**Shyama Prasad Mukherji College**

**Teaching Plan**

**Course and Year: B.Sc. (Hons.) Mathematics, II yr (Aug-Nov, 2022)**

**Semester: III**

**Taught individually or shared: Individually**

**Paper: SEC 1: LaTeX and HTML**

**Faculty: Dr. Pooja Arora**

**Total Marks: 100** (Theory: 38, Internal Assessment: 12, and Practical: 50)

**Number of Classes:** 2 Lectures, 4 Practicals (per week)

**Duration:** 14 Weeks (28 Hrs. Theory + 56 Hrs. Practical) **Examination:** 2 Hrs.

**Course Objectives:** The purpose of this course is to aware students about the latest

typesetting skills, which shall enable them to prepare high quality typesetting, beamer

presentation and webpages.

**Course Learning Outcomes:** After studying this course the student will be able to:

i) Create and typeset a LaTeX document.

ii) Typeset a mathematical document using LaTeX.

iii) Learn about pictures and graphics in LaTeX.

iv) Create beamer presentations.

v) Create web page using HTML.

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| **Name of the Paper**  **SEC-1: LaTeX and HTML**  **(With Practical)** | **Teaching Plan**  **Weeks 1 to 3:** Introduction to TeX and LaTeX, Typesetting a simple document, Adding basic information to a document, Environments, Footnotes, Sectioning and displayed material.  **Weeks 4 to 6:** Accents of symbols, Mathematical typesetting (elementary and advanced): Subscript/Superscript, Fractions, Roots, Ellipsis, Mathematical symbols, Arrays, Delimiters, Multiline formulas, Spacing and changing style in math mode.  **Weeks 7 and 8:** Graphics in LaTeX, Simple pictures using PSTricks, Plotting of functions.  **Weeks 9 and 10:** Beamer presentation.  **Weeks 11 and 12:** HTML basics, Creating simple web pages.  **Weeks 13 and 14:** Adding images and links, Design of web pages.    **Readings**: 1. Bindner, Donald & Erickson, Martin. (2011). *A Student’s Guide to the Study,Practice, and Tools of Modern Mathematics*. CRC Press, Taylor & Francis Group,  LLC.  2. Lamport, Leslie (1994). *LaTeX*: *A Document Preparation System*, User’s Guide and Reference Manual (2nd ed.). Pearson Education. Indian Reprint.  **Suggested Readings**: 1. Kottwitz, S. (2011). LaTeX Beginner’s Guide. Packt Publishing Limited.  2. Dongen, M. R. C. van (2012). *LaTeX and Friends*. Springer-Verlag.  3. Robbins, J. N. (2018). *Learning Web Design*: *A Beginner’s Guide to HTML* (5th ed.).O’Reilly Media Inc.  4. LaTeX wikibook (2016) , en.wikibooks.org.  5. Wendy Willard (2009). HTML: A Beginner’s Guide (4th ed.). McGraw-Hill.  **e- references: 1.** NPTEL Video Lectures.  2. Online video lectures. |
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| **No of classes required (approx.):**  **Weekly basis** | **Schedule Time (Tentative)**  **Weekly basis** |

**Sub topics to be covered and their order along with the respective time frames (if any)**

**Methodology of Teaching:**

1. **Online teaching Platform is used for teaching such as: Google meet, Microsoft Team or Zoom.**
2. **Using online available resources.**
3. **Guide, how to read and write research articles and elaboration of research papers.**
4. **Mentor students to present research paper.**
5. **Encourage students to participate in the academic activities of the college and department as well as in other colleges.**

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| **ASSESSMENT** |  |
| **Tentative date of assessments/ assignments:** | **Test-1 in mid September**  **Assignment-1 in end of September.**  **Test-2 and Assignment-2 in mid October**  **Test-3 in first week of November** |

**Criteria of Assessment: Written Test/ Assignment/ Presentations/Performance in**

**Inter-College Academic Activities.**