



**SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE**

(An Autonomous Institution)

(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)  
(Accredited by NBA-AICTE, New Delhi, ISO 9001:2000 Certified Institution &  
Accredited by NAAC with "A" Grade)

Madagadipet, Puducherry - 605 107



## **SCHOOL OF ARTS AND SCIENCE**

### **BACHELOR OF COMMERCE**

#### **(COMPUTER APPLICATION)**

### **ACADEMIC REGULATIONS 2020**

**(R-2020)**

#### **CURRICULUM**

Curriculum – Regulations 2020

B.Com (Computer Application)

## COLLEGE VISION AND MISSION

### Vision

To be globally recognized for excellence in quality education, innovation and research for the transformation of lives to serve the society.

### Mission

#### M1: Quality Education:

To provide comprehensive academic system that amalgamates the cutting-edge technologies with best practices.

#### M2: Research and Innovation:

To foster value-based research and innovation in collaboration with industries and institutions globally for creating intellectuals with new avenues.

#### M3: Employability and Entrepreneurship:

To inculcate the employability and entrepreneurial skills through value and skill-based training.

#### M4: Ethical Values:

To instill deep sense of human values by blending societal righteousness with academic professionalism for the growth of society.

## DEPARTMENT OF BUSINESS STUDIES

### VISION AND MISSION

### Vision

To explore value-based Accounting and Management Education through innovative and flexible curriculum that enables to decipher and adapt in multidisciplinary academic and research environments and the society at large.

### Mission

#### M1: Knowledge Sharing:

To transform lives through knowledge creation and sharing

#### M2: Collaborative Learning:

To leverage the resources to provide experiential learning, immersion and other collaboration opportunities.

#### M3: Career Development:

To provide the best professional development and career growth opportunities to the students.

#### M4: Consistent Improvement:

To continuously improve through stakeholder engagement, industry relations, and assurance of learning across multiple domains.



### **Programme Outcome (PO)**

**PO1:** Acquire the essential knowledge on the successful prospects of business.

**PO2:** Understand the practical issues and challenges that the trade world encounters.

**PO3:** Apply concepts, principles and procedures in transacting business effectively.

**PO4:** Gain analytical skill in undertaking commercial ventures and evaluate the pros and cons of embarking on trade and trade related activities based on their in-depth knowledge.

**PO5:** Be employable, exhibit entrepreneurial drive and be a model of principled and ethically sound business professionals.

### **Program Specific Outcomes (PSO)**

**PSO1:** Apply the various business management and computer applications concepts to solve the real-world problems.

**PSO2:** Acquire the knowledge on object-based computer applications in various business fields.

**PSO3:** Enrich the practical knowledge on applications of accounting and programming languages in business ventures.

## BACHELOR OF COMMERCE (COMPUTER APPLICATION)

### STRUCTURE FOR UNDERGRADUATE PROGRAMME

Sl. No	Course Category	Breakdown of Credits
<b>Part I</b>		
1	Modern Indian Language (MIL)	06
<b>Part II</b>		
2	English (ENG)	06
<b>Part III</b>		
3	Discipline Specific Core Courses (DSC)	84
4	Discipline Specific Elective Courses (DSE)	12
5	Inter-Disciplinary courses (IDC)	09
6	Skill Enhancement Courses (SEC)	10
7	Employability Enhancement Courses (EEC*)	0
8	Ability Enhancement Compulsory Courses (AECC)	06
9	Open Electives (OE)	04
10	Online Courses (OC)	0
11	Extension Activity (EA)	01
<b>Total</b>		<b>138</b>

### SCHEME OF CREDIT DISTRIBUTION – SUMMARY

Sl. No	Course Category	Credits per Semester						Total Credits
		I	II	III	IV	V	VI	
Part I								
1	Language (MIL) (Tamil / French)	3	3					06
Part II								
2	English (ENG)	3	3					06
Part III								
3	Discipline Specific Core Courses (DSC)	9	14	11	17	16	17	84
4	Discipline Specific Elective Courses (DSE)			3	3	3	3	12
5	Inter-Disciplinary Courses (IDC)	3	3	3				09
6	Skill Enhancement Courses (SEC)	2		2	2	2	2	10
7	Employability Enhancement Courses (EEC*)	0	0	0	0			0
8	Ability Enhancement Compulsory Courses (AECC)	2	2		2			06
9	Open Electives (OE)			2	2			04
10	Online Courses (OC*)					0		0
11	Extension Activity (EA)		1					01
Total		22	26	21	26	21	22	138

\* EEC and OC will not be included for the computation of "Total of Credits" as well as "CGPA".




SEMESTER – I										
Sl. No.	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Part I										
Theory										
1	A20FRT101	French - I	MIL	3	0	0	3	25	75	100
	A20TAT101	Tamil - I								
Part II										
Theory										
2	A20BET101	Business English - I	ENG	3	0	0	3	25	75	100
Part III										
Theory										
3	A20BAT101	Principles of Accounting	DSC	4	1	0	5	25	75	100
4	A20CCT101	Fundamentals of Information Technology	DSC	4	0	0	4	25	75	100
5	A20CCD101	Mathematics for Computer Application	IDC	3	0	0	3	25	75	100
Skill Enhancement Course										
6	A20CCS101	Communication Skills	SEC	0	0	4	2	100	0	100
Employability Enhancement Course										
7	A20CCC101	Certification Course - I*	EEC	0	0	4	0	100	0	100
Ability Enhancement Compulsory Course										
8	A20AET101	Environmental Studies	AECC	2	0	0	2	100	0	100
							22	425	375	800

\* Employability Enhancement Course are to be selected from the list in Annexure 1




SEMESTER – II										
Sl. No.	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Part I										
Theory										
1	A20FRT202	French - II	MIL	3	0	0	3	25	75	100
	A20TAT202	Tamil - II								
Part II										
Theory										
2	A20BET202	Business English - II	ENG	3	0	0	3	25	75	100
Part III										
Theory										
3	A20CCT202	Financial Accounting for Business	DSC	3	1	0	4	25	75	100
4	A20CCT203	Programming with C	DSC	4	0	0	4	25	75	100
6	A20BFT203	Legal Aspects of Business	DSC	4	0	0	4	25	75	100
7	A20CCD202	Economics for Business Decisions	IDC	3	0	0	3	25	75	100
Practicals										
7	A20CCL201	Programming with C Lab	DSC	0	0	4	2	50	50	100
Employability Enhancement Course										
8	A20CCC202	Certification Course - II*	EEC	0	0	4	0	100	0	100
Ability Enhancement Compulsory Course										
9	A20AET202	Public Administration	AECC	2	0	0	2	100	0	100
Extension Activity										
10	A20EAL201	National Service Scheme	EA	0	0	2	1	100	0	100
							26	500	500	1000

\* Employability Enhancement Course are to be selected from the list in Annexure 1




SEMESTER – III										
Sl. No.	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Part III										
Theory										
1	A20CMT305	Corporate Accounting	DSC	4	1	0	5	25	75	100
2	A20CCT304	Programming with C++	DSC	4	0	0	4	25	75	100
3	A20CCD303	Statistics for Computer Application	IDC	3	0	0	3	25	75	100
4	A20CCE301	Basics of Data Science	DSE	3	0	0	3	25	75	100
	A20CCE302	System Software Concepts								
	A20CCE303	Business Strategy								
5	A20XXO3XX	Open Elective – I**	OE	2	0	0	2	25	75	100
Practicals										
6	A20CCL302	Programming with C++ Lab	DSC	0	0	4	2	50	50	100
Skill Enhancement Course										
7	A20CCS302	Accounting using Software	SEC	0	0	4	2	100	0	100
Employability Enhancement Course										
8	A20CCC303	Certification Course - III*	EEC	0	0	4	0	100	0	100
							21	375	425	800

SEMESTER – IV										
Sl. No.	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Part III										
Theory										
1	A20CCT405	Management Accounting	DSC	4	1	0	5	25	75	100
2	A20CCT406	Problem Solving with Java	DSC	4	0	0	4	25	75	100
3	A20CPT408	Database Management Systems	DSC	4	0	0	4	25	75	100
4	A20CCE404	Basics of Stock Market	DSE	3	0	0	3	25	75	100
	A20CCE405	Insurance and Risk Management								
	A20CCE406	Financial Markets and Services								
5	A20XXO4XX	Open Elective – II**	OE	2	0	0	2	25	75	100
Practical										
6	A20CCL403	Programming with Java Lab	DSC	0	0	4	2	50	50	100
7	A20CCL404	DBMS Lab	DSC	0	0	4	2	50	50	100
Skill Enhancement Course										
8	A20CCS403	Entrepreneurial Skills	SEC	0	0	4	2	100	0	100
Ability Enhancement Compulsory Course										
9	A20AET403	Value Education	AECC	2	0	0	2	100	0	100
Employability Enhancement Course										
10	A20CCC404	Certification Course - IV*	EEC	0	0	4	0	100	0	100
							26	525	475	1000

\* Employability Enhancement Course are to be selected from the list in Annexure 1

\*\* Open electives offered by the Departments are listed in Annexure 2




SEMESTER – V										
Sl. No.	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Part III										
Theory										
1	A20CST512	Income Tax Law and Practice	DSC	4	0	0	4	25	75	100
2	A20CMT512	Cost Accounting	DSC	3	1	0	4	25	75	100
3	A20BAT512	Financial Management	DSC	3	1	0	4	25	75	100
4	A20CCE507	Financial Derivatives	DSE	3	0	0	3	25	75	100
	A20CCE508	Banking and Insurance								
	A20CCE509	Security Analysis and Portfolio Management								
Practicals										
5	A20CCL505	Data Visualisation	DSC	0	0	4	2	50	50	100
Project										
6	A20CCP501	Mini Project	DSC	0	0	4	2	40	60	100
Skill Enhancement Course										
7	A20CCS504	Business Research Methods	SEC	0	0	4	2	100	0	100
Online Certification Course										
8	A20CCM501	MOOC - Certificate Course	OC	0	0	4	0	Successful Completion		
							21	290	410	700

