

### CARMEL VIDYA BHAVAN TRUST'S CHRIST COLLEGE-PUNE (Affiliated to Savitribai Phule Pune University)

### **CRITERIA I Curricular Aspects**

1.2.1 Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc(Where the students of the institution have enrollrd and successfully completed during the last five years)

SULLABUS

#### BROCHURES, NOTICES, MODULES & OUTCOMES

Submitted to NationalAssessment and Accreditation Council



(Affiliated to Savitribai Phule Pune University) Accredited by NAAC with 'B+' Grade

### 1.2 ACADEMIC FLEXIBILITY

1.2.1 Outcomes/Brochure/Notice/ Modules (2019-20)



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#### CHRIST COLLEGE - PUNE

Affiliated to the Savitribai Phule Pune University

Accredited by NAAC with 'B+' Grade

Course Objectives & Course Outcomes

	Year 2019 - 20				
Sr.NO	Name of Certificate/ Value added Add on course offered	Course Objectives	Course Outcome		
1	Principles of Programming and Algorithms(PPA)	Analyze the asymptotic performance of algorithms.Write rigorous correctness proofs for algorithms.	Argue the correctness of algorithms using inductive proofs and invariants. Analyze worst-case running times of algorithms using asymptotic analysis.		
		Demonstrate a familiarity with major algorithms and data structures. Apply important algorithmic design paradigms and methods of analysis.	Explain the major graph algorithms and their analyses. Employ graphs to model engineering problems, when appropriate.		
		Synthesize efficient algorithms in common engineering design situations.	Explain the difference between a randomized algorithm and an algorithm with probabilistic inputs.		
2	Advance C	Programming basics and the fundamentals of C. Data types in C.	To learn C program Development . Control the sequence of the program and give logical outputs		
		Students will learn Mathematical and logical operations. Use of if statement and loops.	Implement strings in your C program. Store different data types in the same memory .		
		Implementing pointers. File management and dynamic memory allocation.	Understand the basics of file handling mechanisms . Explain the uses of pre-processors and various memory models.		
3	Tally Computer Based Accounting	To impart knowledge regarding concepts of Financial Accounting. Tally is anaccounting package which is used for learning to maintain accounts.	After successfully qualifying practical examination, students will be awarded certificate to work with well-known accounting software i.e. Tally ERP.9		
		To make students capable to create company, enter accounting voucher entries including advance voucher entries, reconcile bank statement, do accrual adjustments, and also print financial statements, etc.	Student by their own will create company, enter accounting voucher entries including advance voucher entries, reconcile bank statements, print financial statements, etc. in Tally		
		Tally certificate course is not just theoretical program, but it also includes continuous practice, to make students ready with required skill for employability in the job market.	Students will possess required skill and can also be employed as Tally data entry operator.		

4	Personality and soft skill Development	To encourage the all round development of students by focusing on soft skills.	Effectively communicate through verbal/oral communication and improve the listening skills.Write precise briefs or reports and technical documents.
		To make the engineering students aware of the importance, the role and the content of soft skills through instruction, knowledge acquisition, demonstration and practice.	Actively participate in group discussion / meetings / interviews and prepare & deliver presentations
		To develop and nurture the soft skills of the students through individual and groupactivities.	Function effectively in multi-disciplinary and heterogeneous teams through the knowledge of team work, Inter-personal relationships, conflict management and leadership quality.
5		To develop analytical abilities and communication skills among students.	Students will have skills and preparedness for aptitude tests.
	Employability Skill Enhancement Programme	To introduce the students to skills necessary for getting, keeping and being successful in a profession.	Be equipped with essential communication skills (writing, verbal and non-verbal)
		To expose the students to leadership and team-building skills.	Master the presentation skill and be ready for facing interviews.
	Introduction To Cyber Security	To prepare students with the technical knowledge and skills needed to protect and defend computer systems and networks.	Analyze and evaluate the cyber security needs of an organization. Analyze and evaluate the cyber security needs of an organization.
6		To develop graduates that can plan, implement, and monitor cyber security mechanisms to help ensure the protection of information technology assets.	Measure the performance and troubleshoot cyber security systems.Implement cyber security solutions.
		To develop graduates that can identify, analyze, and remediate computer security breaches.	Design and develop a security architecture for an organization.Design operational and strategic cyber security strategies and policies.

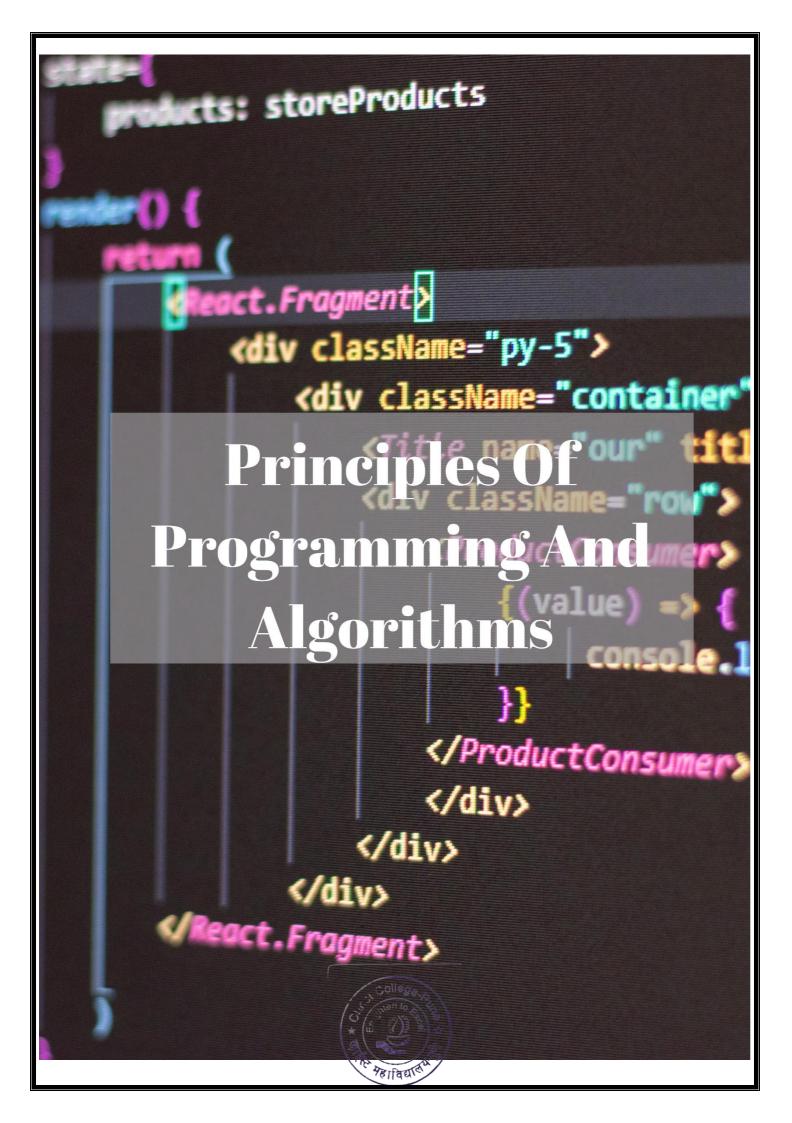
7	Introduction to Human Rights and Duties	The very first objective of human rights is to protect human beings from any kind of discrimination and injustice all over the world.	The course deals with the basic definition, meaning, classification and theories of rights, in general, and human rights, in particular. It also looks into the development, evolution and scope of human rights.
		The objective of Human Rights is to develop individual self- respect and value human dignity.	This course will enhance the students' deeper understanding on Human Rights, empower them to tackle prejudice, improved relationships with their own kinds
		Human Rights is to promote democracy, Social Justice, friendship and brotherhood to gain unity in diversity.	Respects for others, and reshape their way of thinking and actions on real-life issues.
8	Environmental Science	Investigate the complexities of the natural environment and our relationship with it.	Environmental Science student are able to acquire knowledge, competent professionals with a strong foundation of Environmental Science and application
		Explore the problems we face in understanding our natural environment and in living sustainability.Develop scientific, interpretive and creative thinking skills.	The learners will be able to become effective scientific communicators in multidisciplinary teams providing technical leadership to engage with the challenging environmental problems.
		Learn to apply quantitative analysis and field research techniques.Learn to apply quantitative analysis and field research techniques.	They can opt for higher studies in plant and animal sciences as the environmental science is multidisciplinary in nature.
	Artificial Intelligence	Study the concepts of Artificial Intelligence.Learn the methods of solving problems using Artificial Intelligence.	Familiar with Artificial Intelligence, its foundation and principles. Identify appropriate AI methods to solve a given problem.
9		Learn the knowledge representation techniques, reasoning techniques and planning	Examine the useful search techniques, knowledge representation techniques, Inference methods; learn their advantages, disadvantages and comparison.
		Introduce the concepts of Expert Systems and machine learning.	Understand important concepts like Expert Systems, AI applications.Learn Prolog Programming to program intelligent systems.

