DEPARTMENT OF COMPUTER SCIENCE

LIST OF ADD-ON COURSES

1	**WEB DEVELOPMENT DESIGN**
2	**FOUNDATAION OF CYBER SECURITY**
3	**UNDERSTANDING BLOCKCHAIN:AN INTRODUCTORY COURSE**

ADD ON COURSE(2018-2019)
DEPARTMENT OF COMPUTER SCIENCE

1. IQAC Recommendation

IQAC recommendation

IQAC, Vivekananda College, Thakurpukur, met on 04 May 2018, to envisage, formulate, and design Add-On Courses, beyond the prescribed Curriculum.

A. It was decided that all the departments of Humanities, Science and Commerce would design and formulate 30 hour Add-On Courses for 2018-19 Academic calendar, as per UGC guidelines.

B. It was decided that the Departments would be free to choose the Courses based on their (subject) relevance, practicality, and feasibility.

C. It was decided that the Departments would have a Course Coordinator, who would design the Course and Course material in consultation with all teachers of the Department.

D. It was decided that each Department would design its format.

E. It was decided that the Departments would be encouraged to use and utilize their resources while formulating the Add-On Courses, rather than relying on Outsourcing.

F. IQAC would send its recommendations to the Principal/TIC for perusal and implementation.

04/5/18

Co-ordinator
I Q A C
Vivekananda College
Kolkata-700 093

2. Principal Notice

VIVEKANANDA COLLEGE
(GOVT. SPONSORED) (NAAC ACCREDITED GRADE 'A')

Ref. No. _____   Date 10/05/18

Notice

It is hereby notified that Vivekananda College, Thakurpukur, will offer Add-On Courses to All Honours students for the Academic year 2018-19.

Each Department will offer an Add-On Course as per UGC guidelines. Each Course will be structured & overseen by a Course Coordinator, selected from the respective Department. Departmental Heads are requested to take up the matter on an urgent basis.

10/05/16

Principal
Vivekananda College
Thakurpukur Kol-63

259, DIAMOND HARBOUR ROAD, THAKURPUKUR, KOLKATA- 700 063
Website : www.vckolkata63.org   email : vivekanandacollege63@gmail.com

ADD ON COURSE(2018-2019)
DEPARTMENT OF COMPUTER SCIENCE

3. Resolution of departmental meeting

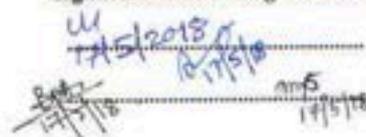**Departmental Meeting**

Date: 17/05/2018

Time: 2:30 pm

Sub: Computer Science department wants to start three Add-on courses for Honours students of the department. The Students are :UG Part-3, Part-2 Honours students and CBCS Semester I and II students.

Agenda:

1. To decide the topics for Add-On course

2. To decide Teachers for three Add-On course.

3. To decide about times and routines.

4. To take attendance for students properly.

5. To decide about methodology for evaluation and certification.

Signature of attending teachers

Resolution:

1. Topics for Add-on Courses are: Web Application Design, Foundations of Cyber Security, Understanding Blockchain : An Introductory Course

2.

Topic	Teacher(s)
Web Application Design	Amitav Biswas, Mahuya Paul
Foundations of Cyber Security	Bodhisattwa Das, Mahuya Paul
Understanding Blockchain : An Introductory Course	Jhuma Mazumder, Mahuya Paul

3.The duration will be from 02/02/2019 to 13/04/2019 on all Saturdays. Three (3) hours class will held.

4. Attendance will be taken on normal way as taken for regular classes.

5. Full Marks will be of 50 marks. Questions will be MCQ types. 25 questions will be given and 2 marks for each questions. Grade A:80-100%, Grade B:60-79%, Grade : 40-59%,Grade D:Fail

4. HOD information letter to the Principal

To
The Principal
Vivekananda College,
Thakurpukur, Kolkata 700063

Dear Sir,

I want your permission to start three Add-on courses for our Honours students of our department.

The UG Part-3, Part-2 Honours students and CBCS Sem I and II students will be participating in these ADD-On courses as per following way.

Part-3 (1+1+1 system)	Understanding Blockchain: An Introductory Course
Part-2 (1+1+1 system)	Foundations of Cyber Security
Semester I and II (CBCS system)	Web Application Design

Sincerely,

17/05/2018

Jhuma Mazumder
Head of Department
Department of Computer Science

Enclosure:

1. Resolution of the departmental meeting
2. Proposal and Course structure for Introducing two Add-on Programs

5. Course Structure Syllabus

A1:Web Application Design

SL	Topic	Subtopic	Hours
1	Introduction to Web Development	1.1 Overview of web technologies and the role of HTML and CSS	1
1		1.2 Understanding the structure of a web page	2
2	HTML Fundamentals	2.1 Introduction to HTML tags and elements	1
2		2.2 Creating headings, paragraphs, lists, and links	2
2		2.3 Working with images and multimedia content	2
2		2.4 Creating forms for user input	1
3	CSS Basics	3.1 Introduction to CSS and its role in web page styling	2
3		3.2 Selectors, properties, and values	1
3		3.3 Applying inline, internal, and external style sheets	1
3		3.4 Formatting text, backgrounds, and borders	1
4	CSS Layout and Box Model	4.1 Understanding the box model and its impact on layout	1
4		4.2 Working with margins, padding, and borders	1
5	Typography and Colors	5.1 Styling text with fonts, sizes, weights, and styles	1
5		5.2 Formatting text using CSS properties	1
5		5.3 Understanding color models and applying colors to elements	1
6	Images and Multimedia	6.1 Working with images: sizing, aligning, and optimizing	2
6		6.2 Incorporating videos and audio into web pages	2
6		6.3 Implementing responsive images and media	1
7	CSS Selectors and Specificity	7.1 Understanding CSS selectors and specificity	1
7		7.2 Applying styles to specific elements and classes	1
8	Responsive Web Design	8.1 Introduction to responsive design principles	1
8		8.2 Creating fluid layouts using CSS media queries	1
9	CSS Frameworks and Libraries	9.1 Overview of popular CSS frameworks (e.g., Bootstrap, Foundation)	1
9		9.2 Using pre-built CSS components and grids	1
10		**Assesment on the course**	**2**
		Total Hours	**32**

A2:Foundations of Cyber Security

SL	Topic	Subtopic	Hours
1	Introduction to Cyber Security	1.1 Definition and Importance of Cyber Security	1
1	Introduction to Cyber Security	1.2 Overview of Cyber Threats	2
2	Basic Concepts of Cyber Security	2.1 Confidentiality, Integrity, and Availability (CIA Triad)	2
2	Basic Concepts of Cyber Security	2.2 Non-repudiation and Accountability	1
2	Basic Concepts of Cyber Security	2.3 Authentication, Authorization, and Accounting (AAA)	2
2	Basic Concepts of Cyber Security	2.4 Overview and Review	1
3	Network Security Fundamentals	3.1 Network Basics and Terminology	1.5
3	Network Security Fundamentals	3.2 Firewalls and Intrusion Detection Systems (IDS)	1.5
3	Network Security Fundamentals	3.3 Virtual Private Networks (VPNs)	2
3	Network Security Fundamentals	3.4 Overview and Review	1
4	Operating System and Application Security	4.1 Basics of Operating System Security	2
4	Operating System and Application Security	4.2 Patch Management and Updates	1
4	Operating System and Application Security	4.3 Introduction to Application Security	2
4	Operating System and Application Security	4.4 Web Security Basics	1
5	Data Security, Privacy, and Human Factors	5.1 Data Protection Principles	2
5	Data Security, Privacy, and Human Factors	5.2 Regulations and Compliance	1
5	Data Security, Privacy, and Human Factors	5.3 Data Breaches and Incident Response	2
5	Data Security, Privacy, and Human Factors	5.4 Overview and Review	1
5	Data Security, Privacy, and Human Factors	5.5 Social Engineering	2
5	Data Security, Privacy, and Human Factors	5.6 Cyber Security Awareness and Training	1
		Assesment on the course	**2**
		Total Hours	**32**

ADD ON COURSE(2018-2019)
DEPARTMENT OF COMPUTER SCIENCE
A3:Understanding Blockchain: An Introductory Course

