



(Vision for the Future)

## FOUNDATION PROGRAM

### Course Syllabus

### FPM 102B: FP Math Level 2 Pure

#### (A) University Vision, Mission, and Values

##### Vision

Dhofar University aspires to occupy a distinct position among the leading institutions of higher education in the Arab Region.

##### Mission

To provide quality teaching and learning, conduct research in an inspiring environment conducive to creativity and innovation, and engage with the community.

##### Core Values

The core values of Dhofar University are:

- **Excellence** – Our commitment to excellence drives us to do better consistently.
- **Integrity** – We believe in honesty and coherence between our words and actions.
- **Responsibility** – We accept full responsibility for our actions all the time.
- **Commitment** – We are committed to give our best and deliver what we promise.
- **Transparency** – For us, transparency is the foundation of trust.
- **Adaptability** – We believe adaptability is the key to success in an ever-changing environment.

#### (B) Foundation Program Vision and Mission

##### Vision

Foundation Program aspires to become one of the leading GFPs in the Arab region, equipping students to be more competitive in colleges inside and outside Oman.

##### Mission

To expose students to rich, engaging curricula using innovative teaching and learning strategies that enable students to tap their learning potential to become autonomous, life-long learners

#### (C) Course/ Instructor/ Coordinator Information

Course Code : FPM 102B  
Course Title : FP Math Level 2 (Pure)  
Credit Hours : NA [4 Teaching Hours per week]  
Pre-requisite : FP Math Level 1  
Co-requisite : NA  
Delivery Mode : Lecture/Tutorial

#### Course Schedule (For all sections):

Section	Class Room	Days	Time	Instructor Name	Email	Office Room	Office Telephone
1	COMC XXXX	2 (ST)	08:00- 10:00	TBD	TBD	FP XXXX	TBD
2	COMC XXXX	2 (MW)	10:00- 12:00	TBD	TBD	FP XXXX	TBD

Course Coordinator : Mohammad Mustafa  
 Email : [m\\_mustafa@du.edu.om](mailto:m_mustafa@du.edu.om)  
 Office Extension : 7570  
 Office Room : 224 A

#### (D) Course Description

The aim of this course is to prepare students for further study of higher-level mathematics at higher and other non-mathematics-related subjects. The course covers the Concept of functions, Exponential and Logarithmic functions, Recognizing three types of symmetric functions, basic statistics, and introduction to probability. For Pure Course, in addition to that, other topics are covered such as Graphing Trigonometric functions, Identities, and using the law of Sine and cosine to solve triangles.

#### (E) Course Learning Outcomes:

Course Learning Outcomes		Assessment Tools
1	Define a function graphically and by set notation, find the domain of certain types of functions, and evaluate functions.	FA / Quiz 1/ Summative/ Midterm
2	Determine if the graph of the equation is symmetric the to x-axis, y-axis, and origin.	FA / Quiz 1/ Summative/ Midterm
3	Identify exponential functions, draw their graphs, and solve their equations.	FA/Assignment 1/ Summative/ Midterm
4	Define the logarithmic functions, draw their graphs, and solve their equations.	FA/Assignment 1/ Summative/ Midterm
5	Use the relationship between exponents and logarithms to solve related problems.	Summative/ Midterm
6	Solve simple real-life problems involving exponential functions	Summative/ Midterm
7	Identify central tendency measures, mean, median, mode, midrange	FA / Quiz 2/ Summative/ Final
8	finding the probability of random experiments.	FA / Quiz 2/ Summative/ Final
9	Use formulas for permutations and combinations.	FA / Quiz 2/ Summative/ Final
10	Define and solve basic trigonometric functions and express them graphically	FA / Assignment 2/ Summative/ Final
11	Define and apply the rules, more types of identities, and proof of trigonometric functions	FA / Assignment 2/ Summative/ Final
12	Use the law of sines and cosines to solve a triangle and real-life problems.	Summative/ Final
General Study Skills		
1	Time Management and Students' Responsibility	FA / Quiz Skill
2	Note Taking	FA / Quiz Skill
3	Research Skills	FA / Quiz Skill

#### (F) Program Learning Outcomes: Refer to Scope and Sequence Document

#### (G) Additional Materials, References and Resources

Textbook 1)	Algebra for College Students: Jerome Kaufmann, Karen L. Schwitter, Thomson Brooks/Cole, 2007, 10 <sup>th</sup> Edition, ISBN 1-285- 19578-7
Reference Books	NA
Handouts	Moodle, OneDrive, Math Worksheets
Useful Websites	Kuta Software
Software(s)	NA
Other Resources	PPT, videos
e-learning Resources	Moodle, OneDrive

## (H) Teaching/ Learning Strategies and Use of Technology

The lecture would include tutorials; homework; assignments; in-class participation; and short quizzes. Students need to refer the textbooks and/or internet sites together with the handouts to update their knowledge and cope up with the assignments and other assessments. Regular class attendance is important and will be monitored. Students are expected to develop their skills for at least 4 hours a week.