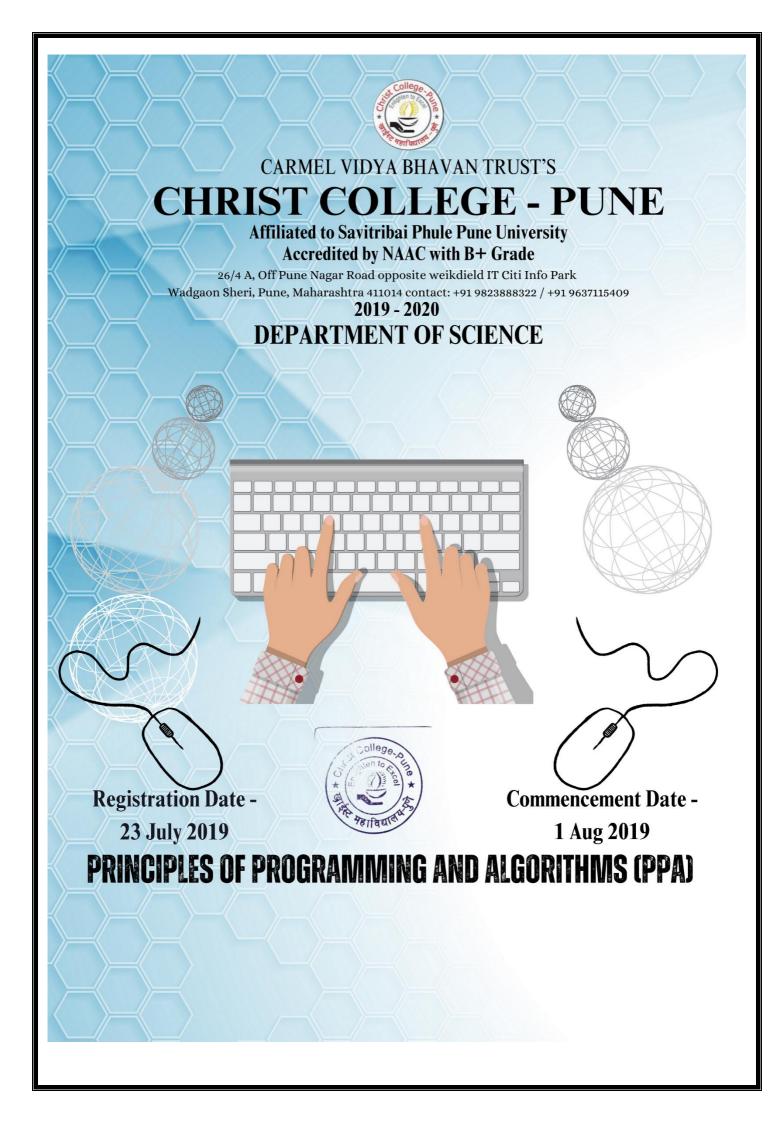
10	INVESTMENT BANKING	The objective of this paper is to know the different aspects of Investment banking, mergers and acquisition and the detailed SEBI guidelines on issue management.	Orientation about banking and financial concepts covered Managing investment in primary market and secondary market.
		This course will help you to perform valuation of companies & prepare reports on important components of Investment Banking such as Mergers & Acquisitions, Project Finance, IPO Analysis etc.	Evaluate critically a range of theories relevant to financial institutions and markets and apply these theories in the analysis of issues related to these institution and market.
		To ensure that students encounter the most relevant and useful language at the right point in their learning.	The role of assessment in Cambridge English Empower is unique and its learning-oriented approach means that assessment constantly informs and enhances learning.
11	CAMBRIDGE ENGLISH	To carve out a place for a form of assessment with different priorities and values from those of traditional assessment, with its focus on reliability and validity.	Empower's unique mix of engaging classroom materials and reliable assessment, with personalised online practice, enables learners to make consistent and measurable progress
		To guarantee that the student's achieves the right language at the right level. To recognise a learner's level of language fluency at the end of the course.	Empower is driven by world-class research and a profound commitment to delivering educational value for the benefit of learners, teachers, educational institutions, employers and society as a whole.
12	ACCA	ACCA members are strategic thinkers with high ethical integrity, strong financial know-how and the right business acumen.	The world's most forward-thinking accountancy body – the ACCA letters after your name are globally recognised and show employers that you work to the highest professional and ethical standards.
		This course will take you through a combination of exams, ethics and three years' professional experience.	The ACCA Qualification is respected globally, and will help you to open doors wherever your career path may take you.
		Students will enter the workplace ready to make a difference in today's fast-paced business world.	Students will have opportunities to learn new skills and gain many other qualifications along the way – including a BSc and an MSc.



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Dr(Fr) Sony Chundattu,CMI (Principal/Director)







(Affiliated to the Savitribai Phule Pune University) ID-No. PU/PN/ASC/269/2007, College Code-829 26/4A, Sainikwadi, Vadgaon Sheri, Pune 411 014. Accredited by NAAC with 'B+' Grade

Ref. No. CCP/

Date: 24 / 07 /2019

#### **Department of Commerce**

#### NOTICE

We are excited to introduce an Add-on course on "**Principles of Programming and Algorithm**". This course offers foundational knowledge of fundamentals of Algorithms and Flowcharts. The course duration will be 30 hours. Certificate will be awarded after successful completion of the course. Interested students must register themselves before 1<sup>st</sup> August 2019.

Flormon

Dr. Jiji Johnson (HOD)

E P Dr (Fr) Sony J. Chundattu CMI

(Principal/director)



Tel : Reception - 7823839456 Office - 7447727242 / 7447727243 Email : director@christcollegepune.org Web : www.christcollegepune.org Module Title: Principles of Programming and Algorithm

Module Duration: 30 hours

Module Description: This module aims to provide a solid foundation in programming principles and algorithms. Participants will learn key concepts, problem-solving techniques, and programming skills necessary for software development and algorithm design.

Module Outline:

Week 1: Introduction to Programming (4 hours)

1.1. Understanding Programming Languages

1.2. Basics of Algorithms

1.3. Pseudocode and Flowcharts

1.4. Setting up Development Environment

Week 2: Variables, Data Types, and Operators (4 hours)

2.1. Variables and Data Storage

2.2. Primitive Data Types (int, float, char, etc.)

2.3. Operators and Expressions

2.4. Input and Output

Week 3: Control Structures (4 hours)

3.1. Conditional Statements (if, else, switch)

3.2. Looping Structures (for, while, do-while)

3.3. Control Flow and Branching

3.4. Error Handling (try-catch or equivalent)



Week 4: Functions and Modular Programming (4 hours)

- 4.1. Introduction to Functions
- 4.2. Function Parameters and Return Values
- 4.3. Scope and Lifetime of Variables
- 4.4. Modular Programming and Code Reusability

Week 5: Algorithms and Problem Solving (4 hours)

6.1. Algorithm Design and Analysis

- 6.2. Searching Algorithms (linear search, binary search)
- 6.3. Sorting Algorithms (bubble sort, insertion sort)
- 6.4. Recursion and Divide-and-Conquer

