DAMIETTA UNIVERSITY

FACULTY OF SCIENCE

MATHEMATICS DEPARTMENT

جامعة دميــــاط
كلية العلـــــــوم
قسم الرياضيـــات

وافق مجلس قسم الرياضيات بتاريخ 2020/7/19 علي تشكيل فريق عمل لادارة برنامج الرياضيات ساعات معتمدة للاعتماد والاتي أسمائهم :-

أولا: معيار رسالة وأهداف البرنامج:

- د/ هدي حمدان مرداش   رئيسا
- د/ نهي محمد البدري   عضواً
- م.م/ أحمد يوسف عبد اللطيف   عضواً

ثانيا: معيار قيادة وتنظيم البرنامج:

- د/ هالة أحمد السقا   رئيساً
- د/ وفاء يحيي قوطة   عضواً
- م/ سهام صابر أحمد   عضواً

ثالثا:معيار الموارد المالية والتسهيلات المادية الداعمة:

- د/ عبد الحكيم أبو الفتوح عبد النبي   رئيسا
- د/ غدير عبد الوهاب الشريف   عضواً
- م/ محمد ابراهيم محمد   عضواً

كما وافق مجلس قسم الرياضيات بتاريخ 2020/9/20 علي رؤية ورسالة وأهداف برنامج الرياضيات (ساعات معتمدة) كالتالي:-

1- الرؤية :-

تحقيق التميز في البحث العلمي في الرياضيات البحتة والتطبيقية والمساهمة في إيجاد حلول لمشاكل المجتمع.

Achieve excellency in scientific research in pure & applied mathematics and contributing in finding solutions to the society problems.

2- الرسالة :-

تزويد المجتمع بخريجين منافسين في مجال الرياضيات البحتة والتطبيقية وفق معايير الجودة لخدمة البحث العلمي وحل المشكلات المجتمعية والحفاظ على الهوية الوطنية والقيم الأخلاقية.

Provide the society with competitive graduates in the field of pure and applied mathematics according to the quality standards to service the scientific research and solve community problems, preserving the national identity and moral values.

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Damietta University

1.1 الاهداف العامة للبرنامج :-

1.1.1 تزويد الطلاب بمجموعة واسعة من المفاهيم والنظريات الأساسية في الكيمياء والفيزياء والرياضيات.
1.1.2 استخدام الأساليب الرياضية المناسبة لتحليل وتفسير البيانات العملية.
1.1.3 استخدام تطبيقات علوم الحاسب وتقنية المعلومات لحل المسائل الرياضية.
1.1.4 تطبيق المهارات والمعرفة الرياضية لفهم وحل مشاكل الحياة الواقعية.
1.1.5 كشف العلاقة بين الرياضيات والعلوم الأساسية الأخرى ، وإدراك دور الرياضيات في تنمية المجتمع.
1.1.6 تحسين اللغة ومهارات التعلم الذاتي.

1.1 The mathematics program main aims are to:

1.1.1) Provide students a wide range of the basic concepts and theories of chemistry, physics, and mathematics.

1.1.2) Utilize the appropriate mathematical techniques to analyze and interpret practical data.

1.1.3) Use computer science applications and information technology to solve mathematical problems.

1.1.4) Apply mathematical skills and knowledge to understand and solve real-life problems.

1.1.5) Reveal the relation between mathematics and other basic sciences, recognize the role of mathematics in the development of society.

1.1.6) Improve language and self-learning skills.

ـ وأيضا وافق مجلس قسم الرياضيات بتاريخ 2018/12/23م على تبني المعايير الأكاديمية القياسية القومية
(NARS) لبرنامج مرحلة البكالوريوس لائحة الساعات المعتمدة.

1.2 مواصفات الخريج :

1.2 General attributes of the graduate of the mathematics program are to:

1.2.1- Recognize the role of basic sciences in the development of society.

1.2.2- Develop scientific approaches that meet community needs considering economic, environmental, social, ethical, and safety requirements.

1.2.3- Utilize scientific facts and theories to analyze and interpret practical data.

1.2.4- Collect, analyze, and present data using appropriate formats and techniques.

1.2.5- Postulate concepts and choose appropriate solutions to solve problems on a scientific basis

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1.2.6- Apply effectively information technology relevant to the field.

1.2.7- Participate effectively in multidisciplinary teamwork and be flexible for adaptation, decision making, and working under contradictory conditions as well as exhibiting a sense of beauty and neatness.

1.2.8- Adopt self and long life-learning and participate effectively in research activities.

