Required Numbers*		
	General	Specific		M	F	T
Professor	Statistics	Applied/ Pure	None	8	5	13
Associate Professor	Statistics/ Mathematics	Applied/ Pure	None	9	9	18
Assistant Professor	Statistics/ Mathematics	Applied/ Pure	None	10	10	20
Lecturer	Statistics/ Mathematics	Applied/ Pure	None	10	10	20
Teaching Assistant	Statistics/ Mathematics	Applied/ Pure	None	8	7	15
Technicians and Laboratory Assistants	Computer Science Lab Technician	Applied	Computer hardware and software, including applications and programming.	2	2	4
Administrative and Supportive Staff	Administration	-	Communication, Word processing, Data entry, Organization.	2	2	4
Others (specify)	None	None	None	0	0	0

F. Learning Resources, Facilities, and Equipment:

1. Learning Resources

Learning resources required by the Program (textbooks, references, e-learning resources, web-based resources, etc.)

For the planning and acquisition of learning resources, the department proceeds as follows:

STEP 1: For each course the department assigned a faculty members committee to do the followings:

- Course description (preliminary syllabus),
- Recommend Lists of Required Textbooks, Essential References Materials (Journals, Reports, etc.), Recommended Textbooks and Reference Material (Journals, Reports, etc.), Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.), and other learning material such as computer-based programs/CD, professional standards or regulations and software.

STEP 2: A committee collects learning resources of all courses and submits the required lists to the Head of the department to get the approbation of the department council.

STEP 3: After the department council approbation, the Department Head asks the College Dean to provide the Required lists of Learning Resources through the University Central Library and/or the IT Deanship.

2. Facilities and Equipment

(Library, laboratories, classrooms, etc.)

For the planning and acquisition resources for library, laboratories, and classrooms, the department proceeds as follows:

STEP 1: Evaluation of the locals assigned for the program: Library (equipped with textbooks and references provided by the Central Library), Laboratories (equipped with appropriate computers and software), and classrooms.

STEP 2: In the shortage case of supplies, a committee will report to the Department Head in order to ask the College Dean to provide such supplies through the University Central Library and/or the IT Deanship.

3. Procedures to ensure a healthy and safe learning environment

(According to the nature of the Program)

Ensuring a healthy and safe learning environment for students in the Bachelor of Science in Applied Statistics program involves a combination of physical safety measures, mental health support, and academic integrity. Below are key procedures to promote a conducive learning environment:

1. **Physical Safety Procedures**
   - **Classroom and Laboratory Safety:**
     - Ensure that all classrooms and labs meet safety standards, including proper ventilation, emergency exits, and accessible pathways.
     - Conduct regular safety inspections of facilities and equipment used in statistical computing and data analysis.
   - **Emergency Preparedness:**
     - Develop and communicate clear emergency procedures (e.g., fire drills, lockdown protocols) to all students and staff.
     - Provide training on how to respond to emergencies and conduct regular drills.
   - **Health Protocols:**
     - Implement health guidelines to promote hygiene, such as regular cleaning of common areas and availability of hand sanitizers.
     - Encourage students to report any health concerns or symptoms and provide access to medical resources and counseling.