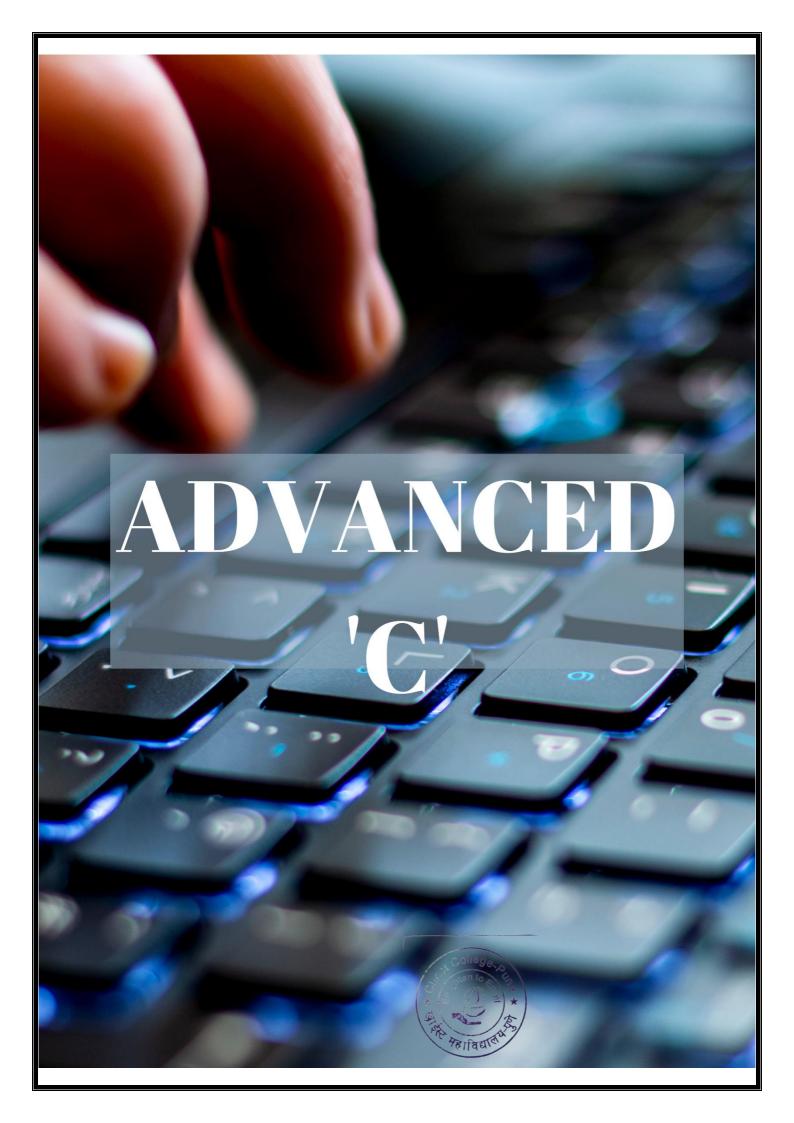
Week 6: Advanced Algorithms (4 hours)

- 7.1. Greedy Algorithms
- 7.2. Dynamic Programming
- 7.3. Graph Algorithms (breadth-first search, depth-first search)
- 7.4. Big O Notation and Algorithm Complexity

Week 7: Final Projects and Review (2 hours)

- 8.1. Final Project Assignment
- 8.2. Project Development
- 8.3. Presentation and Evaluation
- 8.4. Course Review and Q&A







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26/4 A, Off Pune Nagar Road opposite weikdield IT Citi Info Park Wadgaon Sheri, Pune, Maharashtra 411014 contact: +91 9823888322 / +91 9637115409

> 2019 - 2020 DEPARTMENT OF SCIENCE





CARMEL VIDYA BHAVAN TRUST'S

**CHRIST COLLEGE - PUNE** 

(Affiliated to the Savitribai Phule Pune University) ID-No. PU/PN/ASC/269/2007, College Code-829 26/4A, Sainikwadi, Vadgaon Sheri, Pune 411 014. Accredited by NAAC with 'B+' Grade

Ref. No. CCP/

0

Date: 12th Nov 2019

#### Notice

All students are hereby informed that the following Value- Added Courses are starting from 14<sup>th</sup> November 2019.

Sr. No	Course Name	Class	Convener Name
1	Advance C	FYBBA(CA)	Ms. Kirti Nikam
2	Personality & Soft Skill Development	FYBBA & FYBBA(IB)	Dr (Fr) Sony J Chundattu

ZGI

Dr (Fr) Sony J. Chundattu CMI

(Principal/Director)



Tel : Reception - 7823839456 Office - 7447727242 / 7447727243 Email : director@christcollegepune.org Web : www.christcollegepune.org Module Title: Advanced C Programming

Module Duration: 30 hours

Module Description: This module delves deeper into the C programming language, covering advanced topics and techniques to enhance participants' proficiency in C programming.

Module Outline:

Week 1: Pointers and Memory Management (4 hours)

1.1. Understanding Pointers

1.2. Pointer Arithmetic

1.3. Dynamic Memory Allocation (malloc, calloc, realloc, free)

1.4. Memory Leaks and Memory Management Best Practices

Week 2: Advanced Data Types (4 hours)

#### 2.1. Structures and Unions

2.2. Bit Fields

2.3. Enumerations

2.4. Typedef

Week 3: File Handling and Input/Output (4 hours)

3.1. File Operations (fopen, fclose, fread, fwrite)

3.2. File I/O (fprintf, fscanf, fgets, fputs)

3.3. Error Handling with Files

3.4. Binary vs. Text Files

Week 4: Advanced Functions (4 hours)



4.1. Function Pointers4.2. Callback Functions

4.3. Recursive Functions

4.4. Variadic Functions

Week 5: Advanced Topics in C (4 hours)

5.1. Preprocessor Directives (#define, #ifdef, #include)

5.2. Multithreading in C (if applicable)

5.3. Error Handling (errno, perror, strerror)

5.4. C Standard Library Functions (e.g., math.h, string.h)

Week 6: Advanced Data Structures (4 hours)

6.1. Linked Lists (singly, doubly, circular)

6.2. Stacks and Queues (using arrays and linked lists)

6.3. Binary Trees (basic concepts)

6.4. Hashing (basic concepts)



# Personality And Soft Skill Development



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DEPARTMENT OF COMMERCE

Registration Date -11 Nov 2019

Commencement Date -14 Nov 2019

### **PERSONALITY AND SOFT SKILL DEVELOPMENT**



CARMEL VIDYA BHAVAN TRUST'S

**CHRIST COLLEGE - PUNE** 

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Sr. No	Course Name	Class	Convener Name
1	Advance C	FYBBA(CA)	Ms. Kirti Nikam
2	Personality & Soft Skill Development	FYBBA & FYBBA(IB)	Dr (Fr) Sony J Chundattu

ZBI

Dr (Fr) Sony J. Chundattu CMI

(Principal/Director)



Tel : Reception - 7823839456 Office - 7447727242 / 7447727243 Email : director@christcollegepune.org Web : www.christcollegepune.org Module Title: Personality and Soft Skill Development

Module Duration: 30 hours

Module Description: This module is designed to help participants enhance their personality traits and develop essential soft skills required for personal and professional success.

Module Outline:

Week 1: Introduction to Personality and Soft Skills (4 hours)

1.1. Understanding Personality

1.2. The Importance of Soft Skills

1.3. Assessing Personal Strengths and Weaknesses

1.4. Setting Goals for Personal Development

Week 2: Communication Skills (4 hours)

- 2.1. Effective Verbal Communication
- 2.2. Non-Verbal Communication
- 2.3. Listening Skills
- 2.4. Overcoming Communication Barriers

Week 3: Interpersonal Skills (4 hours)

- 3.1. Building Positive Relationships
- 3.2. Conflict Resolution
- 3.3. Empathy and Emotional Intelligence
- 3.4. Networking Skills



Week 4: Time Management and Productivity (4 hours)

4.1. Time Management Techniques

4.2. Setting Priorities

4.3. Goal Setting and Planning

4.4. Dealing with Procrastination

Week 5: Leadership and Teamwork (4 hours)

5.1. Leadership Qualities and Styles

5.2. Team Building and Team Dynamics

5.3. Decision Making and Problem Solving

5.4. Motivating Yourself and Others

Week 6: Stress Management and Resilience (4 hours)

6.1. Identifying Stressors

6.2. Coping Strategies

6.3. Building Resilience

6.4. Mindfulness and Relaxation Techniques







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#### 2019 - 2020 DEPARTMENT OF COMMERCE

**Registration Date -**

23 July 2019

**Commencement Date -**

1 Aug 2019



### TALLY COMPUTER BASED ACCOUNTING



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Ref. No. CCP/

Date: 24 / 07 /2019

#### **Department of Commerce**

#### NOTICE

We are excited to introduce an Add-on course on "Tally & Computer Based Accounting". This course offers foundational knowledge of Accounting using Tally Software. The course duration will be 30 hours. Certificate will be awarded after successful completion of the course. Interested students must register themselves before 1<sup>st</sup> August 2019.

J. Johnson

Dr. Jiji Johnson (HOD)

E P

Dr (Fr) Sony J. Chundattu CMI (Principal/director)



Tel Reception - 7823839456 Office - 7447727242 / 7447727243 Email : director@christcollegepune.org Web.: www.christcollegepune.org Module Title: Tally Computer-Based Accounting

Module Duration: 30 hours

Module Description: This module is designed to provide participants with a comprehensive understanding of Tally, a widely used accounting software, and how to effectively manage accounting tasks using this software.