SEMESTER – VI										
Sl. No.	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Part III										
Theory										
1	A20CCT607	Financial Reporting and Analysis	DSC	3	1	0	4	25	75	100
2	A20CST618	Goods and Service Tax	DSC	3	1	0	4	25	75	100
3	A20CAT613	Internet of Things	DSC	4	0	0	4	25	75	100
4	A20CCE610	Ethical Hacking	DSE	3	0	0	3	25	75	100
	A20CCE611	Cyber Security and Digital Forensics								
	A20CCE612	Personal Finance								
Skill Enhancement Course										
6	A20CCS605	Life Skills Development and Mentoring	SEC	0	0	4	2	100	0	100
Project										
7	A20CCP602	Major Project	DSC	0	0	10	5	40	60	100
							22	240	360	600



### Annexure 1

#### EMPLOYABILITY ENHANCEMENT COURSES - CERTIFICATION COURSES (Not included in CGPA and Credits computation)

**Certification Course - I, II, III & IV**  
(To be chosen from the below list but not limited)

Sl. No.	Course Title
1	MS Office
2	Tally
3	Python Programming
4	Mobile Application Development
5	Advanced Excel
6	Digital Marketing
7	Block Chain
8	PMI Project Management Ready
9	Google Analytics
10	Artificial Intelligence

## Annexure 2

### OPEN ELECTIVE COURSES

Open Elective - I (Offered in Semester III)			
Sl. No	Course Code	Course Title	Offering Department
1	A20BTO301	Biotechnology for human welfare	Bioscience
2	A20BTO302	Food Processing	Bioscience
3	A20BTO303	Food Technology	Bioscience
4	A20CHO304	Food Analysis (Practical)	Chemistry
5	A20CHO305	Molecules of Life (Practical)	Chemistry
6	A20CHO306	Water Analysis (Practical)	Chemistry
7	A20CMO307	Fundamentals of Accounting and Finance	Commerce and Management
8	A20CMO308	Fundamentals of Management	Commerce and Management
9	A20CMO309	Fundamentals of Marketing	Commerce and Management
10	A20CPO310	Data Structures	Computational Studies
11	A20CPO311	Programming in C	Computational Studies
12	A20CPO312	Programming in Python	Computational Studies
13	A20ENO313	Conversational Skills	English
14	A20ENO314	Fine-tune your English	English
15	A20ENO315	Interpersonal Skills	English
16	A20MAO316	Mathematical Modelling	Mathematics
17	A20MAO317	Quantitative Aptitude - I	Mathematics
18	A20MAO318	Statistical Methods	Mathematics
19	A20VCO319	Event Management	Media Studies
20	A20VCO320	Graphic Design	Media Studies
21	A20VCO321	Role of social media	Media Studies
22	A20NDO322	Basic Food Groups	Food Science
23	A20NDO323	Life Style Management	Food Science
24	A20NDO324	Nutritive Value of Foods	Food Science
25	A20PHO325	Astrophysics	Physics
26	A20PHO326	Basic of Modern Communication System	Physics
27	A20PHO327	Bio-Physics	Physics
28	A20TMO328	அடிப்படை தமிழ்	Tamil
29	A20TMO329	வாழ்வியல் இலக்கணம்	Tamil
30	A20TMO330	புதுக்கவிதைப் பட்டறை	Tamil




Open Elective – II (Offered in Semester IV)			
Sl. No.	Course Code	Course Title	Offering Department
1	A20BTO401	Herbal Technology	Bioscience
2	A20BTO402	Vermiculture	Bioscience
3	A20BTO403	Biotechnology for Society	Bioscience
4	A20CHO404	C++ Programming and its Application to Chemistry	Chemistry
5	A20CHO405	Computational Chemistry Practical	Chemistry
6	A20CHO406	Instrumental Methods of Analysis	Chemistry
7	A20CMO407	Essential Legal Awareness	Commerce and Management
8	A20CMO408	Essentials of Insurance	Commerce and Management
9	A20CMO409	Practical Banking	Commerce and Management
10	A20CPO410	Database Management Systems	Computational Studies
11	A20CPO411	Introduction to Data Science using Python	Computational Studies
12	A20CPO412	Web Development	Computational Studies
13	A20ENO413	Functional English	English
14	A20ENO414	English Next-India	English
15	A20ENO415	English for Competitive Exam	English
16	A20MAO416	Discrete mathematics	Mathematics
17	A20MAO417	Operations Research	Mathematics
18	A20MAO418	Quantitative Aptitude - II	Mathematics
19	A20VCO419	Basics of News Reporting	Media Studies
20	A20VCO420	Scripting for media	Media Studies
21	A20VCO421	Video Editing	Media Studies
22	A20NDO422	Food Labelling	Food Science
23	A20NDO423	Hygiene and Sanitation	Food Science
24	A20NDO424	Nutrition for Adolescent	Food Science
25	A20PHO425	Digital Electronics	Physics
26	A20PHO426	Geo-Physics	Physics
27	A20PHO427	Space Science	Physics
28	A20TMO428	சிறுகதைப் பயிற்சி	Tamil
29	A20TMO429	செய்தி வாசிப்பு பயிற்சி	Tamil
30	A20TMO430	நிகழ்த்துக்கலை	Tamil

**Syllabi**  
**FIRST SEMESTER**

<b>A20TAT101</b>	<b>TAMIL – I</b> (Common to all UG programs)	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>Hrs</b>
		<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>45</b>

**பாடத்திட்டத்தின் நோக்கம்**

- இரண்டாயிரம் ஆண்டுகால தமிழின் தொன்மையையும் வரலாற்றையும் அதன் விழுமியங்களையும் பண்பாட்டையும் எடுத்துரைப்பதாக இப்பாடத்திட்டம் அமைக்கப்பட்டுள்ளது.
- தமிழ் இலக்கியம் உள்ளடக்கத்திலும், வடிவத்திலும் பெற்ற மாற்றங்கள், அதன் சிந்தனைகள், அடையாளங்கள் ஆகியவற்றை காலந்தோறும் எழுதப்பட்ட இலக்கியங்களின் வழியாகக் சுவைவதற்கு இப்பாடத்திட்டம் அமைக்கப்பட்டுள்ளது.
- மொழியின் கட்டமைப்பைப் புரிந்து கொள்வதாகவும் பாடத்திட்டம் வடிவமைக்கப்பட்டுள்ளது.
- வாழ்வியல் சிந்தனைகள், ஒழுக்கவியல் கோட்பாடுகள், சமத்துவம், சூழலியல் எனப் பல சுவைகளை மாணவர்களுக்கு எடுத்துரைக்கும் விதத்தில் இப்பாடத்திட்டம் உருவாக்கப்பட்டுள்ளது.
- சிந்தனை ஆற்றலைப் பெருக்குவதற்குத் தாய்மொழியின் பாங்களிப்பினை உணர்த்த இப்பாடத்திட்டம் அமைக்கப்பட்டுள்ளது.

**பாடத்திட்டத்தின் வெளியீப்பாடுகள்**

- CO1** – இலக்கியங்கள் காட்டும் வாழ்வியல் நெறிமுறைகளைப் பேணிநடத்தல்.  
**CO2** – நமது எண்ணத்தை வெளிப்படுத்தும் கருவியாகத் தாய்மொழியைப் பயன்படுத்துதல்.  
**CO3** – தகவல் தொடர்புக்குத் தாய்மொழியின் முக்கியத்துவத்தை உணர்தல்.  
**CO4** – தாய்மொழியின் சிறப்பை அறிதல்.  
**CO5** – இலக்கிய இன்பங்களை நுகரும் திறன்களை வளர்த்தல்.

**அலகு-1**

(9 Hrs)

**இக்காலக் கவிதைகள்-1**

- |                    |   |                                  |
|--------------------|---|----------------------------------|
| 1. பாரதியார்       | - | கண்ணன் என் சேவகன்                |
| 2. பாரதிதாசன்      | - | தமிழ்ப்பேறு                      |
| 3. அப்துல் ரகுமான் | - | அவதாரம்                          |
| 4. மீரா            | - | கனவுகள் + கற்பனைகள் = காகிதங்கள் |
| 5. து.நரசிம்மன்    | - | மன்னித்துவிடு மகனே               |

**அலகு-2**

(9 Hrs)

**இக்காலக் கவிதைகள்-2**

- |                      |   |                                |
|----------------------|---|--------------------------------|
| 1. ராஜா சந்திரசேகர்  | - | கைவிடப்பட்ட குழந்தை            |
| 2. அனார்             | - | மேலும் சில இரத்தக் குறிய்புகள் |
| 3. சுகிர்தராணி       | - | அம்மா                          |
| 4. நா.முத்துக்குமார் | - | தூர்                           |

**அலகு-3**

(9 Hrs)

**சிறுநிலக்கியங்கள்**

- |                      |   |                                      |
|----------------------|---|--------------------------------------|
| 1. கலிங்கத்துப் பரணி | - | வொருதடக்கை வாள் எங்கே... (பாடல்-485) |
|----------------------|---|--------------------------------------|

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- |                         |   |                                      |
|-------------------------|---|--------------------------------------|
| 2. அழகர்கின்றனவிடு தூது | - | இதமாய் மனிதருடனே...(பாடல்-45)        |
| 3. நந்திக் கலம்பகம்     | - | அம்பொன்று வில்லொடிதெல்...(பாடல்-77)  |
| 4. முக்சுபுற பள்ளு      | - | பாயும் மருதஞ் செழிக்கவே...(பாடல்-47) |
| 5. குற்றாலக் குறவஞ்சி   | - | ஓடக் காண்பதுமே...(பாடல்-9)           |

#### காப்பியங்கள்

மணிமேகலை-உலகறவி புக்க காதை- 'மாகுஇல் வால்ஒளி! - இந்நாள் போலும் இளங்கொடி கெடுத்தனை'.  
(28-அடிகள்)

#### அலகு-4

(9 Hrs)

##### தமிழ் இலக்கிய வரலாறு

1. சிற்றிலக்கியம்- தோற்றமும் வளர்ச்சியும்
2. புதுக்கவிதை- தோற்றமும் வளர்ச்சியும்
3. சிறுகதை -தோற்றமும் வளர்ச்சியும்
4. புதினம் -தோற்றமும் வளர்ச்சியும்
5. உரைநடை - தோற்றமும் வளர்ச்சியும்

##### உரைநடைப் பகுதி

1. உ.வே.சாமிநாதையர் - சிவதருமோத்திரச் சுவடி பெற்ற வரலாறு.
2. தஞ்சாவூர் - சவஜாவின் கோபம்.
3. இரா. பச்சியப்பன் - மாடல்ல மற்றையவை.

