


FOUNDATION PROGRAM | MATH UNIT
COURSE SYLLABUS
TERM-1 (2016-2017)

Course Title : **INTERMEDIATE ALGEBRA**

Course Code : **FPM 102B – Level 2 – APPLIED**

Teaching Load : **Five (5) hours weekly**

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Recommended Text Books:

- 1) **College Algebra** by: Raymond.A.Barnett, Michael R. Ziegler, Karl. E. Byleen
Mc Graw Hill, November 1999, 7th Edition.
- 2) **Elementary Statistics** by: Allan G. Bluman, Mc Graw Hill, year 2004, 5th Edition.

DU – Vision:

Dhofar University aspires to occupy a recognized position among the institutions of quality higher education.

DU – Mission:

Dhofar University strives to achieve excellence in teaching, research and community service, in an open learning environment conducive to creativity and innovation and to the acquisition of cutting-edge professional knowledge.

DU - Values:

The core values of Dhofar University are:

1. Academic excellence
2. Individual responsibility
3. Continuous improvement
4. Active citizenship
5. Long-Life learning

□ رؤية البرنامج :

يتطلع البرنامج التأسيسي إلى احتلال مكانة مرموقة بين البرامج التأسيسية في السلطنة من خلال توفير تعليم ذات جودة عالية

□ رسالة البرنامج :

يسعى البرنامج التأسيسي لتزويد الطلبة بتعليم ذات جودة عالية يستند الى معايير المخرجات التعليمية في بيئة تشجع على التميز و التعلم المستمر.

□ قيم البرنامج :

- التميز الأكاديمي
- تحمل المسؤولية الفردية
- تحسين القدرات الذاتية باستمرار
- المواطنة الفاعلة
- التعلم ال

Math Unit – Mission:

Our mission is to provide students with a learning environment in which they can master the skills and concepts necessary for their success in college level Mathematics.

Learning Objectives:

- * Acquiring the knowledge necessary for further study of mathematics at higher levels and for pursuing the study of other curricular subjects.
- * Mastering the language of mathematics and using it to solve real-life problems that may face students now or in the future.
- * Enhancing students' intellectual abilities and self-confidence, and encouraging renovation and innovation by allowing them to uncover relationships and conceive mathematical patterns and models.
- * Developing the mathematical sense in students and employing mathematical methods in life and in other subjects.

Learning Outcomes:

At the end of the Course, the students will be able to:

- Define a function graphically and by set, finding the domain of certain type of functions, and evaluating functions.
- Graph quadratic functions with standard formula.
- Apply the Concept of Combining and Composite functions by adding, subtracting and multiplying functions.
- Apply the concept of Inverse and one to one functions.
- Identify exponential functions, draw their graphs, and solve their equations.
- Define the Logarithmic functions, draw their graphs, and solve their equations.
- Solve a system of Linear Equations (using elimination method)
- Graph linear Inequalities in two variables.
- Solve a system of Linear Inequalities graphically.
- Measure central tendency, mean, median, mode, variance, standard deviation, sample space and probability.

Academic Honesty:

Students are expected to complete all work with the highest standard of honesty and integrity. Plagiarism, forgery, cheating or any form of academic misconduct will not be tolerated. Any of the above may cause a student's final course grade to be lowered significantly or the student may receive a failing grade, depending on the severity of the offence. Plagiarism is the presentation of the work of another as one's own work. (Refer to DU Catalogue)

Plagiarism:

Plagiarism is a particular form of cheating and you must avoid it at all costs. Any case of plagiarism will be given zero in that section of assessment.

Class Management:

- Students are required to arrive to all classes on time.
- Use of mobile phone is not allowed during the lecture time. You must, therefore, switch off your mobile phone before you enter the lecture room.

Attendance Regulation:

| Level | 1 st warning Hours of absences | Final warning Hours of absences | Withdrawal |
|------------|--|------------------------------------|------------|
| Math 1 & 2 | 5% | 15% | 25% |

Students will receive copies of warning letters in their DU email.

Evaluation and Grading:

Students who show dedication and commitment to their studies and class work, homework and Project will be noted. In case of borderline grading, student's efforts will be reviewed.

| Quiz-1 | Mid Term | Quiz-2 | Final Exam | CA | Final Grade |
|--------|----------|--------|------------|------|-------------|
| 10 % | 30% | 10% | 40 % | 10 % | 100 % |

Continuous Assessment (CA) (10 %):

| | |
|---|-----|
| Class Attendance + Class Participation + Assignments | 10% |
|---|-----|

Useful Links / Websites:

<http://www.purplemath.com/modules/index.htm>

<http://library.thinkquest.org/20991/alg2/index.html>

<http://math2.org/math/trig/identities.htm>

<http://library.thinkquest.org/20991/alg2/trig.html>

<http://msenux.redwoods.edu/math/courses/math120.php>

<http://archives.math.utk.edu/topics/algebra.html>

<http://www.math.wsu.edu/HS/problems.html>

Study Plan – Level 2 – Math Applied – Topics to be covered during the Term-1

| Week (Dates) | Topics To Be Covered | Remarks |
|-------------------------------|---|------------------------------|
| Week 1 (04/09/16 – 08/09/16) | Registration & Orientation | |
| Week 2 (11/09/16 – 15/09/16) | Eid Al-Adha Holidays | |
| Week 3 (18/09/16 – 22/09/16) | <u>Graphs and Functions</u> 1.1 Functions: Definition, Vertical Line Test, Domain, Evaluating Functions | |
| Week 4 (25/09/16 – 29/09/16) | 1.2 Graphing Quadratic Functions 1.3 Combining Functions and Composite Functions. | |
| Week 5 (02/10/16 – 06/10/16) | 1.4 One-to-one and Inverse Functions Functions. | Quiz-1 10% (06/10/16) |
| Week 6 (09/10/16 – 13/10/16) | <u>Continue:</u> Inverse Functions Revision for Quiz-1 | |
| Week 7 (16/10/16 – 20/10/16) | <u>Exponential Functions</u> 2.1 Exponential Functions: Properties, laws and equations. 2.2 Exponential Functions with base e, solving exponential equations | |
| Week 8 (23/10/16 – 27/10/16) | Mid Term Exam Week | Mid-Term Exam 30% |
| Week 9 (30/10/16 – 03/11/16) | <u>Logarithmic Functions</u> 2.3 Logarithmic Functions: Definition Properties, laws and Equation | |
| Week 10 (06/11/16 – 10/11/16) | <u>Solving System of Linear Equations</u> 3.1 Solving a system of Linear Equations by Elimination Method <u>Linear Inequalities</u> 4.1 Graphing Linear Inequality in two variables 4.2 Solving a System of Linear Inequalities Graphically | |
| Week 11 (13/11/16 – 17/11/16) | <u>Statistics</u> 6.1 Introduction to Descriptive and Inferential Statistics. 6.2 Measures of Variation. | |
| Week 12 (20/11/16 – 24/11/16) | <u>Probability</u> 6.3 Introduction to Probability | Quiz-2 10% (24/11/16) |
| Week 13 (27/11/16 – 01/12/16) | Revision | |
| Week 14 (04/12/16 – 08/12/16) | Final Exam | Final Exam 40 % |
| Week 15 (11/12/16 – 15/12/16) | Marking, Moderation & Finalizing Grades | |