Module Outline:

Week 1: Introduction to Tally (4 hours)

1.1. Overview of Accounting Software

1.2. Introduction to Tally ERP 9

1.3. Installing and Setting Up Tally

1.4. Navigating Tally Interface

Week 2: Creating and Managing Company Data (4 hours)

2.1. Creating a Company in Tally

2.2. Company Configuration Settings

2.3. Creating and Modifying Ledgers

2.4. Understanding Groups and Subgroups

Week 3: Voucher Entry (4 hours)

3.1. Accounting Vouchers in Tally

3.2. Recording Sales and Purchase Transactions

3.3. Handling Receipts and Payments

3.4. Credit Notes and Debit Notes

Week 4: Advanced Voucher Entry (4 hours)



4.1. Multi-currency Transactions4.2. Preparing and Printing Invoices4.3. Voucher Types and Customization4.4. Handling Reverse Charge Transactions

Week 5: Inventory Management (4 hours)

5.1. Introduction to Inventory in Tally

5.2. Stock Groups and Categories

5.3. Creating Stock Items

5.4. Stock Vouchers and Tracking

Week 6: Taxation and GST (4 hours)

6.1. Understanding GST Concepts

6.2. GST Configuration in Tally

6.3. GST Returns Filing

6.4. Handling Tax Deducted at Source (TDS)



## Employability Skill Enhancement Programme





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> 2019 - 2020 DEPARTMENT OF COMMERCE

Registration Date -23 July 2019

Commencement Date -14 Nov 2019

## EMPLOYABILITY SKILL ENHANCEMENT PROGRAMME



CARMEL VIDYA BHAVAN TRUST'S

**CHRIST COLLEGE - PUNE** 

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Ref. No. CCP/

Date: 24 / 07 /2019

#### **Department of Commerce**

#### NOTICE

We are excited to introduce an Add-on course on "Employabilty Skill Enhancement Programme". The course duration will be 30 hours. Certificate will be awarded after successful completion of the course. Interested students must register themselves before 1<sup>st</sup> August 2019.

1. Johnson

Dr. Jiji Johnson (HOD)

Dr (Fr) Sony J. Chundattu CMI (Principal/director)



Tel : Reception - 7823839456 Office - 7447727242 / 7447727243 Email : director@christcollegepune.org Web : www.christcollegepune.org Module Title: Employability Skill Enhancement Program

Module Duration: 30 hours

Module Description: This program aims to equip participants with the essential skills and knowledge needed to enhance their employability and succeed in the job market. It covers a wide range of soft skills, professional development, and practical tools.

Module Outline:

Week 1: Introduction to Employability Skills (3 hours)

- 1.1. Understanding Employability Skills
- 1.2. Importance of Soft Skills

1.3. Assessing Personal Strengths and Areas for Improvement

Week 2: Effective Communication Skills (4 hours)

2.1. Verbal and Non-Verbal Communication

2.2. Active Listening

2.3. Constructive Feedback

2.4. Communication Barriers and Overcoming Them

Week 3: Professionalism and Work Ethics (4 hours)

- 3.1. Workplace Etiquette
- 3.2. Time Management
- 3.3. Punctuality and Attendance
- 3.4. Handling Workplace Conflicts



Week 4: Resume Writing and Interview Skills (4 hours)

- 4.1. Creating an Impressive Resume
- 4.2. Interview Preparation
- 4.3. Mock Interviews and Feedback
- 4.4. Follow-Up and Post-Interview Etiquette

Week 5: Teamwork and Collaboration (3 hours)

- 5.1. Effective Teamwork
- 5.2. Conflict Resolution in Teams
- 5.3. Sharing Responsibility
- 5.4. Group Problem Solving

Week 6: Adaptability and Problem Solving (4 hours)

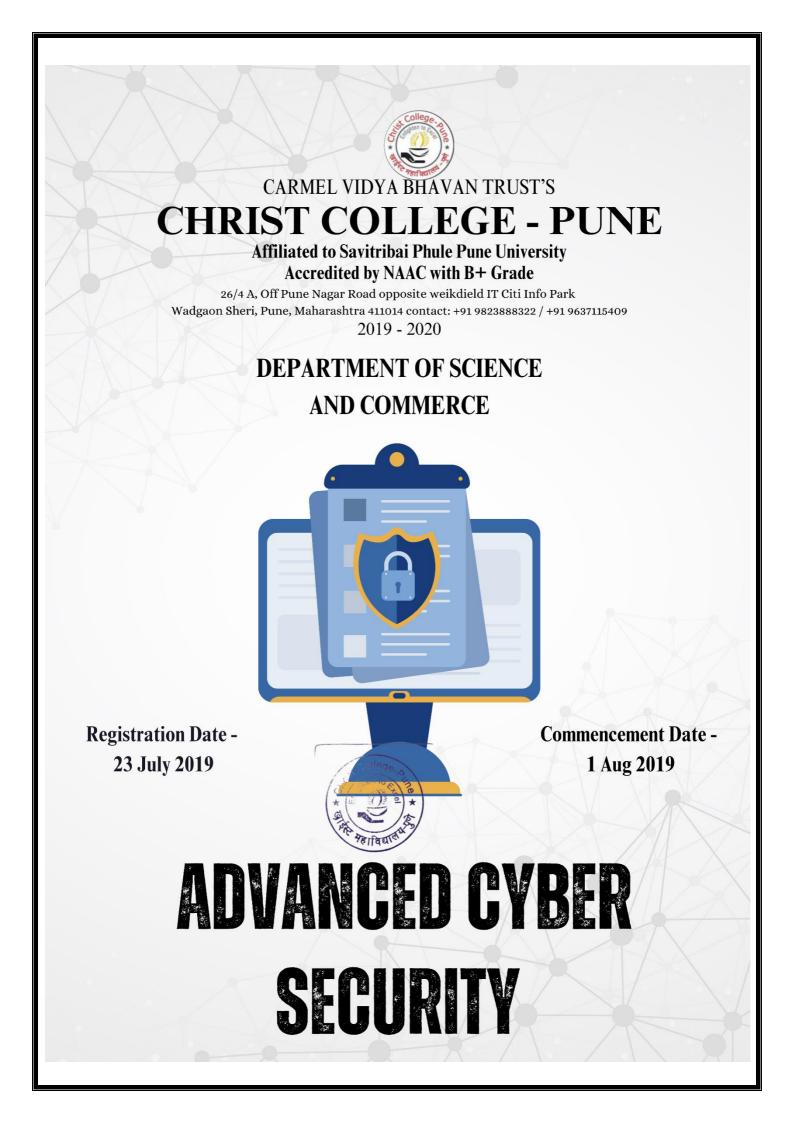
- 6.1. Adaptability in Changing Work Environments
- 6.2. Creative Problem Solving
- 6.3. Decision-Making Skills
- 6.4. Handling Challenges at Work



# ADVANCED CYBER SECURITY

1.4







CARMEL VIDYA BHAVAN TRUST'S CHRIST COLLEGE - PUNE

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Ref. No. CCP/

Date: 24 / 07 /2019

#### **Department of Commerce**

#### NOTICE

We are excited to introduce an Add-on course on "Advanced Cyber Security". Certificate will be awarded after successful completion of the course. Interested students must register themselves before 1<sup>st</sup> August 2019.

Johnen Dr. Jiji Johnson

(HOD)

62 5-

Dr (Fr) Sony J. Chundattu CMI (Principal/director)



Module Title: Introduction to Cybersecurity

Module Duration: 30 hours

Module Description: This module provides a comprehensive introduction to the field of cybersecurity, covering essential concepts and practices to help participants understand and eddress cybersecurity threats.