#### அலகு 5

(9 Hrs)

##### மொழிப்பயிற்சி

1. கலைச்சொல்லாக்கம்
2. அகரவரிசைப்படுத்துதல்
3. மரபுத்தொடர்/பழமொழி
4. கலை விமர்சனம்
5. நேர்காணல்

##### உரைநடை நூல்கள்

1. சக்திவேல், சு., தமிழ் மொழி வரலாறு, மாணிக்கவாசகர் பதிப்பகம், சிதம்பரம், 1988.
2. சிற்பி பாலசுப்ரமணியம் மற்றும் நீலபத்மநாபன், புதிய தமிழ் இலக்கிய வரலாறு, தொகுதி-1, 2, 3, சாகித்திய அகாடமி, புதுவெல்லி, 2013.
3. பாரதியார், பாரதியார் கவிதைகள், குமரன் பதிப்பகம், சென்னை, 2011.

##### பார்வை நூல்கள்

1. கைலாசபதி.க.தமிழ் நாவல் இலக்கியம், குமரன் பதிப்பகம், வடபழனி, 1968.
2. சுந்தரராஜன், பே.கோ. சிவபாதசுந்தரம். சோ., தமிழில் சிறுகதை வரலாறும் வளர்ச்சியும், க்ரியா, சென்னை, 1989.
3. பரந்தாமனார்.அ.கி., நல்ல தமிழ் எழுத வேண்டுமா, பாரி நிலையம், சென்னை, 1998.
4. பாக்கியமேரி, வகைமை நோக்கில் தமிழ் இலக்கிய வரலாறு, என்.சி.எச். பதிப்பகம், சென்னை, 2011.
5. வல்லிக்கண்ணன். புதுக்கவிதைபின் தோற்றமும் வளர்ச்சியும், அன்னம், சிவகங்கை, 1992.

##### இணையத்தளங்கள் :

1. <http://www.tamilkodal.com>
2. <http://www.languageab.com>
3. <http://www.tamilweb.com>

<b>FRENCH – I</b>		<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>Hrs</b>
<b>A20FRT101</b>	<b>(Common to all UG programs from 2021-22)</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>45</b>

### **Course Objectives**

- To enable the students read, understand, and write simple sentences.
- To grasp relevant grammar for communication
- To learn about the land, people and culture of France.

### **UNITÉ - 1 (09 Hrs)**

Je m'appelle Elise. Et Vous ?

Vous Dansez ? D'accord

Monica, Yukiko et compagnie

### **UNITÉ - 2 (09 Hrs)**

Les Voisins de Sophie

Tu vas au Luxembourg ?

### **UNITÉ - 3 (09 Hrs)**

Nous Venons pour l'inscription

A Vélo, en tain, en avoin

Pardon, monsieur, le BHV s'il vous plait ?

### **UNITÉ - 4 (09 Hrs)**

Au march'e

On déjeune ici ?

### **UNITÉ - 5 (09 Hrs)**

On va chez ma copine ?

Chez Susana

### **Text Book**

Prescribed Text book : *FESTIVAL 1* - Méthode de Français

Authors : Sylvie POISSON-QUINTON

Michèle MAHEO-LE COADIC

Anne VERGNE-SIRIEYS

Edition : CLE International, Nouvelle Édition révisée : 2009

**Reference Book** : Festival 1

**Course Objectives**

- To understand the concept, process, and importance of communication.
- To gain knowledge about the business.
- To inculcate skills of effective communication - both written and oral.
- To acquire knowledge on application of communication skills in the business world
- To enhance the presentation and negotiations skills of the students

**Course Outcomes**

*After completion of the course, the students will be able to*

**CO1** – Understands the basics and importance of communication

**CO2** – Can inculcate all the methods of writing

**CO3** – Draft effective business writing with brevity and lucidity

**CO4** – Acquire career skills to work efficiently and collaboratively

**CO5** – Present an effective oral presentation

**UNIT I INTRODUCTION TO COMMUNICATION****(9 Hrs)**

Meaning and Definition - Process - Functions - Objectives - Importance - Essentials of good communication - Communication barriers - Overcoming communication barriers. Written - Oral - Face-to-face - Silence - Merits and limitations of each type.

**UNIT II BUSINESS LETTERS****(9 Hrs)**

Need and functions of business letters - Planning & layout of business letter - Kinds of business letters - Essentials of effective correspondence.

**UNIT III DRAFTING OF BUSINESS LETTERS****(9 Hrs)**

Enquiries and replies - Placing and fulfilling orders - Complaints and follow-up - Sales letters -Circular letters - Application for employment and resume - writing Report - Notices, Agenda and minutes of the Meetings – Memos.

**UNIT IV ORAL COMMUNICATION****(9 Hrs)**

Meaning, nature and scope - Principles of effective oral communication - Techniques of effective speech - Media of oral communication (Face-to-face conversation - Teleconferences – Press Conference – Demonstration - Radio Recording - Dictaphone – Meetings - Rumor -Demonstration and Dramatization - Public address system - Grapevine -The art of listening - Principles of good listening.

**UNIT V COMMUNICATION SKILLS****(9 Hrs)**

Group Decision-Making - Interviews - Speeches -Customer Care/Customers Relations - Public Relations (Concept, Principles, Do's and Don'ts etc. to be studied for each type).

**Text Books**

1. K. K. Sinha, "Business Communication", Galgotia Publishing, 4<sup>th</sup> Edition, 2011.
2. C. S. Rayudu, "Media and Communication Management", Himalaya Publishing House, 1<sup>st</sup> Edition, 2013.
3. Hory Sankar Mukerjee, "Business Communication: Connecting at Work", Oxford University Press, 1<sup>st</sup> Edition, 2016.

### Reference books

1. Rajendra Pal & J. S. Korlahalli, "Essentials of Business Communication", Sultan Chand & Sons, 3<sup>rd</sup> Edition, 2011.
2. Nirmal Singh, "Business Communication: Principles, Methods and Techniques", Deep & Deep Publications Pvt. Ltd, 1<sup>st</sup> Edition, 2008.
3. Krishna Mohan, R.C. Mohan & Virendra Singh Nirban, "Business Correspondence and Report Writing", Tata McGraw-Hill Publishing, 6<sup>th</sup> Edition, 2020.

### Web References

1. <https://writingcenter.unc.edu/tips-and-tools/business-letters/>
2. [https://onlinecourses.swayam2.ac.in/cec22\\_cm02/preview](https://onlinecourses.swayam2.ac.in/cec22_cm02/preview)
3. <https://thebusinesscommunication.com/what-is-face-to-face-conversation/>
4. <https://www.emerald.com/insight/publication/issn/1356-3289>
5. <https://nptel.ac.in/courses/109104031>





**Course Objectives**

- To develop a deeper understanding of the Fundamentals of Accounting
- To develop the knowledge of accounting from incomplete records.
- To appreciate the role and significance of subsidiary books in accounting system
- To learn the preparation of basic financial statements.
- To gain knowledge about the accounting for non-profit entities.

**Course Outcomes**

*After completion of the course, the students will be able to*

**CO1** – Explain the concepts of accounting and solve simple problems on fundamentals of accounting

**CO2** – Prepare basic financial statements from incomplete accounting records.

**CO3** – Prepare various subsidiary books including different types of cash books.

**CO4** – Prepare the basic financial statements of various business entities.

**CO5** – Handle the accounting pertaining to Non-Profit Making Entities.

**UNIT I ACCOUNTING FUNDAMENTALS****(15 Hrs)**

Meaning and Scope of Accounting, Basic Accounting Concepts, and Conventions – Accounting Standards – International Financial Reporting Standards and their applicability in India – Nature and Objectives of Accounting – Distinction between Book-Keeping and Accountancy – Accounting Transactions – Double Entry Book Keeping – Maintenance of Journal, Ledger, and Trial Balance. Simple Problems on Journal and Trial Balance Preparation.

**UNIT II ACCOUNTING FROM INCOMPLETE RECORDS****(15 Hrs)**

Introduction – Meaning of incomplete records – Features of incomplete records - Limitations of incomplete records - Differences between double entry system and incomplete records - Accounts from incomplete records - Ascertaining profit or loss from incomplete records through statement of affairs - Preparation of final accounts from incomplete records.

**UNIT III SUBSIDIARY BOOKS****(15 Hrs)**

Subsidiary Books – Meaning and Importance – Types of Subsidiary Books – Purchase Book – Sales Book – Purchase Returns Book – Sales Returns Book – Bills Receivables Book – Bills Payables Book – Journal Proper – Cash Book. Types of Cash Book – Simple, Double-column, Triple-Column, Petty Cash Book. Simple Problems in Sales Book, Purchases Book, and Cash Book.

**UNIT IV FINAL ACCOUNTS****(15 Hrs)**

Preparation of Manufacturing, Trading & Profit and Loss Account or Income Statement – Meaning, Contents, and Preparation – Balance Sheet or Position Statement – Meaning, Contents and Preparation – Adjustments in Final Accounts (Closing Stock, Expenses and Income Outstanding, Expenses paid and Income received in advance, Depreciation, Provision for Bad and Doubtful Debts, Interest on Capital and Interest on Drawings. Preparation of Basic Financial Statements with special adjustments - Practical Problems.

**UNIT V ACCOUNTING FOR NON-PROFIT ENTITIES****(15 Hrs)**

Introduction – Features of non-profit organizations – Receipts and Payments Account -Items peculiar to not-for-profit organizations (Capital expenditure, Revenue expenditure, Deferred revenue expenditure, Capital receipt, Revenue receipt) - Income and Expenditure Account - Balance Sheet.

### Text Books

1. S.P. Jain & K.L. Narang, "Financial Accounting", Kalyani Publishers, 12<sup>th</sup> Edition, 2014.
2. S.N. Maheswari, Suneel K. Maheswari & Sharad K. Maheswari, "An Introduction to Accountancy", Vikas Publishing House, 12<sup>th</sup> Edition, 2019.
3. Maheswari & Maheswari, "Financial Accounting", Vikas Publishing House, 6<sup>th</sup> Edition, 2018.