2. **Mental Health and Well-being Support**
   - **Counseling Services:**
     - Offer accessible psychological counseling services for students dealing with stress, anxiety, or other mental health issues.
     - Promote awareness of mental health resources and provide workshops on stress management and coping strategies.
   - **Peer Support Programs:**
     - Establish peer mentoring or support groups where students can share experiences and offer mutual support.
     - Facilitate workshops focusing on resilience, time management, and emotional well-being.
   - **Work-Life Balance Initiatives:**
     - Encourage a balanced workload by promoting healthy study habits and time management skills through workshops and seminars.
3. **Academic Integrity and Support**
   - **Clear Academic Policies:**
     - Communicate academic integrity policies clearly to all students, outlining expectations regarding plagiarism, cheating, and collaboration.
     - Provide resources on proper citation practices and research ethics.
   - **Supportive Learning Environment:**
     - Foster a culture of respect and inclusivity within the classroom, encouraging open discussions and diverse perspectives.
     - Ensure that all students feel comfortable approaching faculty and staff for academic support or concerns.
4. **Health and Safety Training**
   - **Training for Faculty and Staff:**
     - Provide training on health and safety protocols, including mental health first aid and recognizing signs of distress in students.
     - Ensure faculty are equipped to create a supportive and inclusive classroom environment.
   - **Workshops on Data Ethics:**
     - Conduct workshops on ethical considerations in data handling, analysis, and reporting, emphasizing the importance of integrity in statistical work.
5. **Technology and Cyber Safety**
   - **Safe Use of Technology:**
     - Educate students on cybersecurity best practices, including safe data handling, secure use of software, and protecting personal information.
     - Ensure that all software and online resources used in the program comply with data protection regulations.
6. **Feedback and Continuous Improvement**
   - **Regular Surveys and Assessments:**
     - Conduct anonymous surveys to gather student feedback on the learning environment and identify areas for improvement.
     - Use feedback to make necessary adjustments to policies, support services, and facilities.
   - **Advisory Committees:**
     - Establish student advisory committees to provide input on health, safety, and academic policies, ensuring that student voices are heard.

By implementing these procedures, the Bachelor of Science in Applied Statistics program can create a healthy and safe learning environment that supports both the academic and personal well-being of students. This holistic approach contributes to student success and fosters a positive educational experience.

G. Program Quality Assurance:

1. Program Quality Assurance System

Provide a link to the quality assurance manual.

Program quality is monitored through several procedures:

- Courses reports are submitted to the program manager every trimester.
- Appropriate teaching staff committee is in the charge of assessment and modification.
- Prepare and monitor the annual program report.
- Conduct and analyze surveys opinion of the students about the courses and the program.
- Conduct and analyze surveys opinion of the employers about the program.
- Program manager reviews the proposals submitted by the previous committees and makes appropriate decision after approbation of the department council.
- Monitor a global review for the development of the program periodically each five years if necessary.
- Annual KPIs reports.
- Periodic evaluation by stakeholders: students, alumni, faculty members, job market representatives.
- Periodic operational plan progress reports.
- Benchmarking.
- Academic accreditation.

All the previous processes follow the Teaching\Learning Quality Assurance Process Diagram:

