# Course Specification

(Postgraduate)

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| Course Title: **Discussion** |
| Course Code:**MATH690** |
| Program: **Master Program in Mathematics** |
| Department: **Mathematics** |
| College: **Science** |
| Institution: **University of Tabuk, KSA** |
| Version: **2** |
| Last Revision Date:**1/12/1443 H** |

## Table of Contents

# A. General information about the course:

| Course Identification | | | | | |
|---|---|---|---|---|---|
| **1. Credit hours:** | 1 H | | | | |
| **2. Course type** | | | | | |
| a. | University ☐ | College ☐ | Department☒ | Track☐ | Others☐ |
| b. | Required☒ | Elective☐ | | | |
| **3. Level/year at which this course is offered:** Level-3 | | | | | |
| **4. Course general Description**<br><br>In this course, we will discuss some basic fundamentals issues related to the research topics raised recently. In addition to benefiting from these discussions in preparing research plans and proposed ideas that are suitable for postgraduate students to develop research projects in the most complete and optimal manner. | | | | | |
| **5. Pre-requirements for this course (if any):** None | | | | | |
| **6. Co- requirements for this course (if any):** None | | | | | |
| **7. Course Main Objective(s)**<br><br>The main objectives are as follows<br>**1.** Describe the basic steps in preparing a research project.<br>**2.** Identify some recent/suitable ideas for research projects in pure/applied mathematics.<br>**3.** Discuss thebasic skills for presenting research findings.<br>**4.** Explain the main contents of a research project. | | | | | |

## 1. Teaching mode(mark all that apply)

| No | Mode of Instruction | Contact Hours | Percentage |
|---|---|---|---|
| 1. | Traditional classroom | 15 | 100 % |
| 2. | E-learning | | |
| 3. | Hybrid<br>● Traditional classroom<br>● E-learning | | |
| 4. | Distance learning | | |

## 2. Contact Hours (based on the academic semester)

| No | Activity | Contact Hours |
|---|---|---|
| 1. | Lectures | 1 H /week |
| 2. | Laboratory/Studio | |
| 3. | Field | |

| | | |
|---|---|---|
| 4. | Tutorial | |
| 5. | Others (specify) | |
| | Total | 15 |

## B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

| Code | Course Learning Outcomes | Code of CLOs aligned with program | Teaching Strategies | Assessment Methods |
|---|---|---|---|---|
| 1.0 | Knowledge and understanding | | | |
| 1.1 | Demonstrate the main areas of interest to preparing researches in pure/applied Mathematics. | K1 | Lectures, Group works, Presentations, Classroom discussion. | Assignments, Homework, Oral presentation. Discussions and Surveys. |
| 1.2 | Enhance the basic steps of conducting research. | K3 | | |
| 2.0 | Skills | | | |
| 2.1 | Present research findings in formal ways. | S1 | Lectures, Group works, Presentations, Classroom discussion, Seminar, Case study. | Assignments, Homework, Oral presentation. Discussions and Surveys. |
| 2.2 | Analyze a given mathematical problem | S2 | | |
| 2.3 | Using fundamental mathematical techniques in preparing a manuscript. | S3 | | |
| 2.4 | Communicate the research idea accurately using written and oral presentations. | S4 | | |
| 3.0 | Values, autonomy, and responsibility | | | |
| 3.1 | Perform academic integrity and professional ethics when dealing with academic issues. | V1 | Lectures, Group works, Presentations, Classroom discussion, Seminar, Case study. | Assignments, Homework, Oral presentation. discussion.and Surveys. |
| 3.2 | Demonstrate and managing their time and duties with friends and with groups | V2 | | |

## C. Course Content

| No | List of Topics | Contact Hours |
|---|---|---|
| 1 | Concept of a research in Mathematics | 1 |
| 2 | Contents of a research paper | 1 |
| 3 | Examples of research papers in pure/applied Mathematics | 3 |
| 6 | Recent areas of research | 1 |
| 7 | Preparing a research idea | 1 |
| 8 | Formulating a mathematical problem | 1 |
| 9 | Roles of software to extracting results | 1 |
| 10 | How to write Math research articles. | 3 |
| 11 | How to present research ideas and findings. | 1 |
| 14 | Implementing a specific journal-Latex template | 1 |
| 15 | How to submit a paper to journal | 1 |
| Total | | 15 |

## D. Students Assessment Activities

| No | Assessment Activities * | Assessment timing (in week no) | Percentage of Total Assessment Score |
|---|---|---|---|
| 1. | Homework | Weekly basis | 25% |
| 2. | Assignment 1 | 6th weeks | 20% |
| 3. | Assignment 2 | 8th weeks | 20% |
| 4. | Assignment 3 | 12sth week | 20% |
| 5. | Presentation | At End of Semester | 15 % |

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

## E. Learning Resources and Facilities

### 1. References and Learning Resources

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|---|---|
| Essential References | Higham, N. J .Handbook of Writing for the Mathematical<br>Sciences, SIAM, Society for Industrial and Applied Mathematics (2019) |
| Supportive References | NA |
| Electronic Materials | Saudi Digital Library |

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|---|---|
| Other Learning Materials | NA |

## 2. Required Facilities and equipment

| Items | Resources |
|---|---|
| facilities<br>(Classrooms, laboratories, exhibition rooms, simulation rooms, etc.) | Lecture Room with capacity of 30 students and equipped with White Board, Library |
| Technology equipment<br>(projector, smart board, software) | Overhead projector and internet connection. |
| Other equipment<br>(depending on the nature of the specialty) | None |

# F. Assessment of Course Quality

| Assessment Areas/Issues | Assessor | Assessment Methods |
|---|---|---|
| Effectiveness of teaching | Students | Direct and Indirect |
| Effectiveness of students assessment | Teacher | Direct |
| Quality of learning resources | Students | Indirect |
| The extent to which CLOs have been achieved | Teacher, Quality Committee | Direct and Indirect |
| Other | | |

**Assessor** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

**Assessment Methods**(Direct, Indirect)

# G. Specification Approval Data

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|---|---|
| **Council / Committee** | **Approval by the Department Council** |
| **Reference No.** | DEPARTMENT COUNCIL NO (26) |
| **Date** | **11/9/1444 H** |