### Reference Books

1. K.L. Nagarajan, N. Vinayagam & P.L. Mani, "Principles of Accountancy", S. Chand & Sons, 4<sup>th</sup> Edition, 2016.
2. T.S. Grewal, "Double Entry Book-keeping", Sultan Chand & Sons, 12<sup>th</sup> Edition, 2020.
3. Hanif & Mukherjee, "Financial Accounting", Tata McGraw Hill, 2<sup>nd</sup> Edition, 2019.
4. P.C. Tulsian & Bharat Tulsian, "Financial Accounting", S.Chand, 2<sup>nd</sup> Edition, 2016.

### Web References

1. <https://nptel.ac.in/courses/110101003>
2. <https://archive.nptel.ac.in/courses/110/101/110101131/>
3. <https://courses.lumenlearning.com/sac-finaccounting/chapter/ledgers-journals-andaccounts/>
4. <http://www.accountingnotes.net/management-accounting/management-accountingmeaning-limitations-and-scope/5859>
5. <https://efinancemanagement.com/financial-accounting/financial-statement-notes>



**A20CCT101**

**FUNDAMENTALS OF INFORMATION  
TECHNOLOGY**

L	T	P	C	Hrs
4	0	0	4	60

**Course Objectives**

- To provide an in-depth understanding of Modern Computer Systems.
- To explain purpose and types of Data Resource Management.
- To be familiar with Telecommunications and Computer Networks.
- To understand the Electronic Commerce Systems.
- To understand the E-governance.

**Course Outcomes**

*After completion of the course, the students will be able to*

**CO1** – Demonstrate their conceptual understanding and component of Modern Computer Systems.

**CO2** – Appreciate the purpose and types of Data Resource Management.

**CO3** – Develop skills and ability to work with Telecommunications and Computer Networks

**CO4** – Demonstrate their ability in concepts related to Electronic Commerce Systems.

**CO5** – Understand the importance of E-governance

**UNIT I MODERN COMPUTER SYSTEMS**

**(13 Hrs)**

Computer Peripherals, Input, Output and Storage technologies: Voice Recognition and Response Optical Scanning - Video Output - Word Processing - Desktop Publishing - System Software - Operating Systems - Programming Language.

**UNIT II DATA RESOURCE MANAGEMENT**

**(12 Hrs)**

Introduction to DBMS, Types of DBMS, Application of DBMS, Concept of Data Warehouses and Data Marts, Introduction to Data Centers. Storage Technologies.

**UNIT III TELECOMMUNICATIONS AND COMPUTER NETWORKS**

**(15 Hrs)**

Types of networks, Advantages of Network Environment, Business Uses of Internet, Intranet and Extranet, Web 2.0/3.0/4.0/5.0, Distributed/Cloud/Grid Computing, GSM & CDMA, GPRS, 3G, 4G & 5G technologies, VOIP and IPTV.

**UNIT IV ELECTRONIC COMMERCE SYSTEMS**

**(10 Hrs)**

Introduction to e-Commerce and M-Commerce, Advantages and Disadvantages. Concept of B2B, B2C, C2C. Concept of Internet Banking and Online Shopping, Electronic Payment Systems.

**UNIT V E-GOVERNANCE**

**(10 Hrs)**

Concept of e-governance, Technologies for e-governance, e- governance as an effective tool to manage the country's citizens and resources, Advantages and Disadvantage of E-governance, E-governance perspective in India.

**Text Books**

1. Norton P (2010), Introduction to Computers, Tata McGraw-Hill



2. Potter T (2010), Introduction to Computers, John Wiley & Sons (Asia) Pvt Ltd
3. Morley D & Parker CS (2009), Understanding Computers – Today and Tomorrow, Thompson Press

### **Reference books**

1. Jawadekar, WS (2009); Management Information System; Tata McGraw Hill
2. Mclead R & Schell G (2009), Management Information Systems; Pearson Prentice Hall
3. O'Brein, JA (2009); Introduction to Information Systems; Tata McGraw Hill

### **Web References**

1. <https://crk.umn.edu/academics/math-science-and-technology-department/information-technology-management/online>
2. <https://www.igi-global.com/journal/information-technology-management/1074>
3. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5787626/>



**A20CCD101**

**MATHEMATICS FOR COMPUTER  
APPLICATION**

<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>Hrs</b>
<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>45</b>

**Course Objectives**

- To provide an understanding on matrices and determinants
- To know about the applications of matrices and determinants in business
- To be conversant with the ratios and proportions
- To be familiar with Permutations, Combinations, and Sequences
- To be aware of the applications of differential calculus

**Course Outcomes**

*After completion of the course, the students will be able to*

- CO1** - Demonstrate an understanding of applications of Matrices and Determinants.  
**CO2** - Analyse the applications of matrices and determinants in business and economics.  
**CO3** - Demonstrate mastery of mathematical concepts relating to ratios, proportions, indices, logarithms and equations.  
**CO4** - Apply the principles of permutations, combinations, sequences and series in various business applications.  
**CO5** - Know how to compute derivative of a function and higher order differentiation.

**UNIT I MATRICES AND DETERMINANTS**

**(09 Hrs)**

Matrices – Definition and Types. Equality of matrices, Algebra of matrices, Positive Integral Power of a Square Matrix, Matrix Polynomial, Transpose of a Matrix, Symmetry and Skewed Symmetric Matrices. Determinants of a Square Matrix. Properties of Determinants, Adjoint of a Square Matrix, Singular and Non-Singular Matrices, Inverse of a Square Matrix.

**UNIT II APPLICATIONS OF MATRICES IN BUSINESS AND ECONOMICS**

**(09 Hrs)**

Matrix Representation of Data – Matrix Addition and Subtraction, Application, Scalar Multiplication. Methods of Solving non-homogenous system of linear equations – Matrix Inverse method, Determinants method, Gauss Jordon Elimination method – Applications of Matrices in Business and Economics Decisions.

**UNIT III RATIO-PROPORTION, INDICES, LOGARITHMS AND EQUATIONS**

**(09 Hrs)**

Ratios – Proportions – Properties of Proportion. Exponent (Index) of the Power – Laws of Indices. Logarithm – Laws of Logarithms, Systems of Logarithms, Characteristic and Mantissa. Equations – Basic Definitions – Quadratic Equation – Solving a Quadratic Equation – Nature of the Discriminant.

**UNIT IV PERMUTATION, COMBINATION, SEQUENCES & SERIES**

**(09 Hrs)**

The Factorial – Fundamental Principle of Multiplication – Rule of Addition. Permutation and Combination – Difference between Permutation and Combination – Important Formulae of Permutation and Combination – Various Kinds of Permutations – Kind of Combinations . Progression - Sequences and Series – Arithmetic Progression – Geometric Progression.

**UNIT V DIFFERENTIAL CALCULUS**

**(09 Hrs)**

Mathematical functions and their types- linear, quadratic, polynomial, exponential, Logarithmic function Concepts of limit, and continuity of a function. Concept and rules of differentiation, Maxima and Minima involving second or higher order derivatives.



### Text Books

1. Bharat Tulsian & P.C. Tulsian, "Business Mathematics, Logical Reasoning & Statistics", McGraw Hill Education, 1<sup>st</sup> Edition, 2019.
2. Soma Garg & Arun Julka, "Business Mathematics and Statistics", Taxmann Publications, 1<sup>st</sup> Edition, 2010.
3. R.S. Soni, "Business Mathematics and Business Statistics", Ane Books, 1<sup>st</sup> Edition, 2009.

### Reference Books

1. R.S. Soni & A.K. Soni, "Business Mathematics", Ane Books, 1<sup>st</sup> Edition, 2013.
2. Mizrahi and Sullivan, "Mathematics for Business and Social Sciences". Wiley and Sons, 1<sup>st</sup> Edition, 1979.
3. Ayres, Frank Jr., "Schaum's Outline Series: Theory and Problems of Mathematics of Finance", McGraw Hill Education, 1<sup>st</sup> Edition, 1963.
4. Vishal Saxena, "Business Mathematics, Logical Reasoning & Statistics", Bharat Law House, 1<sup>st</sup> Edition, 2019.

### Web References

1. [https://onlinecourses.swayam2.ac.in/nou22\\_cm08/preview](https://onlinecourses.swayam2.ac.in/nou22_cm08/preview)
2. <https://resource.cdn.icaai.org/46668bosfnd-p3-cp1.pdf>
3. <https://resource.cdn.icaai.org/46670bosfnd-p3-cp2-u2.pdf>
4. <https://resource.cdn.icaai.org/46673bosfnd-p3-cp5.pdf>
5. <https://resource.cdn.icaai.org/46674bosfnd-p3-cp6.pdf>



**Course Objectives**

- To improve the skill of rapid reading and comprehending efficiently.
- To expound the significance of time and stress management.
- To decode the correspondence between sound and spelling in English.
- To enhance the sense of social responsibility and accountability of the students.
- To train students to organize, revise and edit ideas to write clearly and commendably.

**Course Outcomes**

*After the completion of the course, the students will be able to*

**CO1** - Understand the pattern to communicate effectively.

**CO2** - Expertise in Managerial skills.

**CO3** - Impart Speaking skills with self-confidence.

**CO4** - Demonstrate leadership qualities to Participate in Group Discussion and Interview efficiently.

**CO5** - Use writing strategies to improve their drafting skills and comprehending of articles.

**UNIT I COMMUNICATION SKILLS - SPEAKING****(12 Hrs)**

1. Aspects of speaking
2. Process and techniques of effective speech
3. Presentations
4. Topic to be given to students for short speech
5. Self-Introduction

**UNIT II SELF-MANAGEMENT SKILLS****(12 Hrs)**

1. Time Management
2. Stress management
3. Perseverance
4. Resilience
5. Mind mapping
6. Self- confidence

**UNIT III COMMUNICATION SKILLS – READING****(12 Hrs)**

1. Phonics
2. Vocabulary
3. Comprehension
4. Skimming and Scanning

**UNIT IV SOCIAL SKILLS****(12 Hrs)**

1. Negotiation and Persuasion
2. Leadership
3. Teamwork
4. Problem solving
5. Empathy
6. Decision making



## UNIT V COMMUNICATION SKILLS - WRITING

(12 Hrs)

1. Descriptive
2. Narrative
3. Persuasive
4. Expository
5. Picture composition

### Text Books

1. Syamala. V, "Effective English Communication for you", Emerald Publishers, 1<sup>st</sup> Edition, 2002.
2. Balasubramanian, "A Textbook of English Phonetics for Indian Students", Trinity Press, 1<sup>st</sup> Edition, 1981.
3. Sardana, C.K., "The Challenge of Public Relations", Har- Anand Publications, 1<sup>st</sup> Edition, 1995.