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Module Outline:

Week 1: Introduction to Cybersecurity (4 hours)

1.1. What is Cybersecurity?

1.2. Importance of Cybersecurity

1.3. Key Terminologies and Definitions

1.4. Historical Context and Evolution of Cybersecurity

Week 2: Cyber Threats and Attack Vectors (4 hours)

2.1. Types of Cyber Threats (Malware, Phishing, DoS, etc.)

2.2. Attack Vectors and Techniques

2.3. Social Engineering Attacks

2.4. Case Studies of Notable Cyberattacks

Week 3: Cybersecurity Fundamentals (4 hours)

3.1. Information Security Principles

3.2. CIA Triad (Confidentiality, Integrity, Availability)

3.3. Security Policies and Procedures

3.4. Security Risk Management

Week 4: Network Security (4 hours)



4.1. Basics of Network Security
4.2. Firewalls and Intrusion Detection Systems (IDS)
4.3. VPNs (Virtual Private Networks)
4.4. Wireless Network Security

Week 5: Operating System Security (4 hours)

5.1. Securing Operating Systems

5.2. User Authentication and Access Control

5.3. Patch Management and Updates

5.4. Host-based Intrusion Detection Systems (HIDS)

Week 6: Cryptography and Data Protection (4 hours)

6.1. Cryptographic Concepts

6.2. Encryption and Decryption

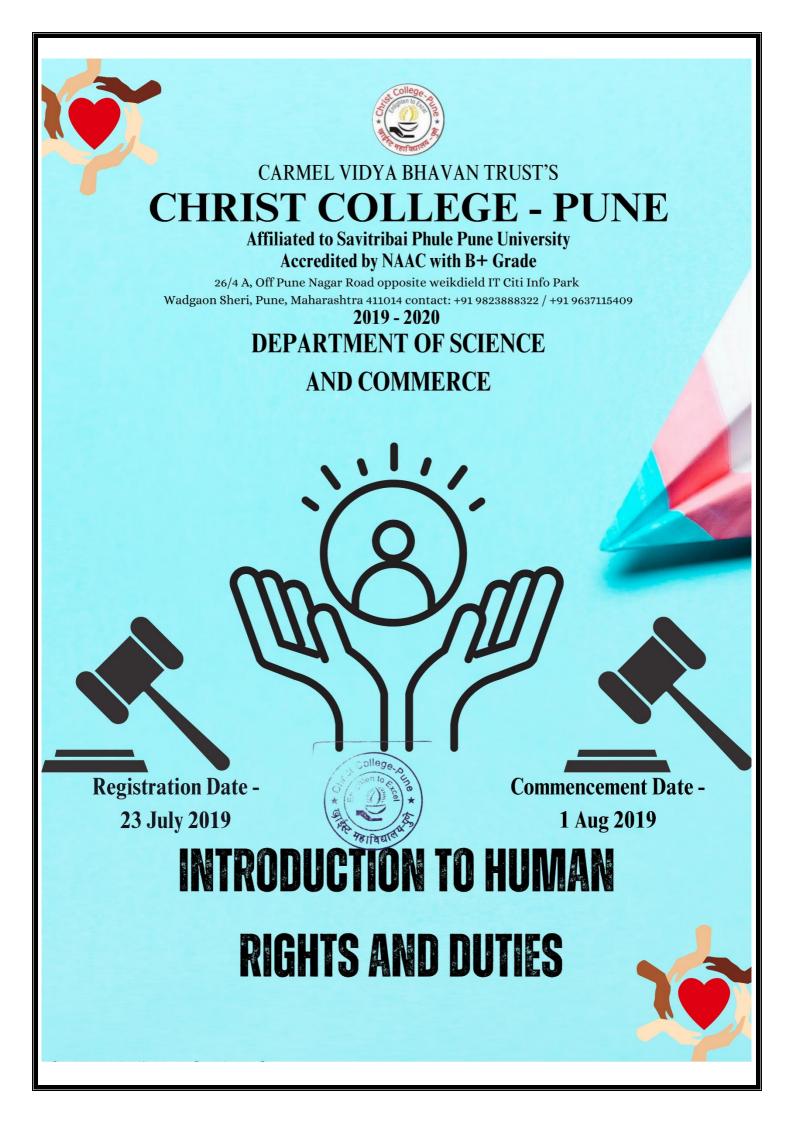
6.3. Public Key Infrastructure (PKI)

6.4. Data Privacy and GDPR



# INTRODUCTION TO HUMAN RIGHTS AND DUTIES

AMAY





CARMEL VIDYA BHAVAN TRUST'S CHRIST COLLEGE - PUNE

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Ref. No. CCP/

Date: 24 / 07 /2019

### **Department of Commerce**

#### NOTICE

We are excited to introduce an Add-on course on "Introduction to Human Rights & Duties". Certificate will be awarded after successful completion of the course. Interested students must register themselves before 1<sup>st</sup> August 2019.

J.Johnson

Dr. Jiji Johnson (HOD)

Dr (Fr) Sony J. Chundattu CMI (Principal/director)



Module Title: Introduction to Human Rights and Duties

Module Duration: 30 hours

Module Description: This module provides a comprehensive introduction to the principles of human rights and duties, emphasizing their importance in promoting social justice and responsible citizenship.

College

Module Outline:

Week 1: Introduction to Human Rights (4 hours)

1.1. What Are Human Rights?

1.2. Historical Evolution of Human Rights

1.3. Universal Declaration of Human Rights (UDHR)

1.4. Importance of Human Rights Education

Week 2: Types of Human Rights (4 hours)

2.1. Civil and Political Rights

2.2. Economic, Social, and Cultural Rights

2.3. Collective Rights

2.4. The Interdependence and Indivisibility of Rights

Week 3: International Human Rights Framework (4 hours)

3.1. International Human Rights Treaties and Conventions

3.2. Human Rights Bodies and Mechanisms

3.3. Reporting and Compliance

3.4. The Role of Non-Governmental Organizations (NGOS

Week 4: Human Rights Violations and Challenges About

- 4.1. Forms of Human Rights Violations
- 4.2. Discrimination and Inequality
- 4.3. Contemporary Human Rights Challenges
- 4.4. Role of Media and Advocacy

Week 5: Human Rights in National Context (4 hours)

- 5.1. Constitutional Rights and Guarantees
- 5.2. National Human Rights Institutions
- 5.3. Human Rights in Education and Healthcare
- 5.4. Indigenous Rights and Cultural Heritage

Week 6: Responsibilities and Duties (4 hours)

- 6.1. Understanding Civic Duties
- 6.2. Citizenship and Social Responsibilities
- 6.3. Ethical Responsibilities
- 6.4. Balancing Rights and Responsibilities



## ENVIRONMENTAL SCIENCE



# CARMEL VIDYA BHAVAN TRUST'S CHRIST COLLEGE - PUNE

Affiliated to Savitribai Phule Pune University Accredited by NAAC with B+ Grade

26/4 A, Off Pune Nagar Road opposite weikdield IT Citi Info Park Wadgaon Sheri, Pune, Maharashtra 411014 contact: +91 9823888322 / +91 9637115409

2019 - 2020 DEPARTMENT OF SCIENCE, COMMERCE AND ARTS

**ENVIRONMENTAL STUDIES** 

Commencement Date -15 July 2019



## CARMEL VIDYA BHAVAN TRUST'S CHRIST COLLEGE - PUNE

(Affiliated to the Savitribal Phule Pune University) ID-No. PU/PN/ASC/269/2007. College Code-829 26/4A. Sainikwadi, Vadgaon Sheri, Pune 411 014. Accredited by NAAC with 'B+' Grade

Ref. No. CCP/

C

Date: 11th July 2019

### Notice

All students are hereby informed that the following Value- Added Courses are starting from 15<sup>th</sup> July 2019.

Sr. No	Course Name	Class	Convener Name
1	Environmental Science	SYBSC(CS)	Ms. Kirti Nikam
2	Environmental Science	SYBA(Eco)	Ms. Merin Varghese
3	Environmental Science	SYBCOM	Ms. Ruby Phumale

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Dr (Fr) Sony J. Chundattu CMI (Principal/Director)



Module Title: Environmental Science

Module Duration: 30 hours

Module Description: This module provides an overview of environmental science, covering key topics related to environmental issues, sustainability, and the impact of human activities on the environment.