SL	Topic	Subtopic	Hours
1	Introduction to Blockchain	1.1 Definition and Importance of Blockchain	1
1	Introduction to Blockchain	1.2 History and Evolution of Blockchain	1
1	Introduction to Blockchain	1.3 Key Characteristics and Components	1
2	Blockchain Basics	2.1 Blockchain Structure and Operation	2
2	Blockchain Basics	2.2 Understanding Blocks, Transactions, and Chains	1
2	Blockchain Basics	2.3 Consensus Mechanisms (Proof of Work, Proof of Stake)	2
3	Cryptography and Blockchain	3.1 Introduction to Cryptography	1
3	Cryptography and Blockchain	3.2 Hash Functions and Digital Signatures	2
3	Cryptography and Blockchain	3.3 Public and Private Keys	1
4	Smart Contracts	4.1 What are Smart Contracts	1
4	Smart Contracts	4.2 How Smart Contracts Work	1
4	Smart Contracts	4.3 Real-world Applications of Smart Contracts	1
5	Blockchain Applications	5.1 Use Cases in Finance (Cryptocurrencies, DeFi)	2
5	Blockchain Applications	5.2 Use Cases in Supply Chain Management	1
5	Blockchain Applications	5.3 Use Cases in Healthcare and Other Industries	1
6	Blockchain Platforms	Introduction to Popular Blockchain Platforms (Bitcoin, Ethere...	2
6	Blockchain Platforms	6.2 Comparison of Different Platforms	1
6	Blockchain Platforms	6.3 Setting Up a Blockchain Environment	1
7	Security and Privacy in Blockchain	7.1 Security Features of Blockchain	1
7	Security and Privacy in Blockchain	7.2 Privacy Concerns and Solutions	1
7	Security and Privacy in Blockchain	7.3 Case Studies of Blockchain Security Incidents	1
8	Future of Blockchain	8.1 Emerging Trends in Blockchain Technology	1
8	Future of Blockchain	8.2 Challenges and Limitations	1
8	Future of Blockchain	8.3 The Future of Blockchain and Its Potential Impact	1
		Assesment on the course	2
		Total Hours	31

6. Addon course class routine

A1:Web Application Design

SL	Topic	Subtopic	Hours	Date	Teacher
1	Introduction to Web Development	1.1 Overview of web technologies and the role of HTML and CSS	1	2/2/2019	AB
1		1.2 Understanding the structure of a web page	2	2/2/2019	AB
2	HTML Fundamentals	2.1 Introduction to HTML tags and elements	1	9/2/2019	MP
2		2.2 Creating headings, paragraphs, lists, and links	2	9/2/2019	MP
2		2.3 Working with images and multimedia content	2	16/2/2019	MP
2		2.4 Creating forms for user input	1	16/2/2019	AB
3	CSS Basics	3.1 Introduction to CSS and its role in web page styling	2	23/2/2019	AB
3		3.2 Selectors, properties, and values	1	23/2/2019	AB
3		3.3 Applying inline, internal, and external style sheets	1	2/3/2019	AB
3		3.4 Formatting text, backgrounds, and borders	1	2/3/2019	AB
4	CSS Layout and Box Model	4.1 Understanding the box model and its impact on layout	1	2/3/2019	AB
4		4.2 Working with margins, padding, and borders	1	9/3/2019	AB
5	Typography and Colors	5.1 Styling text with fonts, sizes, weights, and styles	1	9/3/2019	AB
5		5.2 Formatting text using CSS properties	1	9/3/2019	AB
5		5.3 Understanding color models and applying colors to elements	1	16/3/2019	AB
6	Images and Multimedia	6.1 Working with images: sizing, aligning, and optimizing	2	16/3/2019	AB
6		6.2 Incorporating videos and audio into web pages	2	23/3/2019	AB
6		6.3 Implementing responsive images and media	1	23/3/2019	MP
7	CSS Selectors and Specificity	7.1 Understanding CSS selectors and specificity	1	30/3/2019	MP
7		7.2 Applying styles to specific elements and classes	1	30/3/2019	MP
8	Responsive Web Design	8.1 Introduction to responsive design principles	1	30/3/2019	MP
8		8.2 Creating fluid layouts using CSS media queries	1	6/4/2019	MP
9	CSS Frameworks and Libraries	9.1 Overview of popular CSS frameworks (e.g., Bootstrap, Foundation)	1	6/4/2019	MP
9		9.2 Using pre-built CSS components and grids	1	6/4/2019	MP
10		**Assesment on the course**	2	13/4/2029	
		Total Hours	32		

A2:Foundations of Cyber Security

SL	Topic	Subtopic	Hours	Date	Teacher
1	Introduction to Cyber Security	1.1 Definition and Importance of Cyber Security	1	2/2/2019	BD
1	Introduction to Cyber Security	1.2 Overview of Cyber Threats	2	2/2/2019	BD
2	Basic Concepts of Cyber Security	2.1 Confidentiality, Integrity, and Availability (CIA Triad)	2	9/2/2019	BD
2	Basic Concepts of Cyber Security	2.2 Non-repudiation and Accountability	1	9/2/2019	BD
2	Basic Concepts of Cyber Security	2.3 Authentication, Authorization, and Accounting (AAA)	2	16/2/2019	BD
2	Basic Concepts of Cyber Security	2.4 Overview and Review	1	16/2/2019	BD
3	Network Security Fundamentals	3.1 Network Basics and Terminology	1.5	23/2/2019	BD
3	Network Security Fundamentals	3.2 Firewalls and Intrusion Detection Systems (IDS)	1.5	23/2/2019	BD
3	Network Security Fundamentals	3.3 Virtual Private Networks (VPNs)	2	2/3/2019	MP
3	Network Security Fundamentals	3.4 Overview and Review	1	2/3/2019	MP
4	Operating System and Application Security	4.1 Basics of Operating System Security	2	9/3/2019	MP
4	Operating System and Application Security	4.2 Patch Management and Updates	1	9/3/2019	MP
4	Operating System and Application Security	4.3 Introduction to Application Security	2	16/3/2019	BD
4	Operating System and Application Security	4.4 Web Security Basics	1	16/3/2019	BD
5	Data Security, Privacy, and Human Factors	5.1 Data Protection Principles	2	23/3/2019	MP
5	Data Security, Privacy, and Human Factors	5.2 Regulations and Compliance	1	23/3/2019	MP
5	Data Security, Privacy, and Human Factors	5.3 Data Breaches and Incident Response	2	30/3/2019	BD
5	Data Security, Privacy, and Human Factors	5.4 Overview and Review	1	30/3/2019	BD
5	Data Security, Privacy, and Human Factors	5.5 Social Engineering	2	6/4/2019	BD
5	Data Security, Privacy, and Human Factors	5.6 Cyber Security Awareness and Training	1	6/4/2019	BD
		Assesment on the course	2	13/4/2019	
		Total Hours	32		

ADD ON COURSE(2018-2019)
DEPARTMENT OF COMPUTER SCIENCE

A3:Understanding Blockchain: An Introductory Course

SL	Topic	Subtopic	Hours	Date	Teacher
1	Introduction to Blockchain	1.1 Definition and Importance of Blockchain	1	2/2/2019	JM
1	Introduction to Blockchain	1.2 History and Evolution of Blockchain	1	2/2/2019	JM
1	Introduction to Blockchain	1.3 Key Characteristics and Components	1	2/2/2019	JM
2	Blockchain Basics	2.1 Blockchain Structure and Operation	2	9/2/2019	JM
2	Blockchain Basics	2.2 Understanding Blocks, Transactions, and Chains	1	9/2/2019	JM
2	Blockchain Basics	2.3 Consensus Mechanisms (Proof of Work, Proof of Stake)	2	16/2/2019	JM
3	Cryptography and Blockchain	3.1 Introduction to Cryptography	1	16/2/2019	JM
3	Cryptography and Blockchain	3.2 Hash Functions and Digital Signatures	2	23/2/2019	MP
3	Cryptography and Blockchain	3.3 Public and Private Keys	1	23/2/2019	MP
4	Smart Contracts	4.1 What are Smart Contracts	1	2/3/2019	JM
4	Smart Contracts	4.2 How Smart Contracts Work	1	2/3/2019	JM
4	Smart Contracts	4.3 Real-world Applications of Smart Contracts	1	2/3/2019	MP
5	Blockchain Applications	5.1 Use Cases in Finance (Cryptocurrencies, DeFi)	2	9/3/2019	JM
5	Blockchain Applications	5.2 Use Cases in Supply Chain Management	1	9/3/2019	JM
5	Blockchain Applications	5.3 Use Cases in Healthcare and Other Industries	1	16/3/2019	MP
6	Blockchain Platforms	Introduction to Popular Blockchain Platforms (Bitcoin, Etherei	2	16/3/2019	MP
6	Blockchain Platforms	6.2 Comparison of Different Platforms	1	23/3/2019	JM
6	Blockchain Platforms	6.3 Setting Up a Blockchain Environment	1	23/3/2019	JM
7	Security and Privacy in Blockchain	7.1 Security Features of Blockchain	1	30/3/2019	JM
7	Security and Privacy in Blockchain	7.2 Privacy Concerns and Solutions	1	30/3/2019	MP
7	Security and Privacy in Blockchain	7.3 Case Studies of Blockchain Security Incidents	1	30/3/2019	MP
8	Future of Blockchain	8.1 Emerging Trends in Blockchain Technology	1	6/4/2019	MP
8	Future of Blockchain	8.2 Challenges and Limitations	1	6/4/2019	MP
8	Future of Blockchain	8.3 The Future of Blockchain and Its Potential Impact	1	6/4/2019	JM
		Assesment on the course	2	13/4/2019	
		Total Hours	31		

ADD ON COURSE(2019-2020)
DEPARTMENT OF COMPUTER SCIENCE

1. IQAC Recommendation

IQAC recommendation

IQAC, Vivekananda College, Thakurpukur, met on 03 May 2019, to envisage, formulate, and design Add-On Courses, beyond the prescribed Curriculum.