### Reference Books

1. Murphy, John J, "Pulling Together: 10 Rules for High-Performance Teamwork", Simple Truths, 1<sup>st</sup> Edition, 2016.
2. Sanjay Kumar, PusphLata. "Communication Skills".Oxford University Press.1<sup>st</sup> Edition, 2015.
3. Barun K. Mitra, "Personality Development and Soft skills", Oxford University Press, 1<sup>st</sup> Edition, 2016.

### Web References

1. <https://blog.dce.harvard.edu/professional-development/10-tips-improving-your-public-speaking-skills>
2. [https://onlinecourses.swayam2.ac.in/cec22\\_cm02/preview](https://onlinecourses.swayam2.ac.in/cec22_cm02/preview)
3. <https://journals.sagepub.com/home/jbt>
4. <https://nptel.ac.in/courses/109104031>
5. <http://www.businesscommunicationblog.com>





**Course Objectives**

- To gain knowledge on the importance of natural resources and energy.
- To know the structure and function of an ecosystem.
- To know the causes of types of pollution and disaster management
- To imbibe an aesthetic value with respect to biodiversity, understand the threats and its conservation and appreciate the concept of interdependence
- To observe and discover the surrounding environment through field work.

**Course Outcomes**

*After completion of the course, the students will be able to*

**CO1** – Understand about the various resources.

**CO2**– Learn about the biodiversity.

**CO3**– Learn the different types of pollution and to prevent the pollution.

**CO4**– Know about the pollution Act.

**CO5**– Observe various environmental issues in surroundings.

**UNIT I ENVIRONMENTAL SCIENCES: NATURAL RESOURCES****(6 Hrs)**

Environmental Sciences - Relevance - Significance - Public awareness - Forest resources - Water resources - Mineral resources - Food resources - conflicts over resource sharing - Exploitation - Land use pattern - Environmental impact - fertilizer - Pesticide Problems - case studies.

**UNIT II ECOSYSTEM, BIODIVERSITY AND ITS CONSERVATION****(6 Hrs)**

Ecosystem - concept - structure and function - producers, consumers and decomposers - Food chain - Food web - Ecological pyramids - Energy flow - Forest, Grassland, desert and aquatic ecosystem. Biodiversity - Definition - genetic, species and ecosystem diversity - Values and uses of biodiversity - biodiversity at global, national (India) and local levels - Hotspots, threats to biodiversity - conservation of biodiversity –Insitu&Exsitu.

**UNIT III ENVIRONMENTAL POLLUTION AND MANAGEMENT****(6 Hrs)**

Environmental Pollution - Causes - Effects and control measures of Air, Water, Marine, soil, solid waste, Thermal, Nuclear pollution and Disaster Management - Floods, Earth quake, Cyclone and Landslides. Role of individuals in prevention of pollution - pollution case studies.

**UNIT IV SOCIAL ISSUES - HUMAN POPULATION****(6Hrs)**

Urban issues - Energy - water conservation - Environmental Ethics - Global warming - Resettlement and Rehabilitation issues - Environmental legislations - Environmental production Act. 1986 - Air, Water, Wildlife and forest conservation Act - Population growth and Explosion - Human rights and Value Education - Environmental Health - HIV/AIDS - Role of IT in Environment and Human Health - Women and child welfare - Public awareness - Case studies.

**UNIT V FIELD WORK****(6 Hrs)**

Visit to a local area / local polluted site / local simple ecosystem - Report submission.

### **Text Books**

1. Bharucha Erach, "Textbook of Environmental Studies for Undergraduate Courses", Orient Black Swan, 2<sup>nd</sup> Edition, 2013.
2. Basu Mahua, Savarimuthu Xavier, "Fundamentals of Environmental Studies", Cambridge, 2<sup>nd</sup> Edition, 2017.
3. Agarwal, K.C. "Environmental Biology", Nidi Publications, 1<sup>st</sup> Edition, 2004.

### **Reference Books**

1. Kumarasam, Alagappa Moses & Vasanthy, "Environmental Studies", Bharathidasan University Publications, 1<sup>st</sup> Edition, 2004.
2. Rajamannar, "Environmental Studies", EVR College Publications, 1<sup>st</sup> Edition, 2004.
3. Kalavathy, S, "Environmental Studies", Bishop Heber College Publications, 1<sup>st</sup> Edition, 2004.

### **Web References**

1. [https://aits-tpt.edu.in/wp-content/uploads/2018/08/Environmental-Studies-Lecture-notes.doc-I\\_Betech\\_-ECE-CSE-EEE-CEME\\_III-Sem\\_BR.pdf](https://aits-tpt.edu.in/wp-content/uploads/2018/08/Environmental-Studies-Lecture-notes.doc-I_Betech_-ECE-CSE-EEE-CEME_III-Sem_BR.pdf)
2. <http://eagri.org/eagri50/ENVS302/pdf/lec05.pdf>
3. <https://www.youtube.com/watch?v=78prsPYm98g>
4. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2792934/>
5. <https://www.frontiersin.org/articles/505570>



## SECOND SEMESTER

A20TAT202

TAMIL-II  
(Common to all UG Programs)

L	T	P	C	Hrs
3	0	0	3	45

### பாடத்திட்டத்தின் நோக்கம்

- இரண்டாயிரம் ஆண்டுகால தமிழின் தொன்மையையும் வரலாற்றையும் அதன் விழுமியங்களையும் பண்பாட்டையும் எடுத்துரைப்பதாக இப்பாடத்திட்டம் அமைக்கப்பட்டுள்ளது.
- தமிழ் இலக்கியம் உள்ளடக்கத்திலும், வடிவத்திலும் பெற்ற மாற்றங்கள், அதன் சிந்தனைகள், அடையாளங்கள் ஆகியவற்றை காலந்தோறும் எழுதப்பட்ட இலக்கியங்களின் வழியாகக் கூறுவதற்கு இப்பாடத்திட்டம் அமைக்கப்பட்டுள்ளது.
- மொழியின் கட்டமைப்பைப் புரிந்து கொள்வதாகவும் பாடத்திட்டம் வடிவமைக்கப்பட்டுள்ளது.
- வாழ்வியல் சிந்தனைகள், ஒழுக்கவியல் கோட்பாடுகள், சமத்துவம், சூழ்வியல் எனப் பல கூறுகளை மாணவர்களுக்கு எடுத்துரைக்கும் விதத்தில் இப்பாடத்திட்டம் உருவாக்கப்பட்டுள்ளது.
- சிந்தனை ஆற்றலைப் பெருக்குவதற்குத் தாய்மொழியின் பாங்களிப்பினை உணர்த்த இப்பாடத்திட்டம் அமைக்கப்பட்டுள்ளது.

### பாடத்திட்டத்தின் வெளிப்பாடுகள்

- CO1 – இலக்கியங்கள் காட்டும் வாழ்வியல் நெறிமுறைகளைப் பேணிநடத்தல்.  
CO2 – நமது எண்ணத்தை வெளிப்படுத்தும் கருவியாகத் தாய்மொழியைப் பயன்படுத்துதல்.  
CO3 – தகவல் தொடர்புக்குத் தாய்மொழியின் முக்கியத்துவத்தை உணர்தல்.  
CO4 – தாய்மொழியின் சிறப்பை அறிதல்.  
CO5 – இலக்கிய இன்பங்களை நுகரும் திறன்களை வளர்த்தல்.

### அலகு-1

(9 Hrs)

- எட்டுத்தொகை: 1. குறுந்தொகை (பாடல்-130) 2. நற்றிணை (பாடல்-27) 3. அகநானூறு (பாடல்-86).
- பத்துப்பாட்டு: சிறுபாணாற்றுப்படை (அடிகள்-126-143).
- பதினெண் கீழ்க்கணக்கு: திருக்குறள்- வெகுளாமை (அதிகாரம்-31), காதல் சிறப்புரைத்தல் (அதிகாரம்-113).

### அலகு-2

(9 Hrs)

- எட்டுத்தொகை:
  - ஐங்குறுநூறு (பாடல்-203),
  - கலித்தொகை- பாலைத்திணை (பாடல்-9),
  - புறநானூறு (பாடல்-235).
- பத்துப்பாட்டு- முல்லைப்பாட்டு (6-21).
- பதினெண் கீழ்க்கணக்கு :
  - நாலடியார் - நல்லார் எனத்தான் (221) .
  - திரிகடுகம்- கோலஞ்சி வாழும் குடியும் (33).
  - இனியவை நாற்பது- குழவி தளர்நடை (14).
  - கார் நாற்பது- நலமிகு கார்த்திகை (26).
  - களவழி நாற்பது- கவளங்கொள் யானை (14).

### அலகு-3

(9 Hrs)

#### சைவம்- பன்னிரு திருமுறைகள்

- திருஞானசம்பந்தர் – வேயுறு தோளியங்கன் (இரண்டாம் திருமுறை).

2. திருநாவுக்கரசர்	-	மனமெனும் தோணி (நான்காம் திருமுறை).
3. சுந்தரர்	-	ஏழிசையாய் இசைப்பயனாய் (எழாம் திருமுறை).
4. மாணிக்கவாசகர்	-	ஆதியும் அந்தமும் இல்லா (திருவெம்பாவை).
5. திருமுல்	-	அன்பு சிவம் இரண்டு (திருமந்திரம்).

#### வைணவம் - நாலாயிரத் திவ்வியப் பிரபந்தம்

1. பேயாழ்வார்	-	திருக்கண்டேன் பொன்மேனி....
2. பெரியாழ்வார்	-	கருங்கண் தோகை மயிற் பீலி....
3. தொண்டரடிப்பொடிஆழ்வார்	-	பச்சைமாமலை போல்....
4. ஆண்டாள்	-	கருப்பூரம் நூறுமோ? கமலப்பு....
5. திருமங்கையாழ்வார்	-	வாடினேன் வாடி வருந்தினேன்....

