# **Department of Mathematics Sarat Centenary College**

#### **Academic Plan and Activities**

**Academic Session: 2021-2022** 

#### Distribution of syllabus into Modules and Units of B.Sc. Honours Course CBCS

#### Semester-1

1<sup>st</sup> Module (July to September)

Core Course 1: Calculus, Geometry & Differential Equations (BMH1CC01)

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 1: Prof. Shampa Dutta Unit 2: Dr. Pramit Rej Unit 3: Dr. Bidyut Santra

Core Course 2: Algebra (BMH1CC02)

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 1: Dr. Pramit Rej

Unit 2-3: Dr. Ujjal Kumar Mukherjee

# 2<sup>nd</sup> Module (October to December)

Core Course 1: Calculus, Geometry & Differential Equations (BMH1CC01) Credits: Theory-5, Tutorial-1, Marks-75, Theory-60, Internal Assessment-10, Attendance-05

Unit 1: Prof. Shampa Dutta Unit 2: Dr. Pramit Rej Unit 4: Dr. Bidyut Santra

**Internal Assessment: 1st Week of December** 

Theory and Practical Examination: as per notification of B.U. (Tentatively on December)

Core Course 2: Algebra (BMH1CC02)

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 1: Dr. Pramit Rej

Unit 4: Dr Ujjal Kumar Mukherjee

Internal Assessment: 1st Week of December

Theory and Practical Examination as per notification of B.U. (Tentatively on December)

#### **Semester-II**

1<sup>st</sup> Module (January to March)

Core Course 3: Real Analysis (BMH2CC03)

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 1: Dr. Bidyut Santra

Unit 3: Dr. Ujjal Kumar Mukherjee

Core Course 4: Differential Equation and Vector Calculus (BMH2CC04) Credits: Theory-5, Tutorial-1, Marks – 75, Theory – 60, Internal Assessment – 10, Attendance-05

Unit 1: Dr. Pramit Rej

Unit 3: Dr Ujjal Kumar Mukherjee

Unit 4: Prof. Shampa Dutta

# 2<sup>nd</sup> Module (April to June)

Core Course 3: Real Analysis (BMH2CC03)

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 2: Dr. Bidyut Santra

Unit 3: Dr. Ujjal Kumar Mukherjee

Internal Assessment: 4th Week of May

Theory and Practical Examination: as per notification of B.U. (Tentatively on June)

Core Course 4: Differential Equation and Vector Calculus (BMH2CC04) Credits: Theory-5, Tutorial-1, Marks – 75, Theory – 60, Internal Assessment – 10, Attendance-05

Unit 2: Dr. Pramit Rej

Unit 3: Dr. Ujjal Kumar Mukherjee

Unit 4: Prof. Shampa Dutta

Internal Assessment: 4th Week of May

Theory and Practical Examination: as per notification of B.U. (Tentatively on June)

#### **Semester-III**

#### 1<sup>st</sup> Module (July to September)

Core Course 5: Theory of Real Functions & Introduction to Metric Space(BMH3CC05) Credits: Theory-5, Tutorial-1, Marks – 75, Theory – 60, Internal Assessment – 10, Attendance-05

Unit 1-2: Dr. Ujjal Kumar Mukherjee

Core Course 6: Group Theory-I (BMH3CC06)

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 1-2: Dr. Bidyut Santra Unit 3: Prof. Shampa Dutta

Core Course 7: Numerical Methods & Numerical Methods Lab (BMH3CC07)

Credits: Theory-4, Practical-2, Marks - 75, Theory - 40, Practical - 20, Internal Assessment - 10, Attendance-05

Unit 1-3: Dr. Pramit Rej

Practical

### SEC-1 Logic and Sets (BMH3SEC11)

Credits: Theory-2, Marks – 50, Theory – 40, Internal Assessment – 10

Unit 1-2: Dr. Ujjal Kumar Mukherjee

# 2<sup>nd</sup> Module (October to December)

Core Course 5: Theory of Real Functions & Introduction to Metric Space(BMH3CC05) Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