1.2.9- Deal with scientific data in Arabic, English, or other languages.

1.2.10- Understand, recognize, and describe patterns and make abstractions about them.

1.2.11- Draw conclusions about the real world using mathematical concepts.

1.2.12- Find true statements that can be made about mathematical objects.

1.2.13- Apply techniques, tools, and formulas to understand an object's attributes.

1.2.14- Recognize and use various types of reasoning and methods of proof.

1.2.15- Create and use representations to model and interpret mathematical ideas.

1.2.16- Recognize and understand how mathematical ideas interconnect and build on one another.

1.3 ـ المعايير الأكاديمية للبرنامج:
تم تبني المعايير الأكاديمية المرجعية القومية الخاصة بالهيئة القومية لضمان الجودة و الإعتماد لبرنامج الرياضيات من (The academic standards of the supreme council of Egyptian Universities [NARS]) مجلس قسم الرياضيات بعد مراجعتها و الإطلاع عليها.

2ـ المخرجات التعليمية المستهدفة من البرنامج:
2.1 المعرفة والفهم:

2.1 By the end of this program, the graduates must acquire knowledge and understanding of:

a1- The related basic scientific facts, concepts, principles, and techniques.

a2-The relevant theories and their applications.

a3- The processes and mechanisms supporting the structure and function of the specific topics.

a4- The related terminology, nomenclature, and classification systems.

a5- The theories and methods applied for interpreting and analyzing data related to discipline.

a6- The developmental progress of the program-related knowledge.

a7- The relation between the studied topics and the environment.

a8- Numerical mathematics, and the different ways in which numerical information is used.

a9- Abstract algebraic structures and their roles in solving problems expressed with

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symbols and in developing mathematical theories and techniques.

a10- Mathematical methods and techniques that deal with differential equations and their applications.

a11- Geometrical concepts, and processes used in measuring attributes of objects.

a12- The concept of function, and its role in mathematical analysis.

a13- Discrete mathematics, algorithms, and combinatorial abilities in order to solve problems of finite character and enumerate sets without direct counting.

a14- Probability and statistical models to make inferences about real-world situations.

a15- Modeling and symbolic representations of problem situations.

2.2 القدرات الذهنية:

2.2 By the end of this program, the graduates must be able to:

b1- Differentiate between subject-related theories and assess their concepts and principles.

b2- Analyze, synthesize, assess and interpret qualitatively and quantitatively science-relevant data.

b3- Develop lines of argument and appropriate judgments in accordance with scientific theories and concepts.

b4- Postulate and deduce mechanisms and procedures to handle scientific problems.

b5- Construct several related and integrated information to confirm, make evidence, and test hypotheses.

b6- Formulate mathematical ideas and procedures using appropriate mathematical vocabulary and notation.

b7- Construct symbolic forms of problem situations through modeling real-world situations, develop and use the models to make predictions and informed decisions.

b8- Develop connections within branches of mathematics and between mathematics and other disciplines.

b9- Utilize appropriate processes applied mathematical studies.

b10- Judge the validity of mathematical arguments and the reasonableness of results.

2.3 مهارات مهنية وعملية:

2.3 By the end of this program, the graduates must be able to:

c1- Plan, design, process, and report on the investigated data, using appropriate techniques, and considering scientific GUI dance.

c2- Apply techniques and tools considering scientific ethics.

c3- Solve problems using a range of formats and approaches.

c4- Identify and criticize the different methods used in addressing subject-related issues.

c5- Apply reasoning techniques to build convincing mathematical arguments.

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c6- Develop conjectures and draw appropriate conclusions, and test these conjectures.

c7- Identify required mathematics and other technical information independently.

c8- Use technology to enhance mathematical thinking and understanding.

c9- Conduct independent nontrivial exploration in mathematics.

c10- Develop and reinforce tenacity and confidence in their abilities to use mathematics.

2.4 مهارات العامة و المنتقلة:

2.4 By the end of this program, the graduates must be able to:

d1- Use information and communication technology effectively.

d2- Identify roles and responsibilities, and their performing manner.

d3- Think independently, set tasks, and solve problems on a scientific basis.

d4- Work in groups effectively, manage time, collaborate, and communicate with others positively.

d5- Consider community-linked problems, ethics, and traditions.

d6- Acquire self- and long life-learning.

d7- Apply scientific models, systems, and tools effectively.

d8- Deal with scientific patents considering property rights.

d9- Exhibit the sense of beauty and neatness.

القائم بعمل رئيس قسم الرياضيات

أ.م.د. هالة أحمد السقا