#### இஸ்லாமியம்

சீறாப்பராணம்- பாடல் நின்ற பிணை மானுக்குப்...5 பாடல்கள் (பாடல் எண்கள் 61-65).

#### கிருத்துவம்

இரட்சணிய யாத்ரீகம்- கடைதிறப்புப் படலம் -5 பாடல்கள் (பாடல் எண்கள்: 3,9,10,15,16).

#### அலகு - 4

(9 Hrs)

##### தமிழ் இலக்கிய வரலாறு

1. சங்க இலக்கியங்கள் 2. நீதி இலக்கியங்கள் 3. பக்தி இலக்கியங்கள் 4. காப்பியங்கள்.

#### அலகு-5

(9 Hrs)

##### சிறுகதைகள்

1. புதுமைபித்தன்	-	அகலிகை
2. நா. பிச்சமூர்த்தி	-	வேப்பமரம்
3. அகிலன்	-	ஒரு வேளைச்சோறு
4. ஜி.நாகராஜன்	-	பச்சக் குதிரை
5. கி.ராஜநாராயணன்	-	கதவு
6. சா.கந்தசாமி	-	தக்கையின் மீது நான்கு கண்கள்
7. ஆண்டாள் பிரியதர்ஷினி	-	மாத்திரை
8. வண்ணதாசன்	-	ஒரு உல்லாசப் பயணம்
9. சு. தமிழ்ச்செல்வன்	-	வெயிலோடு போய்
10. பாரததேவி	-	மாப்பிள்ளை விருந்து

#### பார்வை நூல்கள் :

1. அரசு, வீ., இருபதாம் நூற்றாண்டு சிறுகதைகள் நூறு, அடையாளம் பதிப்பகம், திருச்சி, 2013.
2. அருணாச்சலம், பா., பக்தி இலக்கியங்கள், பாரி நிலையம், சென்னை, 2010.
3. தமிழண்ணல், புதிய நோக்கில் தமிழ் இலக்கிய வரலாறு, மீனாட்சி புத்தக நிலையம், மதுரை, 2000.
4. பாக்கியமேரி, வகைமை நோக்கில் தமிழ் இலக்கிய வரலாறு, என்.சி.பி.எச். பதிப்பகம், சென்னை, 2011.
5. பசுபதி, மா. வே., செம்மொழித் தமிழ் இலக்கண இலக்கியங்கள், தமிழ்ப் பல்கலைக்கழகம், 2010 .

#### இணையத்தளங்கள் :

1. <http://www.tamilkodal.com>
2. <http://www.languagelab.com>
3. <http://www.tamilweb.com>

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**A20FRT202**

**FRENCH-II**  
(Common to all UG Programs)

L	T	P	C	Hrs
3	0	0	3	45

**Course Objectives:**

- To enable the students read, understand, and write simple sentences.
- To grasp relevant grammar for communication
- To learn about the land, people and culture of France.

**UNITÉ - 1 (09 Hrs)**

Qu'est -ce qu'on leur offre ?

On solde !

Découvrir Paris en bus avec l'open Tour

**UNITÉ - 2 (09 Hrs)**

Si vous gagne vous ferez quoi

Parasol ou parapluie ?

**UNITÉ - 3 (09 Hrs)**

Quand il est midi à Paris

Vous allez Vivre à Paris

L'avenir du Français

**UNITÉ - 4 (09 Hrs)**

Souvenirs d'enfance

j'ai fait mes études à Lyon 2

**UNITÉ - 5 (09 Hrs)**

Retour des Antilles

Au voleur ! Au voleur !

**Text Book**

Prescribed Textbook : *FESTIVAL 1* - Méthode de Français

Authors : Sylvie POISSON-QUINTON

Michèle MAHEO-LE COADIC

Anne VERGNE-SIRIEYS

Edition : CLE International, Nouvelle Édition révisée : 2009.

**Reference Book**      Festival 1



**Course Objectives**

- To develop the vocabulary and use it in their day today life
- To gain knowledge about the business writing
- To learn and develop soft skills
- To acquire knowledge on application of communication skills in the business world
- To enhance the presentation skills of the students with the use of modern era tools

**Course Outcomes**

*After completion of the course, the students will be able to*

**CO1** – Understands the basics and importance of communication.

**CO2** – Demonstrates all methods of writing.

**CO3** – Utilize soft skills for better communication.

**CO4** – Acquire career skills to work efficiently and collaboratively.

**CO5** – Appraise the use of technology for Communicating effectively.

**UNIT I VOCABULARY DEVELOPMENT****(9 Hrs)**

Business vocabulary -Business Idioms - Business Phrases -One-word substitute -Incorrectly spelt words- confusable- Synonyms -Antonyms

**UNIT II BUSINESS WRITING****(9 Hrs)**

Article writing - Application -Poster -Advertisement design- HR Letters – Letters of Offer, Performance Appraisal and Termination

**UNIT III SOFT SKILLS****(9 Hrs)**

Introduction- Self-confidence, - Leadership Skills- Time Management -Stress Management – Team Management - Positive Attitude- Goal Setting- Career Planning-Creative Thinking – Public Speaking- Emotional Quotient.

**UNIT IV APPLICATION OF COMMUNICATION SKILLS****(9 Hrs)**

Presentation skills: Setting the objectives –planning – preparation – practice and rehearsal –getting ready – making the presentation – paralinguistic elements in Presentation-Types of visual aids to support presentation. Negotiation skills: Nature and Need-Factors affecting Negotiation-Process of negotiation Types of Negotiators- Tips for successful negotiation.

**UNIT V TECHNOLOGY IN COMMUNICATION****(9 Hrs)**

E-mail -Email etiquette- Telephone Advantages and Disadvantages – Guidelines for effective telephonic conversation – Fax- Tele conferencing -Video conferencing.

**Text Books**

1. Rajendra Pal & J. S. Korlahalli, "Essentials of Business Communication", Sultan Chand & Sons, 3<sup>rd</sup> Edition, 2011.
2. C.B. Gupta, "Basic Business Communication", Sultan Chand & Sons, 4<sup>th</sup> Edition, 2017.

3. HorySankarMukerjee, "Business Communication: Connecting at Work", Oxford University Press, 1<sup>st</sup> Edition, 2016.

### **Reference Books**

1. NiraKonar, "Communication Skills for Professionals", Prentice Hall of India, 2<sup>nd</sup> Edition, 2011.
2. Nirmal Singh, "Business Communication: Principles, Methods and Techniques", Deep & Deep Publications Pvt. Ltd, 1<sup>st</sup> Edition, 2008.
3. Krishna Mohan, R.C. Mohan &Virendra Singh Nirban, "Business Correspondence and Report Writing", Tata McGraw-Hill Publishing, 6<sup>th</sup> Edition, 2020.
4. Kevin Gallagher, "Skills Development for Business and Management Students", Oxford University Press., 1<sup>st</sup> Edition, 2010.

### **Web References**

1. <https://www.readnaturally.com/research/5-components-of-reading/vocabulary>
2. <https://businesswriting.com>
3. <https://www.teachingenglish.org.uk/article/paralinguistics>
4. <https://www.entrepreneur.com/article/236724>
5. <https://www.inc.com/guides/2010/06/email-etiquette.html>



**Course Objectives**

- To develop the knowledge of admission of partnership accounting.
- To gain knowledge about the Retirement and Death of Partners.
- To learn the computation of royalties and self-balancing system.
- To help students to acquaint with application of branch and departmental accounting.
- To make the hire purchase and installment payment accounting.

of admission of partnership accounting

**Course Outcomes**

*After completion of the course, the students will be able to*

- CO1** – Prepare Accounting of admission of partners..  
**CO2** – Understand the settlements due at the time of retirement and death of partners.  
**CO3** – Compute royalties accurately and maintain of self-balancing ledgers  
**CO4** – Comprehend the preparation of branch and departmental accounting.  
**CO5** – Make necessary books of record under hire purchase and instalment methods.

**UNIT I PARTNERSHIP ACCOUNTING: ADMISSION OF PARTNERS (13 Hrs)**

Introduction - Meaning, definition and features of partnership - Partnership deed - Methods of maintaining capital accounts of partners - Interest on capital and interest on drawings of partners - Salary and commission to partners - Interest on loan from partners - Division of profits among partners. Admission of a new partner - Introduction - Adjustments required at the time of admission of a partner - Distribution of accumulated profits, reserves and losses - Revaluation of assets and liabilities - New profit-sharing ratio and Sacrificing ratio - Adjustment for goodwill - Adjustment of capital on the basis of new profit-sharing ratio.

**UNIT II RETIREMENT AND DEATH OF PARTNERS (12 Hrs)**

Retirement of a partner – Introduction - Adjustments required on retirement of a partner - Distribution of accumulated profits, reserves and losses - Revaluation of assets and liabilities - Determination of new profit-sharing ratio and gaining ratio - Adjustment for goodwill - Adjustment for current year's profit or loss up to the date of retirement - Settlement of the amount due to the retiring partner - Death of a partner - Adjustments required on the death of a partner.

**UNIT III ROYALTIES AND SELF BALANCING LEDGERS (12 Hrs)**

Royalty meaning in Accounting, Parties in Royalties Accounting, Types of Royalties in Accounts, Important Terms in Royalties Accounting, Royalties Accounting Treatment, Accounting Treatment in Books of Lessee and Accounting Treatment in Books of Lessor. Self-Balancing System: Introduction, working system and various ledgers to be maintained.

**UNIT IV BRANCH AND DEPARTMENTAL ACCOUNTING (12 Hrs)**

Branch Accounts-Dependent Branches (Debtors system, Stock & Debtors system) and Independent Branches (Foreign Branches excluded) – Departmental Accounts: Departmental Trading Account; Profit & Loss Account – Calculation of net profit of various departments and allocation of expenses – Preparation of General Profit & Loss Account and Balance Sheet.

**UNIT V HIRE PURCHASE AND INSTALMENTS SYSTEMS (11 Hrs)**

Introduction - Nature of Hire Purchase Agreement, Special Features, Terms Used and Ascertainment of Total Cash Price, Ascertainment of Interest, Accounting Arrangements of Hire Purchase Transaction, Repossession, Instalment payment system, Differences between Hire Purchase Agreement and Instalment Payment Agreement.



