SYLLABUS

GOLAGHAT COMMERCE COLLEGE

(AUTONOMOUS)

FYUGP 2024 Onward

DEPARTMENT OF COMPUTER SCIENCE

(Recommended by B.O.S. in Computer Science, in its meetings held on 29/11/2024 and approved by UG Board in its meeting held on _____ and passed by the Academic Council meeting held on _____ and effective from the session, 2024-25)

INTRODUCTION

The Undergraduate (UG) program in Computer Science, as recommended by the University Grant Commission (UGC) and aligned with the New Education Policy (NEP) 2020, is designed to equip students with both theoretical knowledge and practical skills in various domains of computer science. This Multidisciplinary curriculum incorporates Major (Core) and Minor disciplines, along with a diverse range of courses such as Multi-Disciplinary Generic Elective Courses (MDGEC),Ability Enhancement Courses (AEC), Value Added Courses (VAC), Skill Enhancement Courses (SEC), Environmental Education (EE), Yoga, Community-Based Engagement (NCC/NSS/Adult Education/Student Mentoring/NGO/Government Institutions, etc.), Digital and Technological Solutions (DTS/DF), Research Ethics and Methodology, Research Projects, and Discipline-Specific Electives (DSE).

This comprehensive program aims to develop students' problem-solving abilities and enhance their skills in computing technologies, preparing them for various careers in industries like government, business, finance, commerce, research, and more. The goal is to expose students to a variety of fields within computer science to develop a broad knowledge base while simultaneously honing specific technical skills for career readiness in the rapidly evolving tech landscape. Emphasis is also placed on cultivating socially and ethically responsible citizens.

Program Specific Outcome (POS):

The objective of the UG Computer Science program is to provide students with a deep understanding of computer science concepts and their real-world applications. By gaining proficiency in computational thinking, programming, and use of modern tools, students will be prepared to adapt to technological advancements in personal, professional, and industrial settings.

The program focuses on developing critical skills for students in areas such as:

Programming Proficiency: Students will be equipped with fundamental and advanced programming skills to solve real-world problems efficiently.

Application of Technology: Learners will gain the ability to apply computer science techniques to day-to-day life tasks and in professional environments, enhancing productivity and effectiveness.

Industry-Readiness: The curriculum covers core disciplines such as software development, web technologies, databases, networking, and cyber security to ensure that graduates are well-prepared for a variety of roles in industries such as software development, IT< business, and research.

Ethical and Social Awareness: Alongside technical skills, the program emphasized the importance of being ethically responsible and socially conscious in the application of technology, promoting the development of graduates who can make a positive impact in

their communities and professions.

By the end of the program, the students will have gained the skills and knowledge needed to pursue careers in computer science or related fields and to continue further education and research in advanced areas of technology.

Recommended Courses by BoS of Computer Science, Golaghat Commerce College (Autonomous) for FYUGP (NEP).

Year	Semester	Nature of Course	Course Name	Course Code	Total Credit
1	I	Generic Elective	Office Automation Tools	CSCGEC1	03
	I	Skill Enhancement Course	HTML & CSS	MSESEC1	03
2	II	Generic Elective	Internet Technology	CSCGEC2	03
	II	Skill Enhancement Course	E-Commerce	MSESEC2	03

Details of the Course from Next page…..

Semester Wise Details of the Computer Related Papers under FYUGP (NEP) for Golaghat Commerce College (Autonomous), Golaghat (Assam)

For 1st Sem

Title of Course	:	**Office Automation Tools**
Course Code	:	**CSCGEC1**
Nature of the Course	:	**Generic Elective**
Total Credits	:	**03**
Distribution of Marks	:	**End-Sem: 45** (30Th+15P)**, In-Sem: 30** (20Th+10 P)

COURSE OBJECTIVES:

- To introduce to the basics of office suite software, such as Microsoft Office and Libre Office.
- To develop skills in word processing, including formatting documents, creating tables, and using drawing tools.
- To teach how to use basic formulas and functions, macros, and pivot tables in spreadsheets.
- To instruct on creating and delivering effective presentations using presentation tools.

Units	Contents	L	T	P	Total Hours
1 3Th+3Pr	**Introduction to Office Suite:** About Office MS Office and Installation	04	01	02	07
2 (Marks: 9Th+4Pr)	**Word Processing:** • Creating and Saving New Document • Open existing document • Formatting Document (Word, Paragraph formatting) • Printing Document.	07	01	05	13
3 (Marks: 9Th+4Pr)	**Spreadsheets:** • Concept of Worksheet and Workbook • Editing data in Worksheet • Formatting Worksheet/Column/Row/Cell • Formula and Function, Different important functions in MS-Excel • Preparing chart in Spreadsheet software. • Sorting and Filtering concept	07	01	05	13
4 (Marks: 9Th+4Pr)	**Presentation Tools / Application:** • Concept of Presentation and Slide • Creating and Saving Presentation • Performing Slide show. • Adding and formatting slide objects. • Slide layout selection • Adding notes, hand-outs • Adding animation and sound effect • Add slide transitions effect	05	01	06	12