**Unit 3-4: Dr Ujjal Kumar Mukherjee Internal Assessment: 1st Week of December** 

Theory and Practical Examination: as per notification of B.U. (Tentatively in December)

Core Course 6: Group Theory–I(BMH3CC06) Credits: Theory-5, Tutorial-1, Marks – 75, Theory – 60, Internal Assessment – 10, Attendance-05

Unit 4-5: Dr. Bidyut Santra Unit 3: Prof. Shampa Dutta

Internal Assessment: 1st Week of December

Theory and Practical Examination: as per notification of B.U. (Tentatively in December)

Core Course 7: Numerical Methods & Numerical Methods Lab (BMH3CC07) Credits: Theory-4, Practical-2, Marks – 75, Theory – 40, Practical – 20, Internal Assessment – 10, Attendance-05

Unit 3-6: Dr. Pramit Rej

**Practical** 

**Internal Assessment: 1st Week of December** 

Theory and Practical Examination: as per notification of B.U. (Tentatively in December)

# SEC-1 Logic and Sets (BMH3SEC11)

Credits: Theory-2, Marks – 50, Theory – 40, Internal Assessment – 10

Unit 3: Dr. Ujjal Kumar Mukherjee

Internal Assessment: 1st Week of December

Theory and Practical Examination: as per notification of B.U. (Tentatively in December)

## Semester IV 1st Module (January to March)

Core Course 8: Riemann Integration and Series of Functions (BMH4CC08) Credits: Theory-5, Tutorial-1, Marks – 75, Theory – 60, Internal Assessment – 10, Attendance-05

Unit-1-3: Dr. Ujjal Kumar Mukherjee

**Core Course 9: Multivariate Calculus (BMH4CC09)** 

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 1: Dr. Pramit Rej Unit 3: Prof. Shampa Dutta

Core Course 10: Ring Theory and Linear Algebra I (BMH4CC10)

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 1-2: Dr. Bidyut Santra

**SEC-2: Graph Theory (BMH4SEC21)** 

Credits: Theory-2, Marks - 50, Theory - 40, Internal Assessment - 10

Unit 1-2: Dr Ujjal Kumar Mukherjee

**2<sup>nd</sup> Module (April to June)** 

Core Course 8: Riemann Integration and Series of Functions (BMH4CC08) Credits: Theory-5, Tutorial-1, Marks – 75, Theory – 60, Internal Assessment – 10, Attendance-05

Unit-4-5: Dr Ujjal Kumar Mukherjee

Internal Assessment: 4th Week of May

Theory and Practical Examination: as per notification of B.U. (Tentatively on June)

**Core Course 9: Multivariate Calculus (BMH4CC09)** 

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 2: Dr. Pramit Rej

Unit 4: Prof. Shampa Dutta

Internal Assessment: 4th Week of May

Theory and Practical Examination: as per notification of B.U. (Tentatively on June)

**Core Course 10: Ring Theory and Linear Algebra I (BMH4CC10)** 

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 3-4: Dr. Bidyut Santra

**Internal Assessment: 4th Week of May** 

Theory and Practical Examination: as per notification of B.U. (Tentatively on June)

**SEC-2: Graph Theory (BMH4SEC21)** 

Credits: Theory-2, Marks – 50, Theory – 40, Internal Assessment – 10

Unit 3: Dr. Ujjal Kumar Mukherjee Internal Assessment: 4th Week of May

Theory and Practical Examination: as per notification of B.U. (Tentatively on June)

Semester V

1<sup>st</sup> Module (July to September)

Core Course 11: Partial Differential Equations and Applications (BMH5CC11) Credits: Theory-5, Tutorial-1, Marks – 75, Theory – 60, Internal Assessment – 10, Attendance-05