A. It was decided that all the departments of Humanities, Science and Commerce would design and formulate 30 hour Add-On Courses for 2019-20 Academic calendar, as per UGC guidelines.

B. It was decided that the Departments would be free to choose the Courses based on their (subject) relevance, practicality, and feasibility.

C. It was decided that the Departments would have a Course Coordinator, who would design the Course and Course material in consultation with all teachers of the Department.

D. It was decided that each Department would design its format.

E. It was decided that the Departments would be encouraged to use and utilize their resources while formulating the Add-On Courses, rather than relying on Outsourcing.

F. IQAC would send its recommendations to the Principal/TIC for perusal and implementation.

Co-ordinator
I Q A C
Vivekananda College
Kolkata-700 063

2. Principal Notice

VIVEKANANDA COLLEGE
(GOVT. SPONSORED) (NAAC ACCREDITED GRADE 'A')

Ref. No. ....   Date. 08·5·19

Notice

It is hereby notified that Vivekananda College, Thakurpukur, will offer Add-On Courses to All Honours students for the Academic year 2019-20.

Each Department will offer an Add-On Course as per UGC guidelines. Each Course will be structured & overseen by a Course Coordinator, selected from the respective Department. Departmental Heads are requested to take up the matter on an urgent basis.

08·5·19

Principal
Vivekananda College
Thakurpukur Kol-63

269, DIAMOND HARBOUR ROAD, THAKURPUKUR, KOLKATA- 700 063
Website : www.vckolkata63.org   email : vivekanandacollege63@gmail.com

3. Resolution of departmental meeting

Departmental Meeting

Date: 15/05/2019

Time: 2:30 pm

Sub: Computer Science department wants to start three Add-on courses for Honours students of the department. The Students are :

Part-3 (1+1+1 system)	Understanding Blockchain: An Introductory Course
Semester III and IV (CBCS system)	Foundations of Cyber Security
Semester I and II (CBCS system)	Web Application Design

Agenda:

1. To decide the topics for Add-On course

2. To decide Teachers for three Add-On course.

3. To decide about times and routines.

4. To take attendance for students properly.

5. To decide about methodology for evaluation and certification.

Signature of attending teachers

Resolution:

1. Topics for Add-on Courses are: Web Application Design, Foundations of Cyber Security, Understanding Blockchain : An Introductory Course

2.

Topic	Teacher(s)
Web Application Design	Amitav Biswas, Mahuya Paul
Foundations of Cyber Security	Bodhisattwa Das, Mahuya Paul
Understanding Blockchain : An Introductory Course	Jhuma Mazumder, Mahuya Paul

3. The duration will be from 01/02/2020 to 11/04/2020 on all Saturdays. Three (3) hours class will held.

4. Attendance will be taken on normal way as taken for regular classes.

5. Full Marks will be of 50 marks. Questions will be MCQ types. 25 questions will be given and 2 marks for each questions. Grade A:80-100%, Grade B:60-79%, Grade : 40-59%,Grade D:Fail

4. HOD information letter to the Principal

To
The Principal
Vivekananda College,
Thakurpukur, Kolkata 700063

Dear Sir,

I want your permission to start three Add-on courses for our Honours students of our department.

The UG Part-3 Honours students and CBCS Sem I , II ,III and IV students will be participating in these ADD-On courses as per following way.

Part-3 (1+1+1 system)	Understanding Blockchain: An Introductory Course
Semester III and IV (CBCS system)	Foundations of Cyber Security
Semester I and II (CBCS system)	Web Application Design

Sincerely,

15/05/2019

Jhuma Mazumder
Head of Department
Department of Computer Science

Enclosure:

1. Resolution of the departmental meeting
2. Proposal and Course structure for Introducing two Add-on Programs

5. Course Structure Syllabus

A1:Web Application Design

SL	Topic	Subtopic	Hours
1	Introduction to Web Development	1.1 Overview of web technologies and the role of HTML and CSS	1
1		1.2 Understanding the structure of a web page	2
2	HTML Fundamentals	2.1 Introduction to HTML tags and elements	1
2		2.2 Creating headings, paragraphs, lists, and links	2
2		2.3 Working with images and multimedia content	2
2		2.4 Creating forms for user input	1
3	CSS Basics	3.1 Introduction to CSS and its role in web page styling	2
3		3.2 Selectors, properties, and values	1
3		3.3 Applying inline, internal, and external style sheets	1
3		3.4 Formatting text, backgrounds, and borders	1
4	CSS Layout and Box Model	4.1 Understanding the box model and its impact on layout	1
4		4.2 Working with margins, padding, and borders	1
5	Typography and Colors	5.1 Styling text with fonts, sizes, weights, and styles	1
5		5.2 Formatting text using CSS properties	1
5		5.3 Understanding color models and applying colors to elements	1
6	Images and Multimedia	6.1 Working with images: sizing, aligning, and optimizing	2
6		6.2 Incorporating videos and audio into web pages	2
6		6.3 Implementing responsive images and media	1
7	CSS Selectors and Specificity	7.1 Understanding CSS selectors and specificity	1
7		7.2 Applying styles to specific elements and classes	1
8	Responsive Web Design	8.1 Introduction to responsive design principles	1
8		8.2 Creating fluid layouts using CSS media queries	1
9	CSS Frameworks and Libraries	9.1 Overview of popular CSS frameworks (e.g., Bootstrap, Foundation)	1
9		9.2 Using pre-built CSS components and grids	1
10		**Assesment on the course**	**2**
		Total Hours	**32**

A2: Foundations of Cyber Security

SL	Topic	Subtopic	Hours
1	Introduction to Cyber Security	1.1 Definition and Importance of Cyber Security	1
1	Introduction to Cyber Security	1.2 Overview of Cyber Threats	2
2	Basic Concepts of Cyber Security	2.1 Confidentiality, Integrity, and Availability (CIA Triad)	2
2	Basic Concepts of Cyber Security	2.2 Non-repudiation and Accountability	1
2	Basic Concepts of Cyber Security	2.3 Authentication, Authorization, and Accounting (AAA)	2
2	Basic Concepts of Cyber Security	2.4 Overview and Review	1
3	Network Security Fundamentals	3.1 Network Basics and Terminology	1.5
3	Network Security Fundamentals	3.2 Firewalls and Intrusion Detection Systems (IDS)	1.5
3	Network Security Fundamentals	3.3 Virtual Private Networks (VPNs)	2
3	Network Security Fundamentals	3.4 Overview and Review	1
4	Operating System and Application Security	4.1 Basics of Operating System Security	2
4	Operating System and Application Security	4.2 Patch Management and Updates	1
4	Operating System and Application Security	4.3 Introduction to Application Security	2
4	Operating System and Application Security	4.4 Web Security Basics	1
5	Data Security, Privacy, and Human Factors	5.1 Data Protection Principles	2
5	Data Security, Privacy, and Human Factors	5.2 Regulations and Compliance	1
5	Data Security, Privacy, and Human Factors	5.3 Data Breaches and Incident Response	2
5	Data Security, Privacy, and Human Factors	5.4 Overview and Review	1
5	Data Security, Privacy, and Human Factors	5.5 Social Engineering	2
5	Data Security, Privacy, and Human Factors	5.6 Cyber Security Awareness and Training	1
		Assesment on the course	**2**
		Total Hours	**32**

ADD ON COURSE(2019-2020)
DEPARTMENT OF COMPUTER SCIENCE
A3: Understanding Blockchain: An Introductory Course