Where, L: Lectures T: Tutorials P: Practicals

Modes of In-Semester Assessment: : (30 Marks)

- One Internal(Th) Examination : 10 Marks
- One Internal (Pr) Examination : 10 Marks
- Others (Seminar Presentation/Assignment) : 10 Marks

LEARNING OUTCOMES:

After the completion of this course, the learner will be able to:

- Install and use Microsoft Office and Libre Office software for various tasks.
- Format documents, create tables, and use drawing tools to enhance their word processing skills.
- Create spreadsheets, use basic formulas and functions, macros, and pivot tables to analyze data.
- Create effective presentations by adding and formatting text, pictures, graphic objects, including charts, objects, formatting slides, notes, hand-outs, slide shows, using transitions, animations.
- Use cloud-based office automation tools and understand the advantages of using such tools in their work.

SUGGESTED READINGS:

1. SushilaM , Introduction to Essential tools,JBA,2009.
2. Wang, W. (2018). Office 2019 For Dummies. United States: Wiley.
3. Kumar, B. (2017). Mastering MS Office. India: V&S Publishers.
4. Kumar A, (2019) Computer Basics with Office Automation, Dreamtech Press, ISBN: 9789389447194, 9789389447194.

Title of Course	:	**HTML & CSS**
Course Code	:	**MSESEC1**
Nature of the Course	:	**Skill Enhancement Course**
Total Credits	:	**03**
Distribution of Marks	:	**End-Sem: 45** (30Th+15P)**, In-Sem: 30** (20Th+10 P)

COURSE OBJECTIVES:

- To introduce students to HTML and its history.
- To teach students how to write HTML code and view HTML webpages.
- To instruct students on using HTML tags and attributes effectively.
- To teach students how to format webpages using basic HTML tags, formatting tags, and color coding.
- To familiarize students with HTML lists, images, hyperlinks, tables, forms, and headers.
- To familiarize students with CSS and its usefulness in Webpage design.

Units	Contents	L	T	P	Total Hours
1 (Marks: 4Th+2Pr)	**Introduction:** History of HTML, Software required for writing HTML code and viewing HTML webpage, HTML Tags and Attributes: HTML Tag vs. Element, HTML Attributes	04	01	02	07
2 (Marks: 8Th+4Pr)	**HTML Basic Formatting Tags:** HTML Basic Tags, HTML Formatting Tags, HTML Color Coding, HTML-Grouping Using Div Span, Div and Span Tags for Grouping.	06	01	04	11
3 (Marks: 8Th+4Pr)	**HTML-Lists:** Unordered Lists, Ordered Lists, Definition list. **HTML-Image:** Image and Image Mapping. **HTML-Hyperlink:** URL-Uniform Resource Locator, URL Encoding.	06	01	04	11
4 (Marks: 8Th+4Pr)	**HTML-Table:** < table >, <th>, < tr >, < td >, < caption>, <thead>, <tbody>, <tfoot>, <colgroup>, < col > **HTML-Form:** < input >, <textarea>, < button >, < select >, < label > **HTML-Headers:** Title, Base, Link, Styles, Script, Meta	06	01	04	11
5 (Marks: 2Th+1Pr)	**CSS:** Concept of CSS, Advantage of CSS, Types of CSS and their use in Webpage and Website design.	3	1	1	05

Where, L: Lectures T: Tutorials P: Practicals

Modes of In-Semester Assessment: : (30 Marks)

- One Internal(Th) Examination : 10 Marks
- One Internal (Pr) Examination : 10 Marks
- Others (Seminar Presentation/Assignment) : 10 Marks

LEARNING OUTCOMES:

After the completion of this course, the learner will be able to:

- Understand the history and importance of HTML.
- Write HTML code and view HTML webpages using appropriate software.
- Use HTML tags and attributes to create effective webpages.
- Format webpages using basic HTML tags, formatting tags, and color coding.
- Use HTML lists, images, hyperlinks, tables, forms, and headers to enhance their webpages.
- Understand the features and capabilities of CSS and its role in web development.