Module Outline:

Week 1: Introduction to Environmental Science (4 hours)

- 1.1. What is Environmental Science?
- 1.2. Importance of Environmental Science
- 1.3. Historical Perspective of Environmental Issues
- 1.4. Environmental Ethics and Sustainability

Week 2: Earth's Systems (4 hours)

2.1. Earth's Spheres (Atmosphere, Hydrosphere, Geosphere, Biosphere)

- 2.2. Earth's Climate and Weather Systems
- 2.3. The Water Cycle
- 2.4. Soil and Land Use

Week 3: Biodiversity and Conservation (4 hours)

- 3.1. The Importance of Biodiversity
- 3.2. Threats to Biodiversity
- 3.3. Conservation Strategies
- 3.4. Endangered Species and Ecosystems



Week 4: Pollution and Environmental Health (4 hours)

- 4.1. Types of Pollution (Air, Water, Soil, Noise, Light)
- 4.2. Sources of Pollution
- 4.3. Impact on Human Health
- 4.4. Pollution Control and Remediation

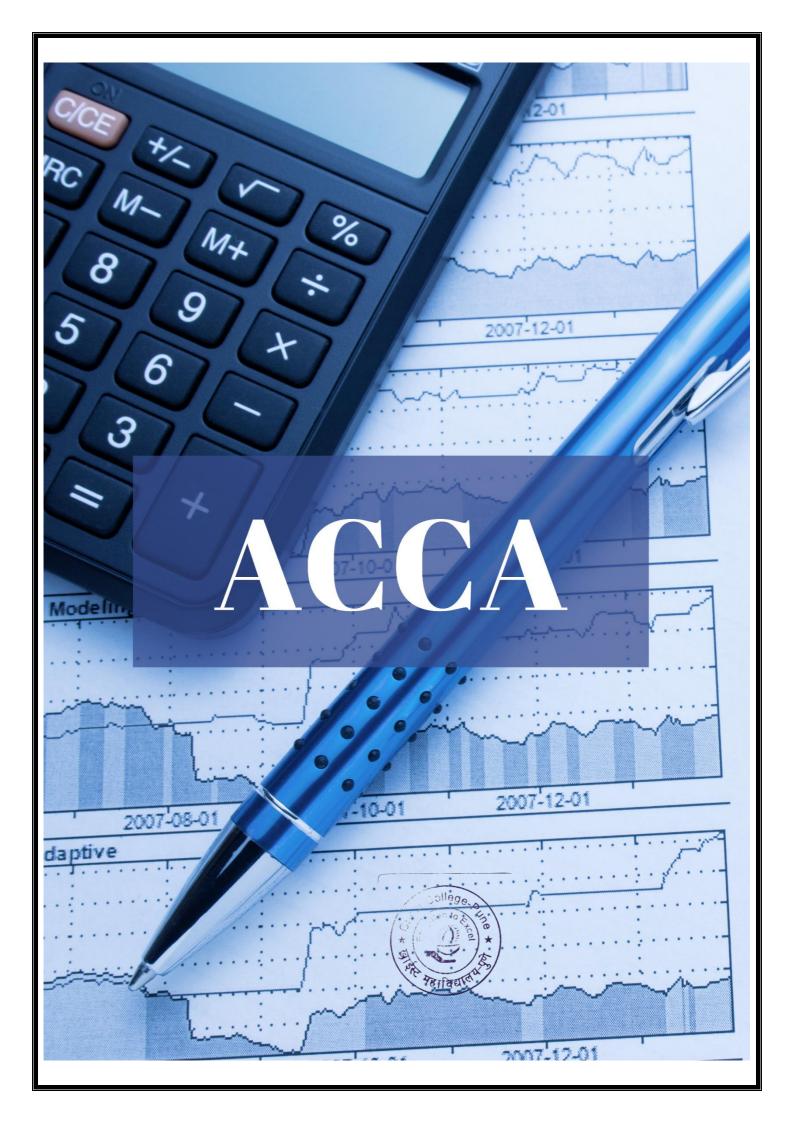
Week 5: Energy and Resources (4 hours)

- 5.1. Energy Sources and Consumption
- 5.2. Renewable and Non-Renewable Energy
- 5.3. Resource Depletion
- 5.4. Sustainable Resource Management

Week 6: Environmental Policy and Regulation (4 hours)

- 6.1. Environmental Laws and Regulations
- 6.2. International Environmental Agreements
- 6.3. Environmental Impact Assessments
- 6.4. Environmental Advocacy and NGOs







## CARMEL VIDYA BHAVAN TRUST'S CHRIST COLLEGE - PUNE

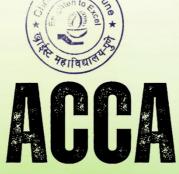
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26/4 A, Off Pune Nagar Road opposite weikdield IT Citi Info Park Wadgaon Sheri, Pune, Maharashtra 411014 contact: +91 9823888322 / +91 9637115409 2019 - 2020

## **DEPARTMENT OF COMMERCE**



Registration Date -23 July 2019



Commencement Date -1 Aug 2019



CARMEL VIDYA BHAVAN TRUST'S

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Ref. No. CCP/

Date: 24<sup>th</sup> July 2019

#### Notice

All students are hereby informed that the following Certificate Courses are starting from 1<sup>st</sup> August 2019.

Sr. No	Course Name	Convener Name
1	ACCA	Ms. Jiji Jhonson
2	Investment Banking(IB)	Ms. Jiji Jhonson
3	Cambridge English	Ms. Jiji Jhonson
4	AI	Ms. Leena Sanu

Dr (Fr) Sony J. Chundattu CMI

(Principal/Director)



Module Title: ACCA Knowledge Level Preparation

Module Duration: 30 hours

Module Description: This module is designed to provide a comprehensive understanding of key accounting and financial concepts to prepare students for ACCA Knowledge Level papers.

Module Outline:

Week 1: Introduction to ACCA and Accounting Principles (4 hours)

1.1. Overview of ACCA Qualification

1.2. Fundamental Accounting Concepts

1.3. Accounting Standards and Principles

1.4. Double-Entry Bookkeeping

Week 2: Financial Accounting (4 hours)

2.1. Preparation of Financial Statements

- 2.2. Statement of Financial Position (Balance Sheet)
- 2.3. Income Statement (Profit and Loss Statement)
- 2.4. Cash Flow Statements

Week 3: Management Accounting (4 hours)

- 3.1. Cost Accounting Basics
- 3.2. Cost-Volume-Profit Analysis
- 3.3. Budgeting and Variance Analysis
- 3.4. Decision-Making Techniques

Week 4: Business and Technology (4 hours)



4.1. Business Types and Organizations

4.2. Business Environment and Stakeholders

4.3. Information Systems and Technology

4.4. Ethical and Professional Conduct

Week 5: Law and Ethics (4 hours)

5.1. Introduction to Business Law

5.2. Contract Law

5.3. Company Law

5.4. Ethics and Professionalism

Week 6: Quantitative Methods (4 hours)

6.1. Time Value of Money

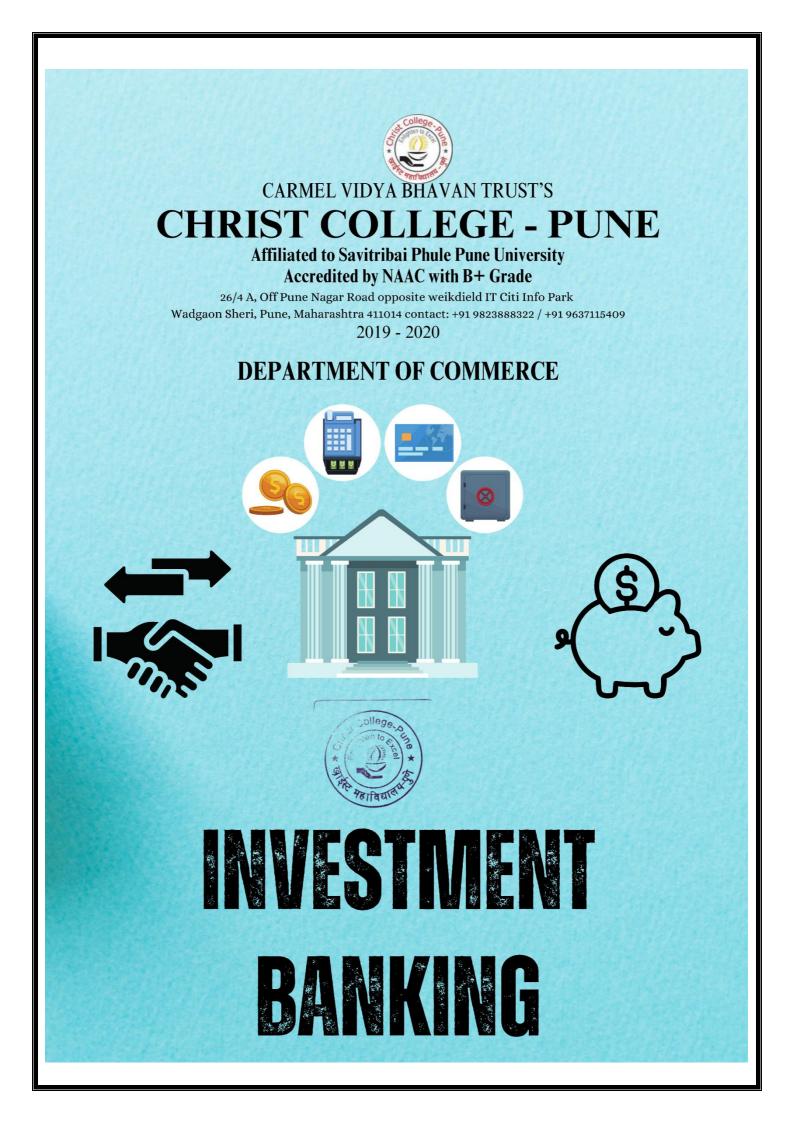
6.2. Statistical Analysis

6.3. Forecasting Techniques

6.4. Investment Appraisal









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4	AI	Ms. Leena Sanu

Dr (Fr) Sony J. Chundattu CMI

(Principal/Director)



Module Title: Investment Banking

Module Duration: 30 hours

Module Description: This module provides an in-depth understanding of the world of investment banking, covering key concepts, strategies, and financial instruments used in the industry.