SL	Topic	Subtopic	Hours
1	Introduction to Blockchain	1.1 Definition and Importance of Blockchain	1
1	Introduction to Blockchain	1.2 History and Evolution of Blockchain	1
1	Introduction to Blockchain	1.3 Key Characteristics and Components	1
2	Blockchain Basics	2.1 Blockchain Structure and Operation	2
2	Blockchain Basics	2.2 Understanding Blocks, Transactions, and Chains	1
2	Blockchain Basics	2.3 Consensus Mechanisms (Proof of Work, Proof of Stake)	2
3	Cryptography and Blockchain	3.1 Introduction to Cryptography	1
3	Cryptography and Blockchain	3.2 Hash Functions and Digital Signatures	2
3	Cryptography and Blockchain	3.3 Public and Private Keys	1
4	Smart Contracts	4.1 What are Smart Contracts	1
4	Smart Contracts	4.2 How Smart Contracts Work	1
4	Smart Contracts	4.3 Real-world Applications of Smart Contracts	1
5	Blockchain Applications	5.1 Use Cases in Finance (Cryptocurrencies, DeFi)	2
5	Blockchain Applications	5.2 Use Cases in Supply Chain Management	1
5	Blockchain Applications	5.3 Use Cases in Healthcare and Other Industries	1
6	Blockchain Platforms	Introduction to Popular Blockchain Platforms (Bitcoin, Ethere	2
6	Blockchain Platforms	6.2 Comparison of Different Platforms	1
6	Blockchain Platforms	6.3 Setting Up a Blockchain Environment	1
7	Security and Privacy in Blockchain	7.1 Security Features of Blockchain	1
7	Security and Privacy in Blockchain	7.2 Privacy Concerns and Solutions	1
7	Security and Privacy in Blockchain	7.3 Case Studies of Blockchain Security Incidents	1
8	Future of Blockchain	8.1 Emerging Trends in Blockchain Technology	1
8	Future of Blockchain	8.2 Challenges and Limitations	1
8	Future of Blockchain	8.3 The Future of Blockchain and Its Potential Impact	1
		Assessment on the course	2
		Total Hours	**31**

ADD ON COURSE(2019-2020)
DEPARTMENT OF COMPUTER SCIENCE
6. Addon course class routine

A1:Web Application Design

SL	Topic	Subtopic	Hours	Date	Teacher
1	Introduction to Web Development	1.1 Overview of web technologies and the role of HTML and CSS	1	1/2/2020	AB
1		1.2 Understanding the structure of a web page	2	1/2/2020	AB
2	HTML Fundamentals	2.1 Introduction to HTML tags and elements	1	8/2/2020	AB
2		2.2 Creating headings, paragraphs, lists, and links	2	8/2/2020	MP
2		2.3 Working with images and multimedia content	2	15/2/2020	AB
2		2.4 Creating forms for user input	1	15/2/2020	AB
3	CSS Basics	3.1 Introduction to CSS and its role in web page styling	2	22/2/2020	MP
3		3.2 Selectors, properties, and values	1	22/2/2020	AB
3		3.3 Applying inline, internal, and external style sheets	1	29/2/2020	MP
3		3.4 Formatting text, backgrounds, and borders	1	29/2/2020	AB
4	CSS Layout and Box Model	4.1 Understanding the box model and its impact on layout	1	29/2/2020	AB
4		4.2 Working with margins, padding, and borders	1	7/3/2020	AB
5	Typography and Colors	5.1 Styling text with fonts, sizes, weights, and styles	1	7/3/2020	AB
5		5.2 Formatting text using CSS properties	1	7/3/2020	MP
5		5.3 Understanding color models and applying colors to elements	1	14/3/2020	MP
6	Images and Multimedia	6.1 Working with images: sizing, aligning, and optimizing	2	14/3/2020	AB
6		6.2 Incorporating videos and audio into web pages	2	21/3/2020	AB
6		6.3 Implementing responsive images and media	1	21/3/2020	MP
7	CSS Selectors and Specificity	7.1 Understanding CSS selectors and specificity	1	28/3/2020	MP
7		7.2 Applying styles to specific elements and classes	1	28/3/2020	AB
8	Responsive Web Design	8.1 Introduction to responsive design principles	1	28/3/2020	AB
8		8.2 Creating fluid layouts using CSS media queries	1	4/4/2020	AB
9	CSS Frameworks and Libraries	9.1 Overview of popular CSS frameworks (e.g., Bootstrap, Foundation)	1	4/4/2020	AB
9		9.2 Using pre-built CSS components and grids	1	4/4/2020	MP
10		Assessment on the course	2	11/4/2020	
		Total Hours	**32**		

A2: Foundations of Cyber Security

SL	Topic	Subtopic	Hours	Date	Teacher
1	Introduction to Cyber Security	1.1 Definition and Importance of Cyber Security	1	1/2/2020	BD
1	Introduction to Cyber Security	1.2 Overview of Cyber Threats	2	1/2/2020	BD
2	Basic Concepts of Cyber Security	2.1 Confidentiality, Integrity, and Availability (CIA Triad)	2	8/2/2020	BD
2	Basic Concepts of Cyber Security	2.2 Non-repudiation and Accountability	1	8/2/2020	MP
2	Basic Concepts of Cyber Security	2.3 Authentication, Authorization, and Accounting (AAA)	2	15/2/2020	BD
2	Basic Concepts of Cyber Security	2.4 Overview and Review	1	15/2/2020	MP
3	Network Security Fundamentals	3.1 Network Basics and Terminology	1.5	22/2/2020	AB
3	Network Security Fundamentals	3.2 Firewalls and Intrusion Detection Systems (IDS)	1.5	22/2/2020	BD
3	Network Security Fundamentals	3.3 Virtual Private Networks (VPNs)	2	29/2/2020	BD
3	Network Security Fundamentals	3.4 Overview and Review	1	29/2/2020	BD
4	Operating System and Application Security	4.1 Basics of Operating System Security	2	7/3/2020	AB
4	Operating System and Application Security	4.2 Patch Management and Updates	1	7/3/2020	BD
4	Operating System and Application Security	4.3 Introduction to Application Security	2	14/3/2020	BD
4	Operating System and Application Security	4.4 Web Security Basics	1	14/3/2020	MP
5	Data Security, Privacy, and Human Factors	5.1 Data Protection Principles	2	21/3/2020	BD
5	Data Security, Privacy, and Human Factors	5.2 Regulations and Compliance	1	21/3/2020	AB
5	Data Security, Privacy, and Human Factors	5.3 Data Breaches and Incident Response	2	28/3/2020	BD
5	Data Security, Privacy, and Human Factors	5.4 Overview and Review	1	28/3/2020	BD
5	Data Security, Privacy, and Human Factors	5.5 Social Engineering	2	4/4/2020	MP
5	Data Security, Privacy, and Human Factors	5.6 Cyber Security Awareness and Training	1	4/4/2020	BD
		Assessment on the course	2	11/4/2020	
		Total Hours	**32**		

ADD ON COURSE(2019-2020)
DEPARTMENT OF COMPUTER SCIENCE
A3: Understanding Blockchain: An Introductory Course

SL	Topic	Subtopic	Hours	Date	Teacher
1	Introduction to Blockchain	1.1 Definition and Importance of Blockchain	1	1/2/2020	JM
1	Introduction to Blockchain	1.2 History and Evolution of Blockchain	1	1/2/2020	JM
1	Introduction to Blockchain	1.3 Key Characteristics and Components	1	1/2/2020	BO
2	Blockchain Basics	2.1 Blockchain Structure and Operation	2	8/2/2020	JM
2	Blockchain Basics	2.2 Understanding Blocks, Transactions, and Chains	1	8/2/2020	BO
2	Blockchain Basics	2.3 Consensus Mechanisms (Proof of Work, Proof of Stake)	2	15/2/2020	JM
3	Cryptography and Blockchain	3.1 Introduction to Cryptography	1	15/2/2020	JM
3	Cryptography and Blockchain	3.2 Hash Functions and Digital Signatures	2	22/2/2020	JM
3	Cryptography and Blockchain	3.3 Public and Private Keys	1	22/2/2020	MP
4	Smart Contracts	4.1 What are Smart Contracts	1	29/2/2020	MP
4	Smart Contracts	4.2 How Smart Contracts Work	1	29/2/2020	JM
4	Smart Contracts	4.3 Real-world Applications of Smart Contracts	1	29/2/2020	JM
5	Blockchain Applications	5.1 Use Cases in Finance (Cryptocurrencies, DeFi)	2	7/3/2020	MP
5	Blockchain Applications	5.2 Use Cases in Supply Chain Management	1	7/3/2020	JM
5	Blockchain Applications	5.3 Use Cases in Healthcare and Other Industries	1	14/3/2020	JM
6	Blockchain Platforms	Introduction to Popular Blockchain Platforms (Bitcoin, Ethere	2	14/3/2020	JM
6	Blockchain Platforms	6.2 Comparison of Different Platforms	1	21/3/2020	MP
6	Blockchain Platforms	6.3 Setting Up a Blockchain Environment	1	21/3/2020	JM
7	Security and Privacy in Blockchain	7.1 Security Features of Blockchain	1	21/3/2020	BO
7	Security and Privacy in Blockchain	7.2 Privacy Concerns and Solutions	1	28/3/2020	JM
7	Security and Privacy in Blockchain	7.3 Case Studies of Blockchain Security Incidents	1	28/3/2020	JM
8	Future of Blockchain	8.1 Emerging Trends in Blockchain Technology	1	4/4/2020	BO
8	Future of Blockchain	8.2 Challenges and Limitations	1	4/4/2020	BO
8	Future of Blockchain	8.3 The Future of Blockchain and Its Potential Impact	1	4/4/2020	JM
		Assesment on the course	2	11/4/2020	
		Total Hours	**31**		

ADD ON COURSE(2021-2022)
DEPARTMENT OF COMPUTER SCIENCE

1. IQAC Recommendation

IQAC recommendation

IQAC, Vivekananda College, Thakurpukur, met on 14/Sept/2021, to envisage, formulate and design Add-On Courses, beyond prescribed Curriculum.

