PANJAB UNIVERSITY, CHANDIGARH (INDIA)

(Established under Panjab University Act VII of 1947 enacted by Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

B. Sc. (Honours) in MATHEMATICS AND COMPUTING

(Four Years Programme as per NEP-2020)

Under the Framework of Honours School System

and

Syllabi of B. Sc. (Honours) in

MATHEMATICS AND COMPUTING

Ist and IInd semester

Department of Mathematics

Panjab University, Chandigarh

Academic Session (2023-2024)

Course Structure with Credit Details

(First and Second Semesters)

MAJOR, MINOR, SKILL ENHANCEMENT AND INTERDISCIPLINARY COURSES THROUGHOUT THE FOUR YEAR UNDERGRADUATE PROGRAM AS PER NEP-2020.

Major Courses

Semester	Course Code	Name of Course	Credits
I			

ABILITY ENHANCEMENT COMPULSORY COURSES

A Student is required to take two Ability Enhancement Course (language) of 2 credits each per semester, in Semesters I to II.

COMMON VALUE ADDED COURSES

A Student is required to take Common Value Added Courses of 2 credits in Semesters I,II, V and VI.

EVALUATION

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1. **There shall be one Mid Term Examination of 20% Marks in each semester.**
2. **There shall be continuous internal assessment for practical**

4-Year UG Degree (Honours): A four-year UG Honours degree in the Major discipline will be awarded to those who complete a four-year degree programme with 192 credits and have satisfied the credit requirements.

4-year UG Degree (Honours with Research): Students who secure 75 percentage marks and above in the first six semesters and wish to undertake research at the undergraduate level can choose a research stream in the fourth year. They should do a research project/ dissertation/thesis under the guidance of a faculty member of the University/College. The research project/dissertation/thesis will be in the Major discipline. The students, who secure 192 credits, including 6 credits from a research project/dissertation/thesis, are awarded UG Degree(Honours with Research).

Essential Textbooks

(A) G. B. Thomas, M. D. Weir and J. R. Hass, Thomas' Calculus, (12 ed.), Pearson Education, 2014.

Further Readings

1. J. L. Taylor Foundations of Analysis, American Mathematical Society, 2012.
2. S. Narayan, Integral Calculus, S. Chand and Company Ltd, 2001.
3. M.J. Strauss, G.L. Bradley and K. J. Smith, Calculus, (3 ed.), Pearson Education, 2007.

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MATC -DSC-152: Ordinary Differential Equations

Credits: 3 (L=0; T=0; P=3) **Total hours: 45 (Practicals=45)**

Total Marks: 75 (Including Internal Assessment= 15) **Time Allowed for Examination: 3hrs.**

Instructions for the Candidates and Paper Setters

2. **W. E. Boyce and R. C. Diprima, Elementary differential equations and boundary value problems, Seventh Edition, John Wiley and Sons, Inc., 2001**
3. **E. A. Coddington, An introduction to ordinary differential equations, Prentice- Hall**