### **Text Books**

1. Hanif & Mukherjee, "Financial Accounting", Tata McGraw Hill, 2<sup>nd</sup> Edition, 2019.
2. S.P. Jain & K.L. Narang, "Financial Accounting", Kalyani Publishers, 12<sup>th</sup> Edition, 2014.
3. P.C. Tulsian & Bharat Tulsian, "Financial Accounting", S.Chand, 2<sup>nd</sup> Edition, 2016.

### **Reference Books**

1. M.C. Shukla, T.S. Grewal & S.C. Gupta, "Advanced Accounts – Vol.1", S.Chand & Sons, 19<sup>th</sup> Edition, 2017.
2. R.L. Gupta & Radhaswamy, "Advanced Accountancy – Vol.1", Sultan Chand & Sons, 1<sup>st</sup> Edition, 2013.
3. Arulanandam & Raman, "Advanced Accountancy Vol.1", Himalaya Publishing House, 7<sup>th</sup> Edition, 2018.
4. Maheswari & Maheswari, "Financial Accounting", Vikas Publishing House, 6<sup>th</sup> Edition, 2018.

### **Web References**

1. [https://onlinecourses.nptel.ac.in/noc19\\_mg37/preview](https://onlinecourses.nptel.ac.in/noc19_mg37/preview)
2. <https://archive.nptel.ac.in/courses/110/106/110106147/>
3. <https://icmai.in/upload/Students/Syllabus2016/Inter/Paper-5-January-2021.pdf>
4. <https://ocw.mit.edu/courses/sloan-school-of-management/15-515-financial-accounting-fall-2003/>
5. [https://www.icai.org/post.html?post\\_id=12430](https://www.icai.org/post.html?post_id=12430)



**Course Objectives**

- To understand the Fundamentals of Computers and introduction to C language.
- To study the basic terminologies of C language and arrays
- To understand the Functions, Structures and Unions.
- To understand the concepts of Pointers.
- To study about File Management Operations in C.

**Course Outcomes**

*After completion of the course, the students will be able to*

- CO1** – Describing the basic introduction about C programming.
- CO2** - Incorporating the use of sequential, selection and repetition control structures into a program.
- CO3** - Develop the concepts of looping and arrays.
- CO4** - Design and develop programs using Functions and Pointers.
- CO5**- Understand the File management Operations and Pre-processor Directives.

**UNIT I INTRODUCTION TO C****(12 Hrs)**

Fundamentals of Computer: Computer Definition – Block Diagram of Computer – Types of Computer – Characteristics of Computer – C programming: History of C – Features of C – Compilation Process – Variables – Data Types – Keywords – Identifiers – Operators – Constants – Literals - Tokens

**UNIT II CONTROL STATEMENT****(12 Hrs)**

Conditional Statements: Simple If – If.. else – else.. if – Nested If – Looping: for – while – Do..While – Nested for – Switch Statement – Unconditional Statements: Break – Continue – Goto.

**UNIT III ARRAYS****(12 Hrs)**

Arrays: Definition – Declaring Arrays – Initializing Arrays – Accessing Array Elements – Types of Arrays - One Dimensional Arrays -Two DimensionalArrays - Multi-Dimensional Array- Dynamic Arrays - Character Arrays – Sorting an Array.

**UNIT IV FUNCTIONS AND POINTERS****(12 Hrs)**

Functions: Definition – Declaration – Categories of Functions - Recursive Functions - Passing Arrays to Functions – String Functions – Math Functions – Pointers: Definition - Declaration - Initialization - Accessing - Pointers and Arrays – Pointers and Functions - Call by Reference – Call by Value - Array of Pointers.

**UNIT V STRUCTURES, UNIONS AND FILES****(12 Hrs)**

Structure: Definition - Declaration - Arrays of Structures – Accessing Members of the Structure - Nested structures – Passing Structures to Functions – Union – Definition – Size of the Union - Accessing Union Members - File Handling in C: Functions of File Handling - Error Handling – Pre Processor.

**Text Books**

1. Balagurusamy. E, "Programming in ANSI C", Tata McGraw Hill, 8<sup>th</sup> Edition, 2019.
2. Byron S Gottfried and Jitendar Kumar Chhabra, "Programming with C", Tata McGraw Hill Publishing Company, 4<sup>th</sup> Edition, New Delhi, 2015.
3. Herbert Schildt, "C: The Complete Reference", McGraw Hill, 4<sup>th</sup> Edition, 2014.

**Reference Books**

1. Ashok N Kamthane, "Computer Programming", Pearson education, 2<sup>rd</sup> Impression, 2012.
2. VikasVerma, "A Workbook on C ", Cengage Learning, 2<sup>rd</sup> Edition, 2012.

3. Dr. P. Rizwan Ahmed, "Office Automation", Margham Publications, 2016.
4. P.Visu, R.Srinivasan and S.Koteeswaran, "Fundamentals of Computing and Programming", 4<sup>th</sup> Edition, SriKrishna Publications, 2012.
5. PradipDev, ManasGhoush, "Programming in C", 2<sup>rd</sup> Edition, Oxford University Press, 2011.

### **Web References**

1. <https://archive.nptel.ac.in/courses/106/104/106104128/>
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3. [https://onlinecourses.nptel.ac.in/noc20\\_cs94/preview](https://onlinecourses.nptel.ac.in/noc20_cs94/preview)
4. <https://www.cprogramming.com/codej.html>



**Course Objectives**

- To understand the concept of basic principles in economics.
- To be familiar with utility analysis.
- To create knowledge on cost and revenue analysis.
- To demonstrate pricing strategies and methods in business.
- To understand the distribution theories and profit calculation of business firms.

**Course Outcomes**

*After completion of the course, the students will be able to*

**CO1** – Enhance the knowledge on economic principles utilized for business decision making.

**CO2** – Analyze the satisfaction level of consumers.

**CO3** – Familiarize with the cost and revenue of the business firms.

**CO4** – Understand the concepts of pricing and methods of pricing.

**CO5** – Know the distribution and calculation of profit in business.

**UNIT I INTRODUCTION TO BASIC ECONOMIC PRINCIPLES****(09 Hrs)**

Introduction to Economics – Nature and Scope of Economics – Branches of Economics – Economic Analysis – Inductive and Deductive methods – Positive Vs. Normative – Partial Vs. General Equilibrium – Static and Dynamic – Twin Principles – Incremental and Marginal Principle – Opportunity cost – Central Economic Problems – Role and Responsibilities of Economists in Business Decisions.

**UNIT II UTILITY ANALYSIS AND REVEALED PREFERENCE THEORY****(09 Hrs)**

Utility Analysis – Types of Utility – Measurement of Utility – Cardinal Utility Theory – Ordinal Utility Theory – Indifference Curve – Derivation of Demand and Supply Curves from Utility Analysis – Revealed Preference Theory – Consumer Surplus – Consumer Equilibrium- Demand Theory.

**UNIT III COST AND REVENUE ANALYSIS****(09 Hrs)**

Cost – Types of Costs – Different Types of Costs – Short Run and Long Run Cost Curves – Revenue – Types of Revenue – Derivation of Average Revenue and Marginal Revenue from Total Revenue – Break Even Analysis - Break Even Point.

**UNIT IV PRICING METHODS AND STRATEGIES****(09 Hrs)**

Meaning – Definition – Objectives of Pricing – Importance of Pricing – General Considerations of Pricing – Factors affecting Pricing – Cost Based Pricing – Mark Up Pricing – Absorption Pricing – Full Cost Pricing – Marginal Cost Pricing – Target Pricing - Market Oriented Pricing – Going Rate Pricing - Dual Pricing– Life Cycle of a Product.

**UNIT V THEORIES OF DISTRIBUTION AND PROFIT****(09 Hrs)**

Distribution -Distinction between Personal and Functional Distribution – Theories of Distribution – Distribution Shares – Wage Theories – Real and Money Wages – Profit – Gross Profit – Net Profit – Accountant Profit – Economist Profit – Theories of Profit.

### **Text Books**

1. P.N.Chopra, "Business Economics", Kalyani Publishers , 7th Edition, 2015
2. Dr.S.Sankaran, "Business Economics" , Margham Publications, 5th Edition, 2011.
3. Bharat Meghe, Dharendra, Kumar and Vidya Nakhate,"Economic Analysis for Business Decisions" Himalaya Publishing House,1<sup>st</sup> Edition,2014.

### **Reference Books**

1. Dr.Padmalochna Bisovi, Dr.Rijwan Ahmed Mushtak Shaikh, "Economic Analysis for Business Decisions",Thakur Publication Pvt.Ltd.Pune,1<sup>st</sup> Edition,2016.
2. S.K.Agarwal "Business Economics", S.Chand, 1st Edition, 2018
3. H.L.Ahujja "Business Economics", Vikas Publications, 13th<sup>d</sup> Edition,2016.
4. K.Rajagoplachar, "Business Economics", Atlantic Publisher, 1st<sup>h</sup> Edition, 2022.
5. C.M.Chaudhary, "Business Economics", RBSA Publishers, 1st Edition, 2000.

### **Web References**

1. <https://onlinelibrary.wiley.com/journal/10991468>
2. <https://nptel.ac.in/courses/110105075>
3. <https://mu.ac.in>
4. <http://www.icsi.edu>
5. <https://www.mim.ac.mw>



**Course Objectives**

- To provide a comprehensive understanding on the general principles of contracts.
- To familiarise with the law relating to sale of goods.
- To understand the provisions of Partnership and LLP Acts.
- To orient students about the basics of The Companies Act 2013.
- To help students to acquaint with an understanding on Competition and IPR Laws.

**Course Outcomes**

**After completion of the course, the students will be able to**

- CO1 - Demonstrate a clear understanding on the general principles of contracts  
 CO2 - Be conversant with the legal provisions pertaining to sale of goods in India  
 CO3 - Appreciate and distinguish between Partnership and LLP with reference to Indian Law  
 CO4 - Explain the basic provisions with respect to The Companies Act 2013.  
 CO5 - Categorize and understand the various nuances of Intellectual Property Rights and Competition in India

**UNIT I CONTRACTS LAW: GENERAL PRINCIPLES****(12 Hrs)**

Contract – meaning, characteristics and kinds - Essentials of a valid contract - Offer and acceptance, consideration, contractual capacity, free consent, legality of objects. Void agreements, Performance of a contract –breach and remedies against breach of contract. Contingent contracts, Quasi – contracts.