SUGGESTED READINGS:

1. Huddleston, R. (2018), Introduction to HTML and CSS -- O'Reilly.
2. Jon Duckett (2019), HTML and CSS, John Wiely.
3. Minnick,J. (2015).WebDesignwithHTML5andCSS3(8thEdition).Cengage Learning.
4. James P. (2011), Professional Mobile Web Development with WordPress, Joomla! and Drupal, Wiley Publications, ISBN: 978-0-470-88951-0

For 2nd Sem

Title of Course	:	**Internet Technology**
Course Code	:	**CSCGEC2**
Nature of the Course	:	**Generic Elective**
Total Credits	:	**03**
Distribution of Marks	:	**End-Sem: 45** (30Th+15P)**, In-Sem: 30** (20Th+10 P)

COURSE OBJECTIVES:

- Familiar with Internet and different concepts in Internets.
- Familiar with Internet based services and their use in proper ways.
- Familiar with Internet base different application and their potentiality
- Familiar with Cyber security and user privacy

Units (Marks)	**Contents**	**L**	**T**	**P**	**Total Hours**
1 8Th+2Pr	**Introduction to Internet:** Computer Network and types, Internet and its history, Application of Internet.	05	01	04	10
2 9Th+4Pr	**Terminologies in Computer network:** Communication Media and types, Modes of communication, Types of communication, Node, Network devices, protocol, Client-Server technology, Peer-to-Peer technology, Distributed computing and cloud computing.	06	01	06	13
3 6Th+4Pr	**Internet Based Services:** E-Mail, Mailing List, WWW, FTP, Telnet etc. **Terminology in Internet:** Webpage, Website, Homepage, Portal, ISP, Domain Name System.	04	01	05	10
4 7Th+5Pr	**Internet based Application:** E-Commerce, Banking, Social Media, Mobile application. **Concept of Cyber Security and Privacy.**	05	01	06	12

Where, L: Lectures T: Tutorials P: Practicals

Modes of In-Semester Assessment: : (30 Marks)

- One Internal(Th) Examination : 10 Marks
- One Internal (Pr) Examination : 10 Marks
- Others (Seminar Presentation/Assignment) : 10 Marks

LEARNING OUTCOMES:

After the completion of this course, the learner will be able to:

- Understand the proper functioning of Internet and different aspects.
- Use of different Internet based services and implementation in our life
- Necessity of Cyber Security and User Privacy in Online field.

Title of Course	:	**E-Commerce**
Course Code	:	**MSESEC2**
Nature of the Course	:	**Skill Enhancement Course**
Total Credits	:	**03**
Distribution of Marks	:	**End-Sem: 45** (30Th+15P)**, In-Sem: 30** (20Th+10 P)

Course Objectives:

To enable the student to become familiar with the mechanism for conducting business transactions through electronic means.

Units	Contents	L	T	P	Total Hours
1 (Marks: 3Th+3Pr)	**Introduction to E-Commerce:** E-Commerce and E-Marketing, E-Commerce Vs. Traditional Commerce, Features of E-Commerce, Advantages and Disadvantages of E-Commerce, e-commerce business models (introduction, key elements of a business model and categorizing major E-commerce business models), forces behind e-commerce.	06	01		07
2 (Marks: 9Th+4Pr)	**Social Media as E-Marketing Channel:** Concept of Social Media, Techniques uses for marketing in social media.	07	01	05	13
3 (Marks: 9Th+4Pr)	**Security and Encryption:** Need and concepts, the e-commerce security environment: (dimension, definition and scope of e-security), security threats in the E-commerce environment (security intrusions and breaches, attacking methods like hacking, sniffing, cyber-vandalism etc.), technology solutions (Encryption, security channels of communication, protecting networks and protecting servers and clients).	12	01	05	13
4 (Marks: 9Th+4Pr)	**E-payment System:** Models and methods of e–payments (Debit Card, Credit Card, Smart Cards, e-money), digital signatures (procedure, working and legal position), payment gateways, online banking (meaning, concepts, importance, electronic fund transfer, automated clearing house, automated ledger posting), UPI system and risks involved in e-payments.	05	01	06	12

Where, L: Lectures T: Tutorials P: Practicals

Modes of In-Semester Assessment: : (30 Marks)

- One Internal(Th) Examination : 10 Marks
- One Internal (Pr) Examination : 10 Marks
- Others (Seminar Presentation/Assignment) : 10 Marks

LEARNING OUTCOMES:

After the completion of this course, the learner will be able to:

- Understand the E-Commerce.
- Current trend of Marketing
- Developed Confident in E-Market business
- Mechanism of E-Payment systems and advantages.

Suggested Readings

1. Kenneth C. Laudon and Carlo Guercio Traver, *E-Commerce*, Pearson Education.
2. David Whiteley, *E-commerce: Strategy, Technology and Applications*, McGraw Hill Education
3. Bharat Bhaskar, *Electronic Commerce: Framework, Technology and Application, 4th Ed.*, McGraw Hill Education
4. PT Joseph, *E-Commerce: An Indian Perspective*, PHI Learning
5. KK Bajaj and Debjani Nag, *E-commerce*, McGraw Hill Education
6. TN Chhabra, *E-Commerce,* Dhanpat Rai & Co.
7. Sushila Madan, *E-Commerce,* Taxmann
8. TN Chhabra, Hem Chand Jain, and Aruna Jain, *An Introduction to HTML*, Dhanpat Rai & Co.

===X===