A. It was decided that all the departments of Humanities, Science and Commerce would design and formulate 30 hour Add-On Courses for the session 2021-22, Academic calendar, as per UGC guidelines.

B. It was decided that the Departments would be free to choose the Courses on the basis of their (subject) relevance, practicality and feasibility.

C. It was decided that the Departments would have a Course Coordinator, who would design the Course and Course materials, in consultation with all teachers of the Department.

D. It was decided that each Department would design its own format; and could follow a blended mode of instruction.

E. It was decided that the Departments would be encouraged to use and utilize their own resources while formulating the Add-On Courses, rather than relying on Outsourcing.

F. IQAC would send its recommendations to the Principal/TIC for perusal and implementation.
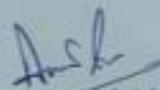
14/9/21

Co-ordinator
I Q A C
Vivekananda College
Kolkata-700 063

2. Principal Notice

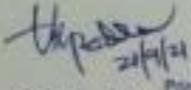**VIVEKANANDA COLLEGE**
(GOVT. SPONSORED) (NAAC ACCREDITED GRADE 'A')

Ref. No. _____   Date 21/9/21

Notice

It is hereby notified that Vivekananda College, Thakurpukur, will offer Add-On Courses to All Honours students for the Academic year 2021- 22.

　　　Each Department will offer an Add-On Course as per UGC guidelines. Each Course will be structured & overseen by a Course Coordinator, selected from the respective Department. Departmental Heads arerequested to take up the matter on an urgent basis.

Principal
Principal Vivekananda College
Thakurpukur, Kol-63

269, DIAMOND HARBOUR ROAD, THAKURPUKUR, KOLKATA- 700 063
Website : www.vckolkata63.org   email : vivekanandacollege63@gmail.com

Departmental Meeting

Date: 28/09/2021

Time: 2:30 pm

Sub: Computer Science department wants to start three Add-on courses for Honours students of the department. The Students are :

Semester V, VI (CBCS system)	Understanding Blockchain: An Introductory Course
Semester III and IV (CBCS system)	Foundations of Cyber Security
Semester I and II (CBCS system)	Web Application Design

Agenda:

1. To decide the topics for Add-On course

2. To decide Teachers for three Add-On course.

3. To decide about times and routines.

4. To take attendance for students properly.

5. To decide about methodology for evaluation and certification.

Signature of attending teachers

Resolution:

1. Topics for Add-on Courses are: Web Application Design, Foundations of Cyber Security, Understanding Blockchain : An Introductory Course

2.

Topic	Teacher(s)
Web Application Design	Amitav Biswas, Mahuya Paul
Foundations of Cyber Security	Bodhisattwa Das, Mahuya Paul
Understanding Blockchain : An Introductory Course	Jhuma Mazumder, Mahuya Paul

3. The duration will be from 12/02/2022 to 23/04/2022 on all Saturdays. Three (3) hours class will be held.

4. Attendance will be taken on normal way as taken for regular classes.

5. Full Marks will be of 50 marks. Questions will be MCQ types. 25 questions will be given and 2 marks for each questions. Grade A:80-100%, Grade B:60-79%, Grade : 40-59%,Grade D:Fail

4. HOD information letter to the Principal

To
The Principal
Vivekananda College,
Thakurpukur, Kolkata 700063

Dear Sir,

I am happy to share that our department is now providing three additional ADD-ON courses for our Honours students.

The UG CBCS Sem I , II ,III , IV , V, VI students will be participating in these ADD-On courses as per following way.

Semester V, VI (CBCS system)	Understanding Blockchain: An Introductory Course
Semester III and IV (CBCS system)	Foundations of Cyber Security
Semester I and II (CBCS system)	Web Application Design

Sincerely,

28/09/2021

Jhuma Mazumder
Head of Department
Department of Computer Science

Enclosure:

1. Resolution of the departmental meeting
2. Proposal and Course structure for Introducing two Add-on Programs

5. Course Structure Syllabus

A1:Web Application Design

SL	Topic	Subtopic	Hours
1	Introduction to Web Development	1.1 Overview of web technologies and the role of HTML and CSS	1
1		1.2 Understanding the structure of a web page	2
2	HTML Fundamentals	2.1 Introduction to HTML tags and elements	1
2		2.2 Creating headings, paragraphs, lists, and links	2
2		2.3 Working with images and multimedia content	2
2		2.4 Creating forms for user input	1
3	CSS Basics	3.1 Introduction to CSS and its role in web page styling	2
3		3.2 Selectors, properties, and values	1
3		3.3 Applying inline, internal, and external style sheets	1
3		3.4 Formatting text, backgrounds, and borders	1
4	CSS Layout and Box Model	4.1 Understanding the box model and its impact on layout	1
4		4.2 Working with margins, padding, and borders	1
5	Typography and Colors	5.1 Styling text with fonts, sizes, weights, and styles	1
5		5.2 Formatting text using CSS properties	1
5		5.3 Understanding color models and applying colors to elements	1
6	Images and Multimedia	6.1 Working with images: sizing, aligning, and optimizing	2
6		6.2 Incorporating videos and audio into web pages	2
6		6.3 Implementing responsive images and media	1
7	CSS Selectors and Specificity	7.1 Understanding CSS selectors and specificity	1
7		7.2 Applying styles to specific elements and classes	1
8	Responsive Web Design	8.1 Introduction to responsive design principles	1
8		8.2 Creating fluid layouts using CSS media queries	1
9	CSS Frameworks and Libraries	9.1 Overview of popular CSS frameworks (e.g., Bootstrap, Foundation)	1
9		9.2 Using pre-built CSS components and grids	1
10		**Assesment on the course**	**2**
		Total Hours	**32**

A2: Foundations of Cyber Security

SL	Topic	Subtopic	Hours
1	Introduction to Cyber Security	1.1 Definition and Importance of Cyber Security	1
1	Introduction to Cyber Security	1.2 Overview of Cyber Threats	2
2	Basic Concepts of Cyber Security	2.1 Confidentiality, Integrity, and Availability (CIA Triad)	2
2	Basic Concepts of Cyber Security	2.2 Non-repudiation and Accountability	1
2	Basic Concepts of Cyber Security	2.3 Authentication, Authorization, and Accounting (AAA)	2
2	Basic Concepts of Cyber Security	2.4 Overview and Review	1
3	Network Security Fundamentals	3.1 Network Basics and Terminology	1.5
3	Network Security Fundamentals	3.2 Firewalls and Intrusion Detection Systems (IDS)	1.5
3	Network Security Fundamentals	3.3 Virtual Private Networks (VPNs)	2
3	Network Security Fundamentals	3.4 Overview and Review	1
4	Operating System and Application Security	4.1 Basics of Operating System Security	2
4	Operating System and Application Security	4.2 Patch Management and Updates	1
4	Operating System and Application Security	4.3 Introduction to Application Security	2
4	Operating System and Application Security	4.4 Web Security Basics	1
5	Data Security, Privacy, and Human Factors	5.1 Data Protection Principles	2
5	Data Security, Privacy, and Human Factors	5.2 Regulations and Compliance	1
5	Data Security, Privacy, and Human Factors	5.3 Data Breaches and Incident Response	2
5	Data Security, Privacy, and Human Factors	5.4 Overview and Review	1
5	Data Security, Privacy, and Human Factors	5.5 Social Engineering	2
5	Data Security, Privacy, and Human Factors	5.6 Cyber Security Awareness and Training	1
		Assesment on the course	**2**
		Total Hours	**32**

ADD ON COURSE(2021-2022)
DEPARTMENT OF COMPUTER SCIENCE
A3:Understanding Blockchain: An Introductory Course