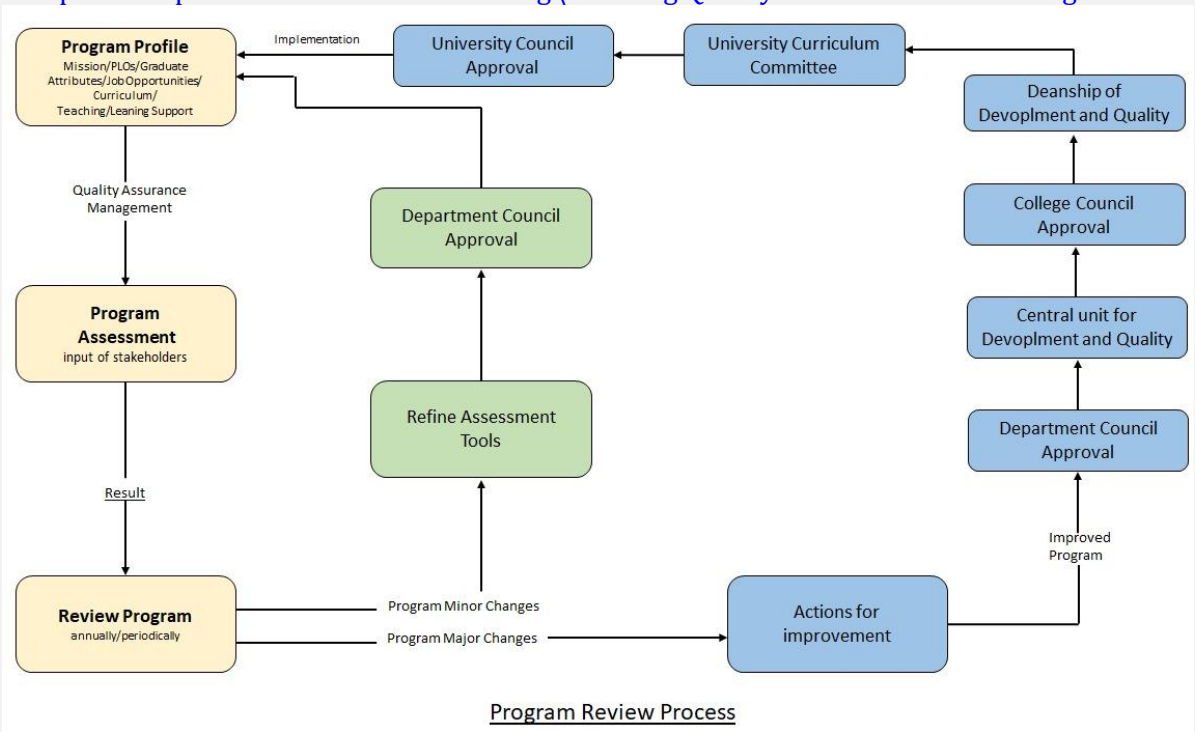

Figure 1 - Teaching\Learning Quality Assurance Process Diagram

These procedures provide multiple points of input that draw a reliable picture of the program's quality and guide improvement plans and initiatives. The reports and data generated from the

procedures mentioned above are reviewed at multiple levels of the university administration to ensure accountability for the implementation of improvement plans.

2. Procedures to Monitor Quality of Courses Taught by other Departments

To ensure the quality of courses taught by other departments that contribute to the Bachelor of Science in Applied Statistics program, a systematic approach is essential. Here are detailed procedures to monitor and maintain the quality of these courses:

1. **Course Approval Process**
   - **Interdepartmental Review:** Establish a formal process for reviewing and approving courses offered by other departments intended for the Applied Statistics program. This includes evaluating course content, learning outcomes, and relevance to the program.
   - **Course Alignment:** Ensure that the courses align with the overall objectives of the Applied Statistics program. Review syllabi to confirm they meet the necessary academic standards and learning outcomes.
2. **Regular Curriculum Reviews**
   - **Scheduled Review Cycles:** Implement regular review cycles (e.g., every four years) for courses taught by other departments. This includes collecting feedback from students, faculty, and industry stakeholders.
   - **Curriculum Committee Oversight:** Utilize a curriculum committee to oversee the evaluation of interdepartmental courses. This committee should include representatives from the Applied Statistics program and related departments.
3. **Student Feedback Mechanisms**
   - **Course Evaluations:** Administer standardized course evaluations at the end of each semester to gather student feedback on the quality of instruction, course content, and relevance to their studies.
   - **Focus Groups:** Conduct focus groups with students to discuss their experiences in interdepartmental courses, identifying strengths and areas for improvement.
4. **Faculty Collaboration**
   - **Regular Meetings:** Organize regular meetings between faculty from the Applied Statistics program and other departments to discuss curriculum integration, teaching methods, and student performance.
   - **Sharing Best Practices:** Facilitate workshops where faculty can share best practices for teaching and assessment, contributing to a unified approach to education across departments.
5. **Assessment of Learning Outcomes**
   - **Learning Outcome Alignment:** Ensure that the learning outcomes of interdepartmental courses are clearly defined and aligned with the overall learning outcomes of the Applied Statistics program.
   - **Performance Metrics:** Monitor student performance in interdepartmental courses through grades, project outcomes, and exam results to assess their effectiveness in meeting learning objectives.
6. **Continuous Improvement**
   - **Action Plans:** Develop action plans based on feedback and performance assessments. This may include curriculum adjustments, additional resources for faculty, or changes to course delivery methods.
   - **Follow-up Assessments:** Conduct follow-up assessments to evaluate the effectiveness of implemented changes and ensure continuous improvement in course quality.
7. **External Review and Accreditation**
   - **External Audits:** Engage external experts to review the quality of interdepartmental courses periodically. Their insights can provide a fresh perspective on course effectiveness and relevance.

- **Accreditation Standards:** Ensure that all courses meet the accreditation requirements of relevant educational bodies, maintaining high standards across the program.

By implementing these procedures, the Bachelor of Science in Applied Statistics program can effectively monitor and enhance the quality of courses taught by other departments. This systematic approach ensures students receive a cohesive, high-quality education supporting their academic and professional goals.