Unit 1-2: Dr Ujjal Kumar Mukherjee

#### **Core Course 12: Mechanics I (BMH5CC12)**

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 1-2: Dr. Pramit Rej

**Discipline Specific Elective** 

**DSE 1: Linear Programming (BMH5DSE11)** 

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 1-2: Dr. Bidyut Santra

**DSE- 2: Probability and Statistics (BMH5DSE21)** 

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 1-2: Prof. Shampa Dutta

2<sup>nd</sup> Module (October to December)

Core Course 11: Partial Differential Equations and Applications (BMH5CC11) Credits: Theory-5, Tutorial-1, Marks – 75, Theory – 60, Internal Assessment – 10, Attendance-05

Unit 3: Dr. Ujjal Kumar Mukherjee

Internal Assessment: 1st Week of December

Theory and Practical Examination: as per notification of B.U. (Tentatively on December)

Core Course 12: Mechanics I (BMH5CC12)

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 2-3: Dr. Pramit Rej

Internal Assessment: 1st Week of December

Theory and Practical Examination: as per notification of B.U. (Tentatively on December)

**Discipline Specific Elective** 

**DSE 1: Linear Programming (BMH5DSE11)** 

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 3-4: Dr. Bidyut Santra

Internal Assessment: 1st Week of December

Theory and Practical Examination: as per notification of B.U. (Tentatively on December)

DSE- 2: Probability and Statistics (BMH5DSE21)

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 3-4: Prof. Shampa Dutta

Internal Assessment: 1st Week of December

Theory and Practical Examination: as per notification of B.U. (Tentatively in December)

Semester VI

1<sup>st</sup> Module (January to March)

**Core Course 13: Metric Spaces and Complex Analysis (BMH6CC13)** 

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 1-3: Dr. Ujjal Kumar Mukherjee

Core Course 14: Ring Theory and Linear Algebra II (BMH6CC14)

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 1: Dr. Bidyut Santra Unit 3: Prof. Shampa Dutta

DSE-4: Mechanics-II (BMH6DSE43)

Credits: Theory-5, Tutorial-1, Marks-75, Theory-60, Internal Assessment-10, Attendance-05

Unit 1-2: Dr. Pramit Rej

**Course: Project Work (BMH6PW01)** 

Credits: Practical-6, Marks - 75, Written Submission-40, Seminer Presentation -20, Viva-Voce-15

Name of the Teachers: Dr. Ujjal Kumar Mukherjee

Dr. Bidyut Santra Dr. Pramit Rej Prof. Shampa Dutta

2<sup>nd</sup> Module (April to June)

Core Course 13: Metric Spaces and Complex Analysis (BMH6CC13)

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 4-6: Dr. Ujjal Kumar Mukherjee Internal Assessment: 4th Week of May

Theory and Practical Examination: as per notification of B.U. (Tentatively on June)

Core Course 14: Ring Theory and Linear Algebra II (BMH6CC14)

Credits: Theory-5, Tutorial-1, Marks-75, Theory-60, Internal Assessment-10, Attendance-05

Unit 2: Dr. Bidyut Santra Unit 4: Prof. Shampa Dutta

Internal Assessment: 4th Week of May

Theory and Practical Examination: as per notification of B.U. (Tentatively on June)

DSE-4: Mechanics-II (BMH6DSE43)

Credits: Theory-5, Tutorial-1, Marks - 75, Theory - 60, Internal Assessment - 10, Attendance-05

Unit 2-3: Dr. Pramit Rej

Internal Assessment: 4th Week of May

Theory and Practical Examination: as per notification of B.U. (Tentatively on June)

**Course: Project Work (BMH6PW01)** 

Credits: Practical-6, Marks – 75, Written Submission-40, Seminer Presentation -20, Viva-Voce-15

Name of the Teachers: Dr. Ujjal Kumar Mukherjee

Dr. Bidyut Santra Dr. Pramit Rej Prof. Shampa Dutta

Theory and Practical Examination: as per notification of B.U. (Tentatively on June)

Counselling Programme – Final week of June- General outline on the admission and scope of higher education and related jobs.