SL	Topic	Subtopic	Hours
1	Introduction to Blockchain	1.1 Definition and Importance of Blockchain	1
1	Introduction to Blockchain	1.2 History and Evolution of Blockchain	1
1	Introduction to Blockchain	1.3 Key Characteristics and Components	1
2	Blockchain Basics	2.1 Blockchain Structure and Operation	2
2	Blockchain Basics	2.2 Understanding Blocks, Transactions, and Chains	1
2	Blockchain Basics	2.3 Consensus Mechanisms (Proof of Work, Proof of Stake)	2
3	Cryptography and Blockchain	3.1 Introduction to Cryptography	1
3	Cryptography and Blockchain	3.2 Hash Functions and Digital Signatures	2
3	Cryptography and Blockchain	3.3 Public and Private Keys	1
4	Smart Contracts	4.1 What are Smart Contracts	1
4	Smart Contracts	4.2 How Smart Contracts Work	1
4	Smart Contracts	4.3 Real-world Applications of Smart Contracts	1
5	Blockchain Applications	5.1 Use Cases in Finance (Cryptocurrencies, DeFi)	2
5	Blockchain Applications	5.2 Use Cases in Supply Chain Management	1
5	Blockchain Applications	5.3 Use Cases in Healthcare and Other Industries	1
6	Blockchain Platforms	Introduction to Popular Blockchain Platforms (Bitcoin, Ethereu	2
6	Blockchain Platforms	6.2 Comparison of Different Platforms	1
6	Blockchain Platforms	6.3 Setting Up a Blockchain Environment	1
7	Security and Privacy in Blockchain	7.1 Security Features of Blockchain	1
7	Security and Privacy in Blockchain	7.2 Privacy Concerns and Solutions	1
7	Security and Privacy in Blockchain	7.3 Case Studies of Blockchain Security Incidents	1
8	Future of Blockchain	8.1 Emerging Trends in Blockchain Technology	1
8	Future of Blockchain	8.2 Challenges and Limitations	1
8	Future of Blockchain	8.3 The Future of Blockchain and Its Potential Impact	1
		Assesment on the course	2
		Total Hours	**31**

6. Addon course class routine

A1: Web Application Design

SL	Topic	Subtopic	Hours	Date	Teacher
1	Introduction to Web Development	1.1 Overview of web technologies and the role of HTML and CSS	1	12/2/2022	AB
1		1.2 Understanding the structure of a web page	2	12/2/2022	AB
2	HTML Fundamentals	2.1 Introduction to HTML tags and elements	1	19/2/2022	MP
2		2.2 Creating headings, paragraphs, lists, and links	2	19/2/2022	AB
2		2.3 Working with images and multimedia content	2	26/2/2022	MP
2		2.4 Creating forms for user input	1	26/2/2022	AB
3	CSS Basics	3.1 Introduction to CSS and its role in web page styling	2	5/3/2022	AB
3		3.2 Selectors, properties, and values	1	5/3/2022	MP
3		3.3 Applying inline, internal, and external style sheets	1	12/3/2022	AB
3		3.4 Formatting text, backgrounds, and borders	1	12/3/2022	AB
4	CSS Layout and Box Model	4.1 Understanding the box model and its impact on layout	1	12/3/2022	MP
4		4.2 Working with margins, padding, and borders	1	19/3/2022	AB
5	Typography and Colors	5.1 Styling text with fonts, sizes, weights, and styles	1	19/3/2022	MP
5		5.2 Formatting text using CSS properties	1	19/3/2022	AB
5		5.3 Understanding color models and applying colors to elements	1	26/3/2022	AB
6	Images and Multimedia	6.1 Working with images: sizing, aligning, and optimizing	2	26/3/2022	MP
6		6.2 Incorporating videos and audio into web pages	2	2/4/2022	AB
6		6.3 Implementing responsive images and media	1	2/4/2022	MP
7	CSS Selectors and Specificity	7.1 Understanding CSS selectors and specificity	1	9/4/2022	MP
7		7.2 Applying styles to specific elements and classes	1	9/4/2022	AB
8	Responsive Web Design	8.1 Introduction to responsive design principles	1	9/4/2022	AB
8		8.2 Creating fluid layouts using CSS media queries	1	16/4/2022	MP
9	CSS Frameworks and Libraries	9.1 Overview of popular CSS frameworks (e.g., Bootstrap, Foundation)	1	16/4/2022	MP
9		9.2 Using pre-built CSS components and grids	1	16/4/2022	MP
10		Assesment on the course	2	23/4/2022	
		Total Hours	**32**		

A2:Foundations of Cyber Security

SL	Topic	Subtopic	Hours	Date	Teacher
1	Introduction to Cyber Security	1.1 Definition and Importance of Cyber Security	1	12/2/2022	BD
1	Introduction to Cyber Security	1.2 Overview of Cyber Threats	2	12/2/2022	BD
2	Basic Concepts of Cyber Security	2.1 Confidentiality, Integrity, and Availability (CIA Triad)	2	19/2/2022	BD
2	Basic Concepts of Cyber Security	2.2 Non-repudiation and Accountability	1	19/2/2022	MP
2	Basic Concepts of Cyber Security	2.3 Authentication, Authorization, and Accounting (AAA)	2	26/2/2022	BD
2	Basic Concepts of Cyber Security	2.4 Overview and Review	1	26/2/2022	BD
3	Network Security Fundamentals	3.1 Network Basics and Terminology	1.5	5/3/2022	MP
3	Network Security Fundamentals	3.2 Firewalls and Intrusion Detection Systems (IDS)	1.5	5/3/2022	BD
3	Network Security Fundamentals	3.3 Virtual Private Networks (VPNs)	2	12/3/2022	MP
3	Network Security Fundamentals	3.4 Overview and Review	1	12/3/2022	BD
4	Operating System and Application Security	4.1 Basics of Operating System Security	2	19/3/2022	BD
4	Operating System and Application Security	4.2 Patch Management and Updates	1	19/3/2022	BD
4	Operating System and Application Security	4.3 Introduction to Application Security	2	26/3/2022	MP
4	Operating System and Application Security	4.4 Web Security Basics	1	26/3/2022	BD
5	Data Security, Privacy, and Human Factors	5.1 Data Protection Principles	2	2/4/2022	MP
5	Data Security, Privacy, and Human Factors	5.2 Regulations and Compliance	1	2/4/2022	BD
5	Data Security, Privacy, and Human Factors	5.3 Data Breaches and Incident Response	2	9/4/2022	BD
5	Data Security, Privacy, and Human Factors	5.4 Overview and Review	1	9/4/2022	BD
5	Data Security, Privacy, and Human Factors	5.5 Social Engineering	2	16/4/2022	MP
5	Data Security, Privacy, and Human Factors	5.6 Cyber Security Awareness and Training	1	16/4/2022	BD
		Assesment on the course	2	23/4/2022	
		Total Hours	**32**		

ADD ON COURSE(2021-2022)
DEPARTMENT OF COMPUTER SCIENCE
A3:Understanding Blockchain: An Introductory Course

| SL	Topic	Subtopic	Hours	Date	Teacher
1	Introduction to Blockchain	1.1 Definition and Importance of Blockchain	1	12/2/2022	JM
1	Introduction to Blockchain	1.2 History and Evolution of Blockchain	1	13/2/2022	JM
1	Introduction to Blockchain	1.3 Key Characteristics and Components	1	12/2/2022	MP
2	Blockchain Basics	2.1 Blockchain Structure and Operation	2	19/2/2022	JM
2	Blockchain Basics	2.2 Understanding Blocks, Transactions, and Chains	1	19/2/2022	JM
2	Blockchain Basics	2.3 Consensus Mechanisms (Proof of Work, Proof of Stake)	2	26/2/2022	BD
3	Cryptography and Blockchain	3.1 Introduction to Cryptography	1	26/2/2022	JM
3	Cryptography and Blockchain	3.2 Hash Functions and Digital Signatures	2	5/3/2022	BD
3	Cryptography and Blockchain	3.3 Public and Private Keys	1	5/3/2022	JM
4	Smart Contracts	4.1 What are Smart Contracts	1	12/3/2022	MP
4	Smart Contracts	4.2 How Smart Contracts Work	1	12/3/2022	BD
4	Smart Contracts	4.3 Real-world Applications of Smart Contracts	1	12/3/2022	BD
5	Blockchain Applications	5.1 Use Cases in Finance (Cryptocurrencies, DeFi)	2	19/3/2022	JM
5	Blockchain Applications	5.2 Use Cases in Supply Chain Management	1	19/3/2022	MP
5	Blockchain Applications	5.3 Use Cases in Healthcare and Other Industries	1	26/3/2022	JM
6	Blockchain Platforms	Introduction to Popular Blockchain Platforms (Bitcoin, Ethere	2	26/3/2022	JM
6	Blockchain Platforms	6.2 Comparison of Different Platforms	1	2/4/2022	BD
6	Blockchain Platforms	6.3 Setting Up a Blockchain Environment	1	2/4/2022	JM
7	Security and Privacy in Blockchain	7.1 Security Features of Blockchain	1	2/4/2022	JM
7	Security and Privacy in Blockchain	7.2 Privacy Concerns and Solutions	1	9/4/2022	JM
7	Security and Privacy in Blockchain	7.3 Case Studies of Blockchain Security Incidents	1	9/4/2022	JM
8	Future of Blockchain	8.1 Emerging Trends in Blockchain Technology	1	9/4/2022	MP
8	Future of Blockchain	8.2 Challenges and Limitations	1	16/4/2022	JM
8	Future of Blockchain	8.3 The Future of Blockchain and Its Potential Impact	1	16/4/2022	JM
		Assesment on the course	2	23/4/2022	
		Total Hours	**31**		

ADD ON COURSE(2022-2023)
DEPARTMENT OF COMPUTER SCIENCE

1. IQAC Recommendation

IQAC recommendation

IQAC, Vivekananda College, Thakurpukur, met on 18/June/2022, to envisage, formulate and design Add-On Courses, beyond prescribed Curriculum. The IQAC has also decided to organise a program on staff training:

A. It was decided that all the departments of Humanities, Science and Commerce would design and formulate 30 hour Add-On Courses for 2022-23, Academic calendar, as per UGC guidelines.