## (I) Weekly Course Content Outline: Refer to Level 2 (Pure) study plans for specific details.

Week No.	Topics/Activities to be Covered
1	Placement Tests/Registration
2	<ul style="list-style-type: none"><li>• Concept of a Function.</li><li>• Use appropriate software (Geometry Application) to interpret Quadratic Function.</li><li>• Use appropriate software (Geometry Application) to interpret Exponential Function.</li></ul>
3	<ul style="list-style-type: none"><li>• Graphing Nonlinear Equations. (Use the three types of symmetry of an equation to sketch its graph.).</li><li>• Solving Exponential Equations.</li></ul> <b>Quiz Study Skills 1: Time Management and Students' Responsibility</b>
4	<ul style="list-style-type: none"><li>• Logarithms (Definition, Properties, and Solving Logarithmic Equation).</li></ul>
5	<ul style="list-style-type: none"><li>• <b>Complete: Logarithms</b></li><li>• Understand the inverse relationship between exponents and logarithms.</li></ul> <b>Quiz Study Skill 2: Note Taking</b>
6	<ul style="list-style-type: none"><li>• Use the relationship between exponents and logarithms to solve related problems</li><li>• Solve simple real-life problems involving exponential and logarithmic functions.</li></ul>
7	Midterm Exams
8	<ul style="list-style-type: none"><li>• <b>Statistics</b><ul style="list-style-type: none"><li>➢ Inferential Statistics, Summarize data into tables and simple graphs (bar charts, histograms, and pie charts).</li><li>➢ Introduction to Descriptive statistics, mean, median, mode, and midrange.</li></ul></li><li>• <b>Probability</b><ul style="list-style-type: none"><li>➢ Introduction to Probability, compute the probability of simple events using tree diagrams.</li></ul></li></ul>
9	<ul style="list-style-type: none"><li>➢ Use formulas for permutations and combinations</li><li>• <b>Trigonometric Functions</b><ul style="list-style-type: none"><li>➢ Define and solve different trigonometric functions, and express them graphically (sin, cos).</li></ul></li></ul>
10	<ul style="list-style-type: none"><li>➢ Define and apply the rules, <b>identities</b>, and how to prove some of the trigonometric identities.</li></ul> <b>Quiz Study Skill 3: Research Skills</b>
11	<ul style="list-style-type: none"><li>➢ Use the law of sine to solve a triangle and real-life problems.</li><li>➢ Use the law of cosine to solve a triangle and real-life problems.</li></ul>
12	Final Exams

## (J) Assessment Tools and Schedule

Assessment Tools	Grade Proportion	Week/Dates
Midterm exam	30%	7 <sup>th</sup> week
Continuous Assessment	30%	Ongoing in class
Final Exam	40%	End of Term
<b>Course Work Total</b>	<b>100%</b>	
<b>Course work %</b>	<b>50%</b>	
<b>Exit Exam</b>	<b>50%</b>	
<b>Cumulative Total</b>	<b>100%</b>	

## **(K) Important Information for Students**

### **1) University Academic Integrity Policy**

The university requires its student to adhere to the academic integrity policy and avoid indulgences in the acts of cheating, collusion or plagiarism during examinations or continuous assessment. Any act of academic misconduct will invite sanctions as per DU policy.

(Please refer to DU student handbook and Academic Integrity Policy for detailed guidelines.)

### **2) Class Attendance Rules**

Attendance of all classes and course-related activities is obligatory. The maximum absences allowed for a student is 25% of the total number of classes of a particular course. Before reaching the withdrawal stage, LOGSIS warns the students by way of three warnings sent to their DU email account by DAR. This email messages to students is a formal communication of the university with its students so students are strongly advised to access their DU email accounts on daily basis to track their absences, along other important things, to respond appropriately when needed.

### **3) The warnings of absences are as follows:**

- a) **First warning:** this is when a student's absence reaches **07%** of the total number of classes of a particular course.
- b) **Second warning:** this is when a student's absence reaches **14%** of the total number of classes of a particular course.
- c) **Final warning:** this is when a student's absences reach **21%** of the total number of classes of a particular course.

If the absence crosses 25%, the student will be dismissed from the course and a "WA" will be shown in his/her transcript against the dismissed course and dismissal letter will be sent to his DU email account.

### **4) Withdrawal from course. NA**

### **5) End-Term Evaluation by Students**

All students are required to complete "Online Evaluation" of Course, Graduate Attributes and Course Instructor at the end of the term. The specific dates for evaluation shall be announced by the course instructor in the class. It is mandatory for the students to complete this online evaluation, without which their final grades shall not be announced.

### **6) Additional information, if any**

For the benefits of the group, all students are asked to participate actively in all aspects of the course. Those wishing to succeed must:

- Arrive on time and attend all classes.
- Complete all work on assigned dates.
- Complete all writing assignments on assigned dates.
- Take part in oral discussion and make presentations as assigned.
- Participate in class on a regular basis.
- Never miss quizzes, tests, presentations and other alternative assessments as they prepare you for your midterms and also finals.

Students are promoted to the college if their Cumulative Final Grade is 50 or above.

If a student misses any test (midterm/final), the student will only be given a make-up test with a valid excuse approved by the FPC.