

IC 202 Calculus II: Important Information

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Indian Institute of Technology Bhilai

Introduction

- Credit : 3,
- Course start date: 7th January 2022, Course end date: 18th February 2022,
- 7 hours lecture per credit. Total 14 lectures (approx.)
- Continuation of the course Calculus I. Students should be familiar with the concepts of the course Calculus I.

Course contents

- 1 **Continuity & differentiability:** Continuity, partial derivatives, directional derivatives, gradient, differentiability, chain rule, tangent planes and normals;
- 2 **Maxima & minima:** Maxima and minima for function of two variables, Lagrange multiplier method;
- 3 **Integral calculus:** Double and triple integrals with applications to volume, surface area, change of variables,
- 4 **Vector calculus:** Vector fields, line integrals, Green's theorem and its applications, path independence, surface integrals, Gauss's divergence theorem and its applications.

Text Books

- 1 **Thomas' Calculus:** G.B. Thomas, M.D. Weir, J. Hass, 12th edition,
- 2 **A Course in Multivariable Calculus and Analysis:** S.R. Ghorpade, B.V. Limaye, Springer,
- 3 **Calculus: Single and Multivariable:** D. Hughes-Hallett et al, John Wiley.

Evaluation Plan

- ① 2 quizzes : 25 marks each
- ② 1 exam : 40 marks
- ③ Attendance + class & Tutorial response : 10 marks

Lectures and Tutorials

- ① Tuesday : 14.30 - 15.50
- ② Wednesday : 08.30 - 09.50
- ③ Friday : 10.00 - 11.20
- ④ Thursday : 10.00 - 11.20 (Tutorial)

Link for lectures

[https://iitbhilai.webex.com/meet/btech_2021.](https://iitbhilai.webex.com/meet/btech_2021)

Tutorial Groups

There are 4 tutorial groups. The Roll numbers belong to each group with links to attend the tutorial are given below.

- ① **Batch I: 12140010 - 12140460** : https://iitbhilai.webex.com/meet/tut_1.
- ② **Batch II: 12140470 - 12140910** : https://iitbhilai.webex.com/meet/tut_2.
- ③ **Batch III: 12140920 - 12141370** : https://iitbhilai.webex.com/meet/tut_3.
- ④ **Batch IV: 12141380 - 12141790** : https://iitbhilai.webex.com/meet/btech_2021.

The mode of lectures will be online and may be new to you. The course will be fast paced. Therefore it is immensely important that you remain attentive in the class and tutorial and do not miss a lecture.

Communication & Office hours

- 1 Email : arnabp@iitbhilai.ac.in
- 2 Contact number: [6295814836](tel:6295814836)
- 3 Join the whatsapp group for this course via the following link
<https://chat.whatsapp.com/EwrDFbv3Vdx765jWVHdscM>

Note

Students are encouraged to clear doubts and ask questions regarding the course during the lectures/tutorials, or via whatsapp group, or mail. Also the instructor will maintain regular office hours after each lecture for 1 hour duration. Students can call if required in this time only.

SAFE registration

All the students are instructed to register for this course in SAFE application with the help of the following registration code

JW93CEME

The course will appear in SAFE as '2021C - Calculus II'.

ANY QUESTIONS?