B. It was decided that the Departments would be free to choose the Courses on the basis of their (subject) relevance, practicality and feasibility.

C. It was decided that the Departments would have a Course Coordinator, who would design the Course and Course materials, in consultation with all teachers of the Department.

D. It was decided that each Department would design their own format; and could follow a blended mode of instruction.

E. It was decided that the Departments would be encouraged to use and utilize their own resources while formulating the Add-On Courses, rather than relying on Outsourcing.

F. IQAC would send its recommendations to the Principal/TIC for perusal and implementation.

G. The IQAC would also organise a Staff Training programme - 'Effective Working Style 'Conducted by IPE Of Professional Excellence On 25th June 2022 .
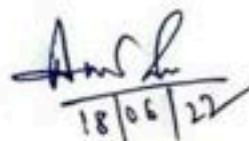
18/06/22

Co-ordinator
I Q A C
Vivekananda College
Kolkata-700 063

2. Principal Notice

☎ (033) 2497 6824
(033) 2497 6834

VIVEKANANDA COLLEGE

(GOVT. SPONSORED) (NAAC ACCREDITED GRADE 'A')

Ref. No............................

Date............................

Notice

It is hereby notified that Vivekananda College, Thakurpukur, will offer Add-On Courses to All Honours students for the Academic year 2022-23.

Each Department will offer an Add-On Course as per UGC guidelines. Each Course will be structured & overseen by a Course Coordinator, selected from the respective Department. Departmental Heads are requested to take up the matter on an urgent basis.

Principal

Vivekananda College
Thakurpukur, Kol-63

3. Resolution of departmental meeting

Departmental Meeting

Date: 24/07/2022

Time: 2:30 pm

Sub: Computer Science department wants to start three Add-on courses for Honours students of the department. The Students are :

Semester V, VI (CBCS system)	Understanding Blockchain: An Introductory Course
Semester III and IV (CBCS system)	Foundations of Cyber Security
Semester I and II (CBCS system)	Web Application Design

Agenda:

1. To decide the topics for Add-On course

2. To decide Teachers for three Add-On course.

3. To decide about times and routines.

4. To take attendance for students properly.

5. To decide about methodology for evaluation and certification.

Signature of attending teachers

Resolution:

1. Topics for Add-on Courses are: Web Application Design, Foundations of Cyber Security, Understanding Blockchain : An Introductory Course

2.

Topic	Teacher(s)
Web Application Design	Amitav Biswas, Mahuya Paul
Foundations of Cyber Security	Bodhisattwa Das, Mahuya Paul
Understanding Blockchain : An Introductory Course	Jhuma Mazumder, Mahuya Paul

3. The duration will be from 04/02/2023 to 15/04/2023 on all Saturdays. Three (3) hours class will be held.

4. Attendance will be taken on normal way as taken for regular classes.

5. Full Marks will be of 50 marks. Questions will be MCQ types. 25 questions will be given and 2

marks for each questions. Grade A:80-100%, Grade B:60-79%, Grade : 40-59%,Grade D:Fail

4. HOD information letter to the Principal

To
The Principal
Vivekananda College,
Thakurpukur, Kolkata 700063

Dear Sir,

I am delighted to announce that our department is introducing three Add-On courses for our Honours students.

The UG CBCS Sem I , II ,III , IV , V, VI students will be participating in these ADD-On courses as per following way.

Semester V, VI (CBCS system)	Understanding Blockchain: An Introductory Course
Semester III and IV (CBCS system)	Foundations of Cyber Security
Semester I and II (CBCS system)	Web Application Design

Sincerely,

24/07/2022

Jhuma Mazumder
Head of Department
Department of Computer Science

Enclosure:

1. Resolution of the departmental meeting
2. Proposal and Course structure for Introducing two Add-on Programs

5. Course Structure Syllabus

A1:Web Application Design

SL	Topic	Subtopic	Hours
1	Introduction to Web Development	1.1 Overview of web technologies and the role of HTML and CSS	1
1		1.2 Understanding the structure of a web page	2
2	HTML Fundamentals	2.1 Introduction to HTML tags and elements	1
2		2.2 Creating headings, paragraphs, lists, and links	2
2		2.3 Working with images and multimedia content	2
2		2.4 Creating forms for user input	1
3	CSS Basics	3.1 Introduction to CSS and its role in web page styling	2
3		3.2 Selectors, properties, and values	1
3		3.3 Applying inline, internal, and external style sheets	1
3		3.4 Formatting text, backgrounds, and borders	1
4	CSS Layout and Box Model	4.1 Understanding the box model and its impact on layout	1
4		4.2 Working with margins, padding, and borders	1
5	Typography and Colors	5.1 Styling text with fonts, sizes, weights, and styles	1
5		5.2 Formatting text using CSS properties	1
5		5.3 Understanding color models and applying colors to elements	1
6	Images and Multimedia	6.1 Working with images: sizing, aligning, and optimizing	2
6		6.2 Incorporating videos and audio into web pages	2
6		6.3 Implementing responsive images and media	1
7	CSS Selectors and Specificity	7.1 Understanding CSS selectors and specificity	1
7		7.2 Applying styles to specific elements and classes	1
8	Responsive Web Design	8.1 Introduction to responsive design principles	1
8		8.2 Creating fluid layouts using CSS media queries	1
9	CSS Frameworks and Libraries	9.1 Overview of popular CSS frameworks (e.g., Bootstrap, Foundation)	1
9		9.2 Using pre-built CSS components and grids	1
10		**Assesment on the course**	**2**
		Total Hours	**32**

A2: Foundations of Cyber Security

SL	Topic	Subtopic	Hours
1	Introduction to Cyber Security	1.1 Definition and Importance of Cyber Security	1
1	Introduction to Cyber Security	1.2 Overview of Cyber Threats	2
2	Basic Concepts of Cyber Security	2.1 Confidentiality, Integrity, and Availability (CIA Triad)	2
2	Basic Concepts of Cyber Security	2.2 Non-repudiation and Accountability	1
2	Basic Concepts of Cyber Security	2.3 Authentication, Authorization, and Accounting (AAA)	2
2	Basic Concepts of Cyber Security	2.4 Overview and Review	1
3	Network Security Fundamentals	3.1 Network Basics and Terminology	1.5
3	Network Security Fundamentals	3.2 Firewalls and Intrusion Detection Systems (IDS)	1.5
3	Network Security Fundamentals	3.3 Virtual Private Networks (VPNs)	2
3	Network Security Fundamentals	3.4 Overview and Review	1
4	Operating System and Application Security	4.1 Basics of Operating System Security	2
4	Operating System and Application Security	4.2 Patch Management and Updates	1
4	Operating System and Application Security	4.3 Introduction to Application Security	2
4	Operating System and Application Security	4.4 Web Security Basics	1
5	Data Security, Privacy, and Human Factors	5.1 Data Protection Principles	2
5	Data Security, Privacy, and Human Factors	5.2 Regulations and Compliance	1
5	Data Security, Privacy, and Human Factors	5.3 Data Breaches and Incident Response	2
5	Data Security, Privacy, and Human Factors	5.4 Overview and Review	1
5	Data Security, Privacy, and Human Factors	5.5 Social Engineering	2
5	Data Security, Privacy, and Human Factors	5.6 Cyber Security Awareness and Training	1
		Assesment on the course	**2**
		Total Hours	**32**

ADD ON COURSE(2022-2023)
DEPARTMENT OF COMPUTER SCIENCE
A3: Understanding Blockchain: An Introductory Course