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Module Outline:

Week 1: Introduction to Investment Banking (4 hours)

1.1. What is Investment Banking?

1.2. History and Evolution of Investment Banking

1.3. Roles and Functions of Investment Banks

1.4. Investment Banking vs. Commercial Banking

Week 2: Financial Markets and Securities (4 hours)

2.1. Overview of Financial Markets

2.2. Types of Financial Securities (Equity, Debt, Derivatives)

2.3. Primary vs. Secondary Markets

2.4. Securities Trading and Regulation

Week 3: Valuation Techniques (4 hours)

- 3.1. Fundamental Analysis
- 3.2. Technical Analysis
- 3.3. Valuation of Equities
- 3.4. Valuation of Fixed Income Securities

Week 4: Mergers and Acquisitions (M&A) (4 hours)

4.1. M&A Process and Stages

4.2. Due Diligence

4.3. Valuation in M&A

4.4. Regulatory and Legal Aspects

Week 5: Investment Banking Services (4 hours)

5.1. Capital Raising (IPOs, Bond Issuance)

5.2. Advisory Services

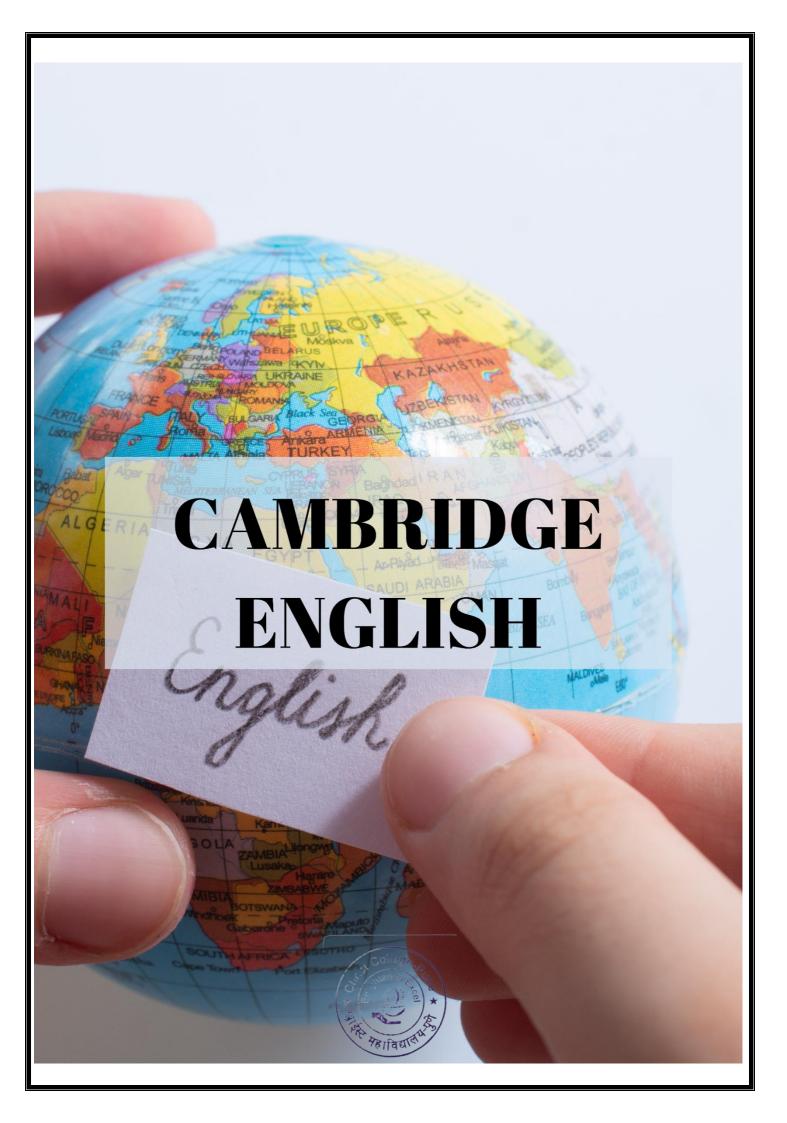
5.3. Asset Management

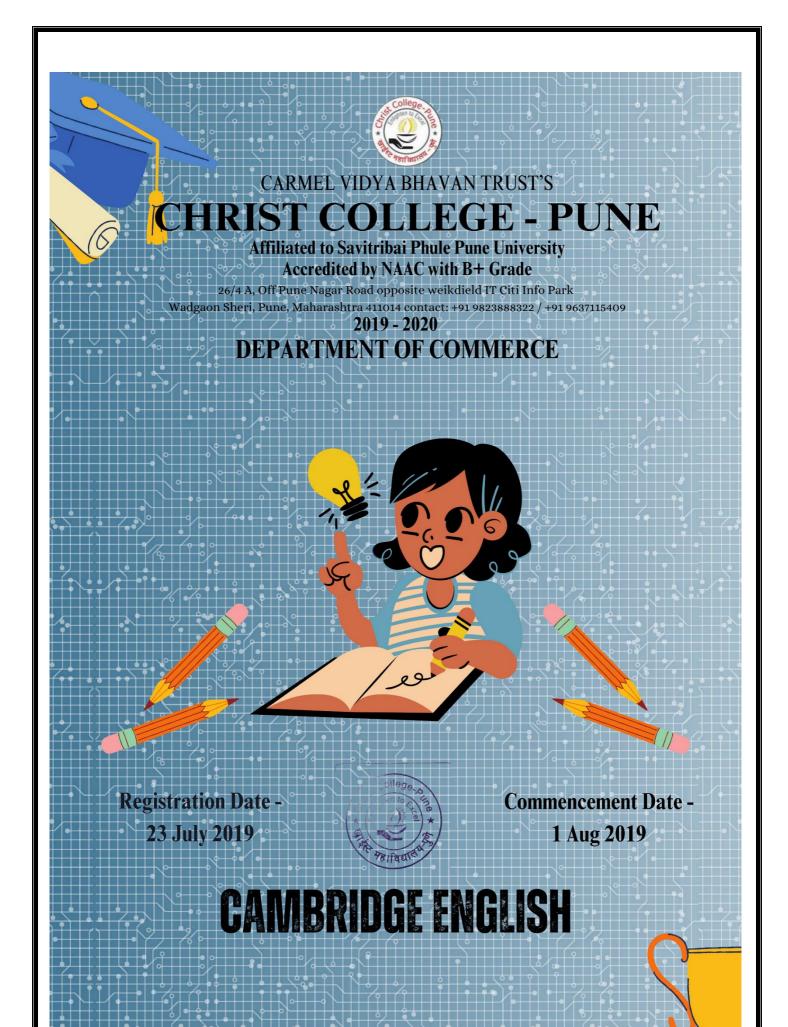
5.4. Risk Management

Week 6: Financial Modeling (4 hours)

- 6.1. Building Financial Models
- 6.2. Forecasting Financial Statements
- 6.3. Discounted Cash Flow (DCF) Analysis
- 6.4. Sensitivity Analysis









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4	AI	Ms. Leena Sanu

Dr (Fr) Sony J. Chundattu CMI

(Principal/Director)



Module Title: Cambridge English Preparation

Module Duration: 30 hours

Module Description: This module is designed to prepare students for the Cambridge English exams, focusing on language skills, test format, and exam strategies.