3. Procedures Used to Ensure the Consistency between Main Campus and Branches (including male and female sections).

A structured approach is essential to ensure consistency between the main campus and branch campuses (including male and female sections) for the Bachelor of Science in Applied Statistics program. Here are procedures to maintain uniformity in academic quality, resources, and student support across all locations:

1. **Standardized Curriculum**
   - **Unified Curriculum Development:**
     - Establish a standardized curriculum framework that outlines core courses, electives, and learning outcomes for the program.
     - Regularly review and update the curriculum to ensure relevance and alignment with industry standards across all campuses.
   - **Course Syllabi Consistency:**
     - Require all instructors to use standardized syllabi that include course objectives, assessment methods, and key topics covered.
     - Implement a centralized system for syllabus approval and distribution to ensure uniformity.
2. **Faculty Training and Development**
   - **Shared Professional Development:**
     - Organize joint faculty training sessions and workshops across campuses to ensure all instructors have the same teaching methodologies and assessment techniques.
     - Facilitate regular faculty meetings (virtual or in-person) to discuss best practices, share experiences, and standardize grading rubrics.
   - **Mentorship Programs:** Establish mentorship programs where experienced faculty members from the main campus support and guide faculty at branch campuses in curriculum delivery and student engagement.
3. **Assessment and Evaluation**
   - **Standardized Assessment Tools:**
     - Develop common assessment tools (exams, projects, rubrics) to evaluate student performance consistently across all campuses.
     - Implement a centralized grading system to ensure transparency and fairness in evaluations.
   - **Regular Monitoring and Feedback:**
     - Conduct regular assessments of student performance data across campuses to identify any discrepancies and address them promptly.
     - Utilize student feedback to assess the quality of instruction and resources at each location.
4. **Resource Allocation**
   - **Equitable Access to Learning Resources:**
     - Ensure all campuses have access to the same textbooks, software, e-learning resources, and laboratory equipment necessary for the program.
     - Regularly review and update resource allocations to maintain consistency in educational quality.

- **Centralized Digital Resources:** Create a centralized online platform (e.g., a learning management system) where students from all campuses can access course materials, assignments, and additional resources.

5. **Student Support Services**
   - **Uniform Support Services:**
     - Ensure that academic advising, career counseling, and mental health services are available and standardized across all campuses.
     - Implement a centralized system for tracking student support requests and outcomes to ensure consistency.
   - **Extracurricular Activities:** Promote similar extracurricular activities, such as clubs, workshops, and networking events, across all campuses to foster community and engagement among students.
6. **Communication and Collaboration**
   - **Regular Communication Channels:**
     - Establish clear communication channels between the main campus and branch campuses to facilitate sharing of information, updates, and best practices.
     - Hold regular meetings (virtual or in-person) between campus coordinators to discuss challenges, successes, and areas for improvement.
   - **Cross-Campus Events:** Organize joint events, such as webinars, guest lectures, or conferences, that involve students and faculty from all campuses, promoting collaboration and a unified program identity.
7. **Gender Equity Considerations**
   - **Inclusive Policies and Practices:**
     - Ensure that policies regarding support services, extracurricular activities, and academic resources are inclusive and equally accessible to male and female students.
     - Monitor participation rates and satisfaction levels among male and female students to identify and address any disparities.

By implementing these procedures, the Bachelor of Science in Applied Statistics program can maintain consistency across the main campus and branch campuses, ensuring that all students receive a high-quality educational experience regardless of location or gender. This approach fosters a cohesive learning environment that supports academic success and personal growth.

4. Assessment Plan for Program Learning Outcomes (PLOs),

First, it "Mastered" level of performance with be a node of assessment of opportunity. The Mechanism, for demonstrating achievement of the learning outcomes, is an ongoing process which consists seven phases:

- **Phase 1.** Data-collection Methodology: Direct and Indirect (listed in Section C.6. above).
- **Phase 2.** Benefits and Drawbacks of Data-collection Methods.
- **Phase 3.** Evaluate the Choice of Data-collection Method.
- **Phase 4.** Collect data.
- **Phase 5.** Interpret evidence.
- **Phase 6.** Report the resulting information and document the analysis.
- **Phase 7.** Identify Areas for Improvement and Enhancement.