SL	Topic	Subtopic	Hours
1	Introduction to Blockchain	1.1 Definition and Importance of Blockchain	1
1	Introduction to Blockchain	1.2 History and Evolution of Blockchain	1
1	Introduction to Blockchain	1.3 Key Characteristics and Components	1
2	Blockchain Basics	2.1 Blockchain Structure and Operation	2
2	Blockchain Basics	2.2 Understanding Blocks, Transactions, and Chains	1
2	Blockchain Basics	2.3 Consensus Mechanisms (Proof of Work, Proof of Stake)	2
3	Cryptography and Blockchain	3.1 Introduction to Cryptography	1
3	Cryptography and Blockchain	3.2 Hash Functions and Digital Signatures	2
3	Cryptography and Blockchain	3.3 Public and Private Keys	1
4	Smart Contracts	4.1 What are Smart Contracts	1
4	Smart Contracts	4.2 How Smart Contracts Work	1
4	Smart Contracts	4.3 Real-world Applications of Smart Contracts	1
5	Blockchain Applications	5.1 Use Cases in Finance (Cryptocurrencies, DeFi)	2
5	Blockchain Applications	5.2 Use Cases in Supply Chain Management	1
5	Blockchain Applications	5.3 Use Cases in Healthcare and Other Industries	1
6	Blockchain Platforms	Introduction to Popular Blockchain Platforms (Bitcoin, Ethereu	2
6	Blockchain Platforms	6.2 Comparison of Different Platforms	1
6	Blockchain Platforms	6.3 Setting Up a Blockchain Environment	1
7	Security and Privacy in Blockchain	7.1 Security Features of Blockchain	1
7	Security and Privacy in Blockchain	7.2 Privacy Concerns and Solutions	1
7	Security and Privacy in Blockchain	7.3 Case Studies of Blockchain Security Incidents	1
8	Future of Blockchain	8.1 Emerging Trends in Blockchain Technology	1
8	Future of Blockchain	8.2 Challenges and Limitations	1
8	Future of Blockchain	8.3 The Future of Blockchain and Its Potential Impact	1
		Assesment on the course	2
		Total Hours	31

6. Addon course class routine

A1: Web Application Design

SL	Topic	Subtopic	Hours	Date	Teacher
1	Introduction to Web Development	1.1 Overview of web technologies and the role of HTML and CSS	1	4/2/2023	MP
1		1.2 Understanding the structure of a web page	2	4/2/2023	AB
2	HTML Fundamentals	2.1 Introduction to HTML tags and elements	1	11/2/2023	AB
2		2.2 Creating headings, paragraphs, lists, and links	2	11/2/2023	AB
2		2.3 Working with images and multimedia content	2	18/2/2023	MP
2		2.4 Creating forms for user input	1	18/2/2023	AB
3	CSS Basics	3.1 Introduction to CSS and its role in web page styling	2	25/2/2023	MP
3		3.2 Selectors, properties, and values	1	25/2/2023	AB
3		3.3 Applying inline, internal, and external style sheets	1	4/3/2023	AB
3		3.4 Formatting text, backgrounds, and borders	1	4/3/2023	MP
4	CSS Layout and Box Model	4.1 Understanding the box model and its impact on layout	1	4/3/2023	AB
4		4.2 Working with margins, padding, and borders	1	11/3/2023	AB
5	Typography and Colors	5.1 Styling text with fonts, sizes, weights, and styles	1	11/3/2023	MP
5		5.2 Formatting text using CSS properties	1	11/3/2023	AB
5		5.3 Understanding color models and applying colors to elements	2	18/3/2023	AB
6	Images and Multimedia	6.1 Working with images: sizing, aligning, and optimizing	1	18/3/2023	MP
6		6.2 Incorporating videos and audio into web pages	2	25/3/2023	AB
6		6.3 Implementing responsive images and media	1	25/3/2023	AB
7	CSS Selectors and Specificity	7.1 Understanding CSS selectors and specificity	1	1/4/2023	AB
7		7.2 Applying styles to specific elements and classes	1	1/4/2023	MP
8	Responsive Web Design	8.1 Introduction to responsive design principles	1	1/4/2023	MP
8		8.2 Creating fluid layouts using CSS media queries	1	8/4/2023	AB
9	CSS Frameworks and Libraries	9.1 Overview of popular CSS frameworks (e.g., Bootstrap, Foundation)	1	8/4/2023	MP
9		9.2 Using pre-built CSS components and grids	1	8/4/2023	AB
10		**Assesment on the course**	2	15/4/2023	
		Total Hours	**32**		

A2: Foundations of Cyber Security

SL	Topic	Subtopic	Hours	Date	Teacher
1	Introduction to Cyber Security	1.1 Definition and Importance of Cyber Security	1	4/2/2023	BD
1	Introduction to Cyber Security	1.2 Overview of Cyber Threats	2	4/2/2023	BD
2	Basic Concepts of Cyber Security	2.1 Confidentiality, Integrity, and Availability (CIA Triad)	2	11/2/2023	BD
2	Basic Concepts of Cyber Security	2.2 Non-repudiation and Accountability	1	11/2/2023	MP
2	Basic Concepts of Cyber Security	2.3 Authentication, Authorization, and Accounting (AAA)	2	18/2/2023	BD
2	Basic Concepts of Cyber Security	2.4 Overview and Review	1	18/2/2023	MP
3	Network Security Fundamentals	3.1 Network Basics and Terminology	1.5	25/2/2023	BD
3	Network Security Fundamentals	3.2 Firewalls and Intrusion Detection Systems (IDS)	1.5	25/2/2023	BD
3	Network Security Fundamentals	3.3 Virtual Private Networks (VPNs)	2	4/3/2023	MP
3	Network Security Fundamentals	3.4 Overview and Review	1	4/3/2023	MP
4	Operating System and Application Security	4.1 Basics of Operating System Security	2	11/3/2023	BD
4	Operating System and Application Security	4.2 Patch Management and Updates	1	11/3/2023	BD
4	Operating System and Application Security	4.3 Introduction to Application Security	2	18/3/2023	MP
4	Operating System and Application Security	4.4 Web Security Basics	1	18/3/2023	BD
5	Data Security, Privacy, and Human Factors	5.1 Data Protection Principles	2	25/3/2023	BD
5	Data Security, Privacy, and Human Factors	5.2 Regulations and Compliance	1	25/3/2023	BD
5	Data Security, Privacy, and Human Factors	5.3 Data Breaches and Incident Response	2	1/4/2023	MP
5	Data Security, Privacy, and Human Factors	5.4 Overview and Review	1	1/4/2023	MP
5	Data Security, Privacy, and Human Factors	5.5 Social Engineering	2	8/4/2023	BD
5	Data Security, Privacy, and Human Factors	5.6 Cyber Security Awareness and Training	1	8/4/2023	BD
		Assesment on the course	2	15/4/2023	
		Total Hours	**32**		

ADD ON COURSE(2022-2023)
DEPARTMENT OF COMPUTER SCIENCE
A3:Understanding Blockchain: An Introductory Course

SL	Topic	Subtopic	Hours	Date	Teacher
1	Introduction to Blockchain	1.1 Definition and Importance of Blockchain	1	4/2/2023	JM
1	Introduction to Blockchain	1.2 History and Evolution of Blockchain	1	4/2/2023	JM
1	Introduction to Blockchain	1.3 Key Characteristics and Components	1	4/2/2023	MP
2	Blockchain Basics	2.1 Blockchain Structure and Operation	2	11/2/2023	JM
2	Blockchain Basics	2.2 Understanding Blocks, Transactions, and Chains	1	11/2/2023	BD
2	Blockchain Basics	2.3 Consensus Mechanisms (Proof of Work, Proof of Stake)	2	18/2/2023	JM
3	Cryptography and Blockchain	3.1 Introduction to Cryptography	1	18/2/2023	JM
3	Cryptography and Blockchain	3.2 Hash Functions and Digital Signatures	2	25/2/2023	JM
3	Cryptography and Blockchain	3.3 Public and Private Keys	1	25/2/2023	JM
4	Smart Contracts	4.1 What are Smart Contracts	1	4/3/2023	BD
4	Smart Contracts	4.2 How Smart Contracts Work	1	4/3/2023	BD
4	Smart Contracts	4.3 Real-world Applications of Smart Contracts	1	4/3/2023	JM
5	Blockchain Applications	5.1 Use Cases in Finance (Cryptocurrencies, DeFi)	2	11/3/2023	JM
5	Blockchain Applications	5.2 Use Cases in Supply Chain Management	1	11/3/2023	MP
5	Blockchain Applications	5.3 Use Cases in Healthcare and Other Industries	1	18/3/2023	JM
6	Blockchain Platforms	Introduction to Popular Blockchain Platforms (Bitcoin, Ethereum)	2	18/3/2023	JM
6	Blockchain Platforms	6.2 Comparison of Different Platforms	1	25/3/2023	JM
6	Blockchain Platforms	6.3 Setting Up a Blockchain Environment	1	25/3/2023	MP
7	Security and Privacy in Blockchain	7.1 Security Features of Blockchain	1	25/3/2023	MP
7	Security and Privacy in Blockchain	7.2 Privacy Concerns and Solutions	1	1/4/2023	JM
7	Security and Privacy in Blockchain	7.3 Case Studies of Blockchain Security Incidents	1	1/4/2023	JM
8	Future of Blockchain	8.1 Emerging Trends in Blockchain Technology	1	1/4/2023	JM
8	Future of Blockchain	8.2 Challenges and Limitations	1	8/4/2023	MP
8	Future of Blockchain	8.3 The Future of Blockchain and Its Potential Impact	1	8/4/2023	MP
		Assesment on the course	2	15/4/2023	
		Total Hours	**31**		