FOUNDATION PROGRAM | MATH UNIT

COURSE SYLLABUS

TERM-1 (2020-2021)

Course Title : **INTERMEDIATE ALGEBRA**

Course Code : **FPM 101A – Level 1 – BASIC**

Teaching Load : **Five (4) hours weekly**

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Recommended Text Book:

1) **Algebra for Cllege Students**: Jerome Kaufmann, Karen L. Schwitter, Thomson Brooks/Cole, year 2007, 10th Edition.

2) **e–text book: Algebra and Trigonometry, 6th Edition,** Margaret L. Lial, John Hornsby, David I. Schneider, Callie Daniels, My lab Math - Pearson

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 التعليمة في بيئة تشجع على التميز و التعلم المستمر.

▫ قيم البرنامج :

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

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 student will be able to:

- Use measurements and unit conversion (metric units).
- Solve System of linear inequalities in two variables.
- Identify exponents and simplify expressions**.**
- Rationalize binomial denominators**.**
- Solve quadratic equations by quadratic formula and use it to solve real-life problems.
- Graph straight lines using intercepts and define the concept of the slope.
- Find the equation of lines in standard form.
- Identify, graph the circle, and write the equation of a circle.
- Define angles and find the length of Arc.
- Define basic Trigonometric Functions and solve right triangle using Pythagorean Theorem.

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	1st warning Hours of absences	2nd warning Hours of absences	Final warning Hours of absences	Withdrawal
Pre Level and Math 1 & 2	7.15 %	14.2 %	21.43	25.1 %

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

Evaluation and Grading:

Exams will be introduced on Moodle.
An Interactive Math Platform (My Lab Math from Pearson) will be integrated with Moodle to be applied within CA.

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

Continuous Assessment (CA) (30%):

Portfolio - Assignments	**10 %**
Quiz 1	**10 %**
Quiz 2	**10 %**

Useful Links / Websites:

1- http://www.regentsprep.org/Regents/math/ALGEBRA/AO1/Lsimplify.htm [Simplifying Radicals]
2- http://www.wtamu.edu/academic/anns/mps/math/mathlab/col_algebra/col_alg_tut14_lineareq.htm
3- http://www.onlinemathlearning.com/algebra-inequalities.html [Video]
4- http://www.webmath.com/gline.html [Interactive Tool]
5- http://www.purplemath.com/modules/strtlneq.htm

Study Plan – Math (Level 1) – Topics to be covered during Term-1 (2020-2021)

Weeks (Dates)	Topics to Be Covered	Remarks
Week 1 (06/09/20 – 10/09/20)	Introduction to Online Classes	Through Moodle & What App groups.
Week 2 (13/09/20 – 17/09/20)	**7.1** Graphing Straight Lines Using Intercepts	7.1 Examples (3-7) P (353-355) Problems: (9-16), (29-31), (35-40) P (359)
Week 3 (20/09/20– 24/09/20)	**7.2.a** Graphing Linear Inequality in two variables. **7.2.b** Solving and Graphing system of Linear Inequalities in two variables.	7.2.a Examples: 1,2,3. P: 362-364. Problems: (1-6), (15-18), (27,30) p. 364. **Supplementary Material**
Week 4 (27/09/20– 01/10/20)	7.3 Finding Slope of a line. (parallel and perpendicular lines). **7.4** Determining the Equation of a Line	7.3 Examples (1-3), 5. P (365-369) Problems: 1-12, 17-28 P (372, 373) 7.4 Examples (8, 9, 10) P (380-382) Problems: (1-5), (15-20), (37-46). P (383) **Quiz-1 10% (01/10/2020)**
Week 5 (04/10/20– 08/10/20)	**5.1** Use Exponents as Integers	5.1 Examples: 1,2,3. p.245-247 Problems: 1-5,8,9,11,13, 15 , 17 , 21,29,33,(43-62),(63-74) P (248-249)
Week 6 (11/10/20– 15/10/20)	Mid-Term Exam Week	**Mid-Term Exam 30%**
Week 7 (18/10/20– 22/10/20)	5.4 Rationalizing binomial denominators	5.4 Examples (4,5) P (267,268) Problems: 53-76. P 270.
Week 8 (25/10/20– 29/10/20)	6.4 Quadratic Formula. 3.7 Equations and problem Solving (Related to Quadratic Equation).	6.4 Examples: 1,2,3,5,6. P (316-320). Problems:11-16,21-26, 53, 55 P (322). 3.7 Examples: 8. P (169). Problems: 55,57,60. P (171)

Week 9 (01/11/20– 05/11/20)	**7.3** Finding distance between two points **13.1 Circles.**	7.3 Examples (1-3), 5. P (365-369) Problems: 1-12, 17-28 P (372, 373) 13.1 Examples (1-3) P (697) and Ex 6 P 699. Problems: (1-8), (15-20), P (701) and Problem 35,38. P (701-702 **Quiz-2 10% (05/11/2020)**
Week 10 (08/11/20– 12/11/20)	1.4 Measurement and Unit Conversion (metric Units). 1) Define angles using radian measure and convert between radian and degree measure.	1.4 Examples 13,15 P (44-45) Problems 86, 87, 98 P 47. **Supplementary Material**
Week 11 (15/11/20– 19/11/20)	2) Find length of arc and area of sector. Define and use basic trigonometric functions 3) Solve a right-angle triangle using Pythagorean theorem. 4) Solve real life problems using basic trigonometric functions.	**Supplementary Material**
Week 12 (21/11/20– 24/11/20)	**Final Exam Week**	**Final Exam 40 %**
Week 13 (29/11/20– 01/12/20)	**Moderation &Finalizing Grades**	