



Dr. Samit Dutta
 Principal and Dean

Read: Resolution of 58th Meeting of the Academic Council of Anand Agricultural University held on 29/07/2022, vide item no. 58.22

To introduce an additional course on Mathematics for 12th Science B-Group students to be admitted to B.Tech.(FT) programme from the Academic Year 2022-23.

NOTIFICATION

It is hereby notified to all concerned that vide item no. 58.22 of the 58th meeting held on 29/07/2022, the Academic Council of the Anand Agricultural University has resolved as under;

“It is hereby resolved that the introduction of the Supplementary Course on Mathematics with (2+0) credit hours in the first semester of B.Tech.(Food Technology) as a compulsory non-gradual course, for the students of “B (Biology) group” of 12th Standard, taking admissions in the B.Tech.(Food Technology) from the academic year 2022-23 as per syllabus stated in Annexure-I is approved.”

NO.: AAU/FPT&BE/Acad/1230-35/2022

Date: 06/09/2022

07

Samit Dutta
 Principal and Dean

NOTIFICATION

Encl.: Annexure-I

Copy F.W.Cs to:

1. All members of the Academic Council of University
2. All officers of Anand Agricultural University, Anand

Copy to:

1. P.S to Hon. Vice Chancellor, AAU, Anand
2. P.A to Registrar, AAU, Anand
3. Academic Branch of Registrar office, AAU, Anand (10 copies)
4. Exam Branch of Registrar office, AAU, Anand (05 copies)
5. Academic Branch of this college/ Notification File
6. All the HODs/Teachers of this college

Annexure-I

Supplementary Course on Mathematics

(2+0)*

Units	Topics	Lectures
Unit 1	Function, Limits & Continuity: Concept of Function, Limit & Continuity, Standard Formulae and related Examples.	08
Unit 2	Differentiation: Definition, Working rules of differentiation, differentiation of a composite function and chain rule, differentiation of parametric functions and Implicit functions, Logarithmic differentiation, differentiation of one function w.r.t. another function, Successive differentiation up to second order.	03
Unit 3	Integration: Indefinite integration- Definition, standard integrals, Integration by the method of substitution and method of trigonometric substitution, Law of integration by parts, Method of partial fractions, Definite Integration: working rules.	04
Unit 4	Algebra: Binomial theorem (without proof) for positive Integral Index (expansion and general term); Binomial theorem for any index (expansion only) first and second binomial approximation with application to engineering problems. Partial fractions (linear factors, repeated linear factors, non-reducible quadratic factors). Determinants and Matrices- expansion of determinants (up to third order) using sarrus rule. Properties of determinants, Minors and Cofactors, solution of equations (up to 3 unknowns) by Cramer's rule. Definition of matrix, addition, subtraction and multiplication of matrices (up to third order). Inverse of a matrix by adjoint method.	05
Unit 5	Vectors: Definition of vector and scalar quantities. Addition and subtraction of vectors. Dot product and cross product of two vectors. Thumb rule. Angle between two vectors.	06
Unit 6	Trigonometry: Addition, subtraction and product formulae. Transformation from product to sum or difference of two angles or vice versa, multiple and submultiple angles, Conditional identities, solution of triangles (excluding ambiguous cases), Periodic function, Series of function.	06
Total		32

* Non-Credit Course

Suggested Reading:

- 1 Higher Engineering Mathematics by BS Grewal; Khanna Publishers, Delhi
- 2 Engineering Mathematics by Dass Gupta, S Chand
- 3 Plane Trigonometry by S. L. Loney, M.A., Cambridge University Press, 1983
- 4 Algebra and Trigonometry by Ron Larson, Cengage Publisher
- 5 Advance Engineering Mathematics 10th Edition by Erwin Kreyszig, John Wiley & Sons, Inc. Publishers Laurie Rosatone
- 6 Advanced Engineering Mathematics by AB Mathur and VP Jagi; Khanna, Publishers, Delhi
- 7 Limits and Derivatives Made Easy by Deepak Bhardwaj, Laxmi Publications Pvt. Ltd., New Delhi
- 8 Differentiation and Integration by W. Bolton, Published by Routledge, New York
- 9 Thomas' Calculus Early Transcendentals Thirteenth Edition based on the original work by George B. Thomas, Jr. as revised by Maurice D. Weir and Joel Hass, Cengage Publisher Services