نموذج وصف المقرر لمادة (الرياضيات 1)

يوفر وصف المقرر هذا إيجازا مقتضياً لاهم خصائص المقرر ومخرجات التعلم المتوقعة من الطالب تحقيقها مبرهنا عما إذا كان قد حقق الاستفادة القصوى من فرص التعلم المتاحة. ولابد من الربط بينها وبين وصف البرنامج .

اسم الجامعة / الكلية	جامعة العين / كلية هندسة النفط
اسم المادة / رمز المقرر	الرياضيات – GE102 - Mathematics
المرحلة الدراسية	الاولى
اشكال الحضور المتاحة	المحاضرة – والمناقشة
نظام المادة	سنوي
عدد الساعات في الاسبوع	4
العام الدراسي لأعداد هذا الوصف	2023/2022
By the end of the year the student should be able to demonstrate ability to explain the mathematical skills that related to the engineering information's Know the basic science related to mathematics	

Week	Subject	Learning outcomes required	Method of learning	Method of Evaluate
1	Coordinates for the plane , The Slope of a line	By the end of the students Subject should be able to: Distinguish between coordinate systems and calculate the slope of straight lines	Lecturing, discussion and H.W	Q&A
2-3	Equations for lines	By the end of the students Subject should be able to: Get to know form of Equations for lines and solve it	Lecturing, discussion and H.W	Q&A
4-5	Composition of functions	By the end of the students Subject should be able to: Intervals , Composition of functions , Vertical lines, Nonvertical lines, Horizontal lines, The distance from a point to a line.	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
6-7	Domain &Range , Sketching a Graph	By the end of the students Subject should be able to: Get to know the concept of Domain &Range an how to draw Sketching a Graph for functions	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam

8	General Functions	By the end of the students Subject should be able to: general concept to Functions	Lecturing, discussion and H.W	Q&A
9	Exponential functions	By the end of the students Subject should be able to: solve the functions of Exponential functions	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
10	Logarithm function	By the end of the students Subject should be able to: solve the functions of Logarithm functions	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
11-12-13	Trigonometric functions	By the end of the students Subject should be able to: Get to know the concept Trigonometric functions (Rules – simplification)of (sin – cos-tan-sec-csc-cot)	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
14-15	Inverse Trigonometric functions	By the end of the students Subject should be able to: solve the Inverse Trigonometric functions ($\sin^{-1}, \cos^{-1}, \tan^{-1}$)	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
16	DIFFERENTIATION , Rules of derivatives	By the end of the students Subject should be able to: Get to know the concept DIFFERENTIATION , Rules of derivatives	Lecturing, discussion and H.W	Q&A
17	The Chain Rule	By the end of the students Subject should be able to: solve the example of Chain Rule	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
18	Higher derivatives	By the end of the students Subject should be able to: solve the example of Higher derivatives	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
19	Implicit Differentiation	By the end of the students Subject should be able to: Get to know the concept Implicit Differentiation	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
20	derivatives of Trigonometric functions	By the end of the students Subject should be able to: Get to know the concept derivatives of Trigonometric functions	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
21-22-23	Applications of derivatives , The slope of the curve , Velocity and	By the end of the students Subject should be able to: Get to know the most important such as The slope of the curve ,	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam

	acceleration and other rates of changes , Maximum and Minimum of point , Concave down and concave up	Velocity and acceleration and other rates of changes , Maximum and Minimum of point , Concave down and concave up		
24	General Integration	By the end of the students Subject should be able to: Get to know the concept General Integration	Lecturing, discussion and H.W	Q&A
25	Indefinite integrals:	By the end of the students Subject should be able to: Get to know the concept of Indefinite integrals:	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
26	Integrals of trigonometric functions	By the end of the students Subject should be able to: solve and simplification of trigonometric functions	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
27	Integration by parts	By the end of the students Subject should be able to: solve the example of Integration by parts	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
28	Application of integrals	By the end of the students Subject should be able to: Get to know the most important of Application of integrals	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
29	Matrices and Determinants , Elementary operations with matrices and vectors	By the end of the students Subject should be able to: Get to know the concept of Matrices and Determinants	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam
30	Matrix multiplication	By the end of the students Subject should be able to: solve the example of Matrix multiplication	Lecturing, discussion and H.W	Q&A, H.W, quiz and exam