Module Outline:

Week 1: Introduction to Cambridge English Exams (4 hours)

1.1. Overview of Cambridge English Exams

1.2. Test Format and Sections

1.3. Scoring and Assessment Criteria

1.4. Test-Taking Strategies

Week 2: Reading and Use of English (4 hours)

2.1. Reading Comprehension Strategies

2.2. Vocabulary and Grammar in Context

2.3. Multiple-Choice and Open-Ended Questions

2.4. Practice Tests and Analysis

Week 3: Writing (4 hours)

3.1. Types of Writing Tasks (Reports, Essays, Letters)

3.2. Planning and Structuring Your Writing

3.3. Vocabulary and Style

3.4. Peer Review and Editing

Week 4: Listening (4 hours)



- 4.1. Active Listening Techniques
- 4.2. Note-Taking Skills
- 4.3. Understanding Different Accents
- 4.4. Listening Practice and Analysis

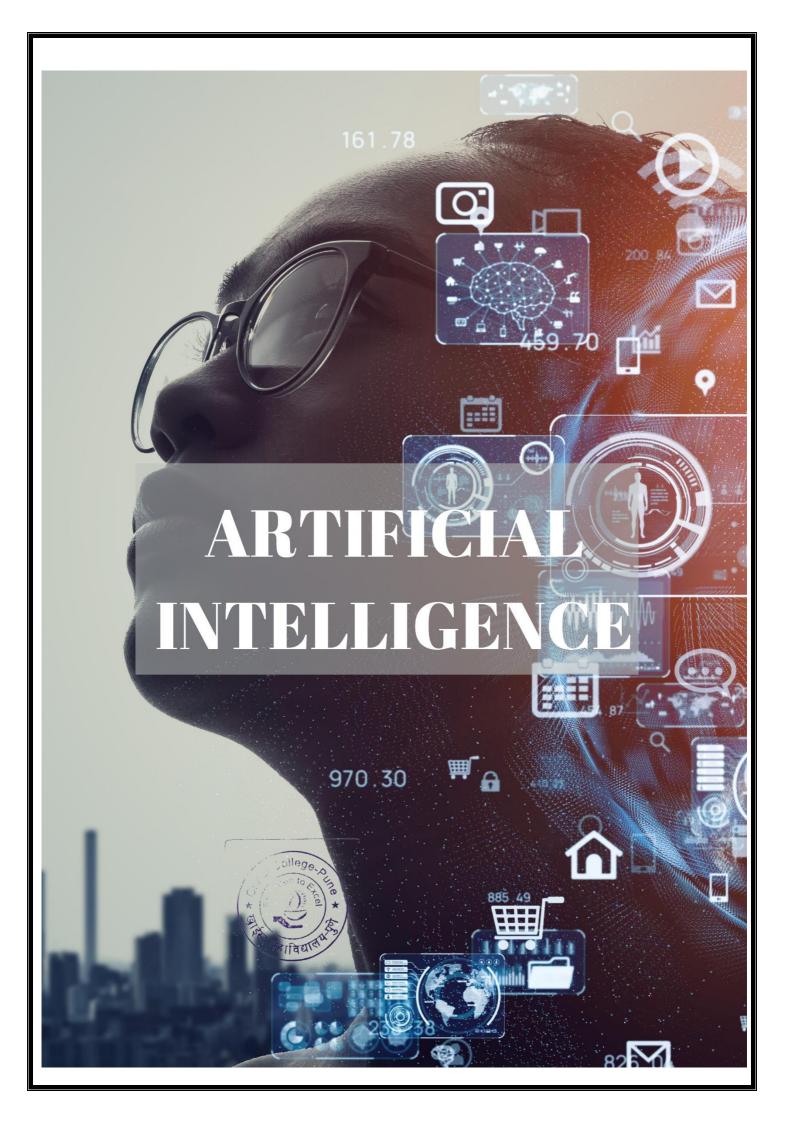
Week 5: Speaking (4 hours)

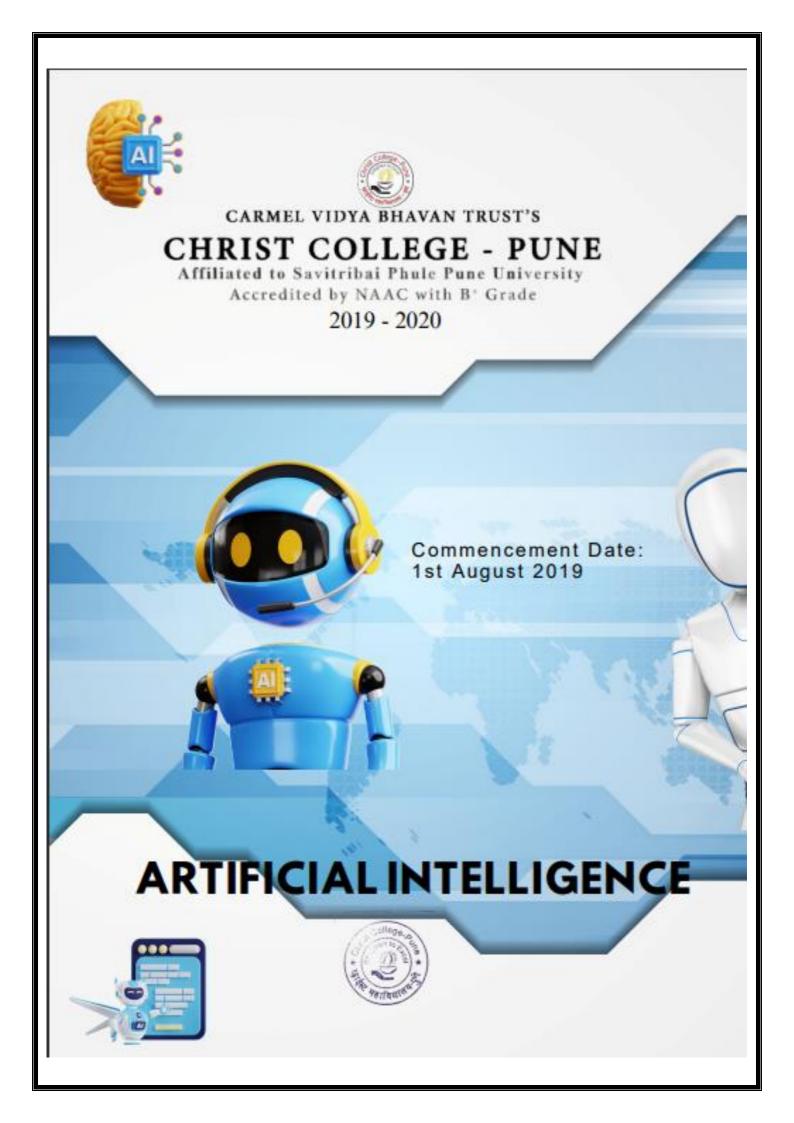
- 5.1. Speaking Test Format (Individual and Pair Work)
- 5.2. Fluency and Coherence
- 5.3. Vocabulary and Pronunciation
- 5.4. Mock Speaking Tests and Feedback

Week 6: Grammar and Language Review (4 hours)

- 6.1. Grammar Review (Tenses, Conditionals, Modals)
- 6.2. Common Errors and Corrections
- 6.3. Vocabulary Building
- 6.4. Language Proficiency Practice









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Dr (Fr) Sony J. Chundattu CMI

(Principal/Director)



Module Title: Artificial Intelligence

Module Duration: 30 hours

Module Description: This module provides an introduction to the field of artificial intelligence, covering fundamental concepts, techniques, and applications.

Module Outline:

Week 1: Introduction to Artificial Intelligence (4 hours)

1.1. What is Artificial Intelligence?

1.2. History and Evolution of AI

1.3. Al vs. Human Intelligence

1.4. AI Applications in Various Fields

Week 2: Problem Solving with Search Algorithms (4 hours)

2.1. State Space Representation

2.2. Uninformed Search Algorithms (BFS, DFS)

2.3. Heuristic Search Algorithms (A\* Search)

2.4. Informed vs. Uninformed Search

Week 3: Machine Learning Basics (4 hours)

3.1. Introduction to Machine Learning

3.2. Supervised Learning vs. Unsupervised Learning

3.3. Data Preprocessing

3.4. Evaluation Metrics in Machine Learning



Week 4: Machine Learning Algorithms (4 hours)

4.1. Linear Regression

4.2. Logistic Regression

4.3. Decision Trees

4.4. k-Nearest Neighbors (k-NN)

Week 5: Neural Networks and Deep Learning (4 hours)

5.1. Introduction to Neural Networks

5.2. Deep Learning vs. Shallow Learning

5.3. Feedforward Neural Networks

5.4. Convolutional Neural Networks (CNNs)

Week 6: Natural Language Processing (4 hours)

6.1. Introduction to NLP

6.2. Text Pre-processing

6.3. Sentiment Analysis

6.4. Named Entity Recognition (NER)