At each stage (cycle of assessment), we use the resulting information in form of report into account to document, analyze, and improve all components of the program based on the appropriate key performance indicators (KPIs). As follows a table summing the long run plan for assessing each track and All PLOs.

PLOs	Stage 1 (one year)	Stage 2 (one year)	Stage 3 (one year)	Stage 4 (one year)
K1	✓			✓
K2		✓	✓	
K3		✓	✓	
S1		✓		✓
S2		✓		✓
S3	✓		✓	
S4	✓		✓	
S5	✓		✓	
V1		✓	✓	
V2	✓			✓
V3		✓		✓

For more details see the attached file Appendix C - Assessment of Learning Outcomes.

5. Program Evaluation Matrix

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
Leadership	Program leaders, faculty, administrative staff	Surveys, interviews, focus groups	Annually
Effectiveness of Teaching & Assessment	Students, alumni, faculty, independent reviewers	Course evaluations, peer reviews, assessment analysis	End of each semester
Learning Resources	Students, faculty, library and IT staff	Resource audits, user satisfaction surveys	Every academic year
Student Support Services	Students, counseling staff, academic advisors	Surveys, focus groups, service utilization analysis	End of each semester
Curriculum Relevance	Students, faculty, employers, industry standards	Curriculum review, stakeholder feedback	Every 4 years
Partnerships and Collaborations	Employers, industry partners, alumni	Partnership assessments, surveys	Annually
Graduate Outcomes	Alumni, employers	Alumni surveys, employment data analysis	Every 2 years
Diversity and Inclusion	Students, faculty, administrative staff	Surveys, focus groups, demographic analysis	Annually
Ethical Practices	Students, faculty, independent reviewers	Compliance audits, incident reports	Annually
Program Satisfaction	Students, alumni	Satisfaction surveys, feedback sessions	End of each semester

Evaluation Areas/Aspects: e.g., leadership, effectiveness of teaching & assessment, learning resources, services, partnerships, etc.

Evaluation Sources: students, graduates, alumni, faculty, program leaders, administrative staff, employers, independent reviewers, etc.
Evaluation Methods: e.g., Surveys, interviews, visits, etc.
Evaluation Time: e.g., beginning of semesters, end of the academic year, etc.

6. Program KPIs*

The period to achieve the target (____) year(s).
*including KPIs required by NCAAA

No.	KPIs Code	KPIs	Targeted Level	Measurement Methods	Measurement Time
1	KPI-P-01	Students' Evaluation of quality of learning experience in the program	3.5/5	surveys	Twice per year
2	KPI-P-02	Students' evaluation of the quality of the courses	3.5/5	surveys	Twice per year
3	KPI-P-03	Completion rate	40%	Graduation data	Yearly starting from the first promotion
4	KPI-P-04	First-year students retention rate	30%	Graduation data	Yearly starting from the first promotion
5	KPI-P-05	Students' performance in the professional and/or national examinations	First 10%	Department data	Yearly
6	KPI-P-06	Graduates' employability and enrolment in postgraduate programs	55%	Department data	Yearly
7	KPI-P-07	Employers' evaluation of the program graduate's proficiency	3.5/5	surveys	Yearly starting from the first promotion
8	KPI-P-08	Ratio of students to teaching staff	12	Department data	Yearly
9	KPI-P-09	Percentage of publications of faculty members	60%	Department data	Yearly
10	KPI-P-10	Rate of published research per faculty member	0.8	Department data	Yearly
11	KPI-P-11	Citations rate in refereed journals per faculty member	100	Department data	Yearly
12	KPI-P-12	Graduate Satisfaction with Career Preparation	4.0 of 5	Annual graduate survey (5-point scale)	6 months post-graduation

No.	KPIs Code	KPIs	Targeted Level	Measurement Methods	Measurement Time
13	KPI-P-13	Assessment of Students' Research Skills	4.0 of 5	Exit-survey	End of academic program

H. Specification Approval Data:

Council / Committee	MATHEMATICS AND STATISTICS DEPARTMENT COUNCIL
Reference No.	8/1446
Date	(08/10/2024) 05/04/1446