**UNIT II LAW OF SALE OF GOODS****(12 Hrs)**

Contract of sale, meaning and difference between sale and agreement to sell. Conditions and warranties - Transfer of ownership in goods including sale by a non-owner. Performance of contract of sale. Unpaid seller – meaning, rights of an unpaid seller against the goods and the buyer.

**UNIT III LAWS OF PARTNERSHIP AND LLP****(12 Hrs)**

(A) Indian Partnership Act, 1932 - Nature and Characteristics of Partnership, Registration of Partnership Firms, Types of Partners, Rights and Duties of Partners, Implied Authority of a Partner, Registration and dissolution of Firm.

(B) The Limited Liability Partnership Act, 2008 - Salient Features of LLP - Incorporation by Registration– Differences between LLP and Partnership, LLP and Company – LLP Agreement – Types of Partners in LLP and their relations – Conversion of Firm and Private Company into LLP.

**UNIT IV THE COMPANIES ACT 2013****(12 Hrs)**

Essential Features of a Company, Corporate Veil Theory, Classes of Companies , Types of Share Capital, Incorporation of a Company , Memorandum of Association , Articles of Association, Doctrine of Indoor Management

**UNIT V COMPETITION LAW, 2002 AND INTELLECTUAL PROPERTY ACT****(12 Hrs)**

Concept of Competition - Need & Importance of Competition Law - Features - Anti Competitive Agreements – Abuse of dominant position – Combinations – CCI (Competition Commission of India) Intellectual Property – Meaning, Types, Overview of Law governing IPR for Copyrights, Trademarks, Patents and Geographical Indications

**Textbooks**

1. Parul Gupta, “Legal Aspects of Business: Concepts and Applications”, Vikas Publishing House, 2nd Edition, 2019.
2. M.C. Kuchhal, and Vivek Kuchhal, “Business Law”, Vikas Publishing House, 6th Edition, 2019.
3. P.C. Tulsian and Bharat Tulsian, “Business Law”, McGraw Hill Education, 3rd Edition, 2017.

### Reference Books

1. N.D. Kapoor, "Elements of Mercantile Law", Sultan Chand & Sons, 38th Edition, 2020.
2. Sushma Arora, "Business Laws", Taxmann Publications, 2nd Edition, 2019.
3. Avtar Singh, "Business Law", Eastern Book Company, 4th Edition, 2018.
4. R.S.N. Pillai & Bagavathi, "Business Law", S. Chand Publishing, 3rd Edition, 2010.
5. M.C. Shukla, "A Manual of Mercantile Law", S. Chand Publishing, 9th Edition, 2010.
6. Ravinder Kumar, "Legal Aspects of Business", Cengage Learning, 4th Edition, 2016.

### Web References

1. <http://14.139.60.114:8080/jspui/bitstream/123456789/738/19/Commercial%20Law.pdf>
2. <https://www.studocu.com/en-au/document/the-university-of-adelaide/commercial-law-i/lecture-notes/lecture-notes-lecture-all-lectures-commercial-law-exam-notes/654814/view>
3. [https://www.icaai.org/post.html?post\\_id=17791](https://www.icaai.org/post.html?post_id=17791)
4. <https://icmai.in/upload/Students/Syllabus2016/Foundation/Paper-3New-29012021.pdf>
5. <https://www.icsi.edu/media/webmodules/BUSINESS%20ENVIRONMENT%20AND%20LAW.pdf>



### Course Objectives

- To practice the fundamental programming methodologies in the C programming language.
- To apply logical skills for problem solving using control structures and arrays.
- To design, implement, test and debug programs that use different data types, variables, strings, arrays, pointers and structures.
- To design modular programming and provide recursive solution to problems.
- To understand the miscellaneous aspects of C and comprehension of file operations.

### Course Outcomes

*After completion of the course, the students will be able to*

- CO1** - Apply and practice logical formulations to solve simple problems leading to specific applications.  
**CO2** - Develop C programs for simple applications making use of basic constructs, arrays and strings.  
**CO3** - Develop C programs involving functions, recursion, pointers and structures.  
**CO4** - Design applications using sequential and random access file processing.  
**CO5** - Build solutions for online coding challenges.

### List of Exercises

1. Simple programming exercises to familiarize the basic C language constructs.
2. Develop programs using identifiers and operators.
3. Develop programs using decision-making and looping constructs.
4. Develop programs using functions as mathematical functions.
5. Develop programs with user defined functions – includes parameter passing.
6. Develop program for one dimensional and two dimensional arrays.
7. Develop program to illustrate pointers.
8. Develop program with arrays and pointers.
9. Develop program for dynamic memory allocation.
10. Develop programs for file operations.

### Reference Books

1. Zed A Shaw, "Learn C the Hard Way: Practical Exercises on the Computational Subjects You Keep Avoiding (Like C)", Addison Wesley, 2016.
2. Anita Goel and Ajay Mittal, "Computer Fundamentals and programming in C", 1<sup>st</sup> Edition, Pearson Education, 2011.
3. Yashwanth Kanethkar, "Let us C", 13<sup>th</sup> Edition, BPB Publications, 2008.
4. Maureen Sprankle, Jim Hubbard, "Problem Solving and Programming Concepts," 9<sup>th</sup> Edition, Pearson, 2011.

### Web References

1. <https://alison.com/course/introduction-to-c-programming>
2. <https://www.geeksforgeeks.org/c-programming-language/>
3. [http://cad-lab.github.io/cadlab\\_data/files/1993\\_prog\\_in\\_c.pdf](http://cad-lab.github.io/cadlab_data/files/1993_prog_in_c.pdf)
4. <https://www.tenouk.com/clabworksheet/clabworksheet.html>
5. <https://fresh2refresh.com/c-programming/>
6. <http://www.skiet.org/downloads/cprogrammingquestion.pdf>





**Course Objectives**

- To introduce the elements of public administration.
- To help the students obtain a suitable conceptual perspective of public administration.
- To introduce them the growth of institution devices to meet the need of changing times.
- To instill and emphasize the need of ethical seriousness in contemporary Indian Public Administration.

**Course Outcomes**

*After completion of the course, the students will be able to*

**CO1**– Understand the concepts and evolution of Public Administration.

**CO2**– Be aware of what is happening in the Public Administration in the country.

**CO3**– Explain the Territory Administration in the State and the Centre.

**CO4**– Appreciate emerging issues in Indian Public Administration.

**UNIT I INTRODUCTION TO PUBLIC ADMINISTRATION****(7 Hrs)**

Meaning, nature and Scope of Public Administration and its relationship with other disciplines- Evolution of Public Administration as a discipline - Woodrow Wilson, Henry Fayol , Max Weber and others - Evolution of Public Administration in India - Arthashastra - Colonial Administration upto 1947

**UNIT II PUBLIC ADMINISTRATION IN INDIA****(8 Hrs)**

Enactment of Indian Constitution - Union Government - The Cabinet - Central Secretariat - All India Services - Training of Civil Servants - UPSC - Niti Ayog - Statutory Bodies: The Central Vigilance Commission - CBI - National Human Rights Commission - National Women's Commission - CAG.

**UNIT III STATE AND UNION TERRITORY ADMINISTRATION****(8 Hrs)**

Differential Administrative systems in Union Territories compared to States Organization of Secretariat - Position of Chief Secretary, Functions and Structure of Departments, Directorates - Ministry of Home Affairs supervision of Union Territory Administration - Position of Lt.Governor in UT - Government of Union Territories Act 1963 - Changing trend in UT Administration in Puducherry and Andaman and Nicobar Island

**UNIT IV EMERGING ISSUES IN INDIAN PUBLIC ADMINISTRATION****(7 Hrs)**

Changing Role of District Collector - Civil Servants - Politicians relationship - Citizens Charter - Public Grievance Redressal mechanisms - The RTI Act 2005 - Social Auditing and Decentralization - Public Private partnership.

**Text Books**

1. Avasthi and Maheswari, "Public Administration in India" Lakshmi Narain Agarwal, Agra, 2013
2. Ramesh K. Arora, "Public Administration: Fresh Perspective", Alekh publishers, Jaipur.2012

**Reference Books**

1. R.B.Jain, "Public Administration in India: 21st Century Challenges for Good Governance", Deep and Deep, 2002.
2. Ramesh K. Arora, "Indian Public Administration", Wishwa Prakashan, 2010.
3. Rumki Basu, "Public Administration: Concept and Theories", Sterling, 2013.

**Web References**

1. <http://cic.gov.in/>
2. <http://www.mha.nic.in/>
3. <http://rti.gov.in/>
4. <http://www.cvc.nic.in/>

### THIRD SEMESTER

Department	Business Studies			Programme: <b>B.Com. Computer Application</b>				
Semester	THIRD			Course Category Code: <b>DSC</b>			*End Semester Exam Type: <b>TE</b>	
Course Code	A20CMT305			Periods / Week		Credit	Maximum Marks	
				L	T	P	C	CAM
Course Name	<b>CORPORATE ACCOUNTING</b>			<b>4</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>25</b>
(Common to All Programmes in B.Com. )								
Course Objective	To show understanding of the Accounting for Share Capital.							
	To explain the accounting for preference shares and bonus issue.							
	To comprehend the accounting for debentures.							
	To compare different types of underwriting and compute pre-incorporation profits.							
	To show the ability to prepare financial statements of companies.							
Course Outcome	<b>Completion of the course, the students will be able to</b>							BT Mapping (Highest Level)
	<b>CO1</b>	Solve problems pertaining to Accounting for Share Capital.						<b>K3</b>
	<b>CO2</b>	Demonstrate an understanding of Accounting for Preference Shares and Bonus Issue.						<b>K3</b>
	<b>CO3</b>	Solve the problems in Accounting for Debentures.						<b>K3</b>
	<b>CO4</b>	Demonstrate an understanding on Underwriting contracts and computation of pre-incorporation profits.						<b>K3</b>
	<b>CO5</b>	Compute the Profits or Losses of Joint Stock Companies by preparing Financial Statements.						<b>K3</b>
<b>UNIT-I</b>	<b>ACCOUNTING FOR SHARE CAPITAL</b>					<b>Periods: 15</b>		
Meaning of Shares and Share Capital – Kinds of Share Capital – Procedure for Issue of shares – Issue of shares at par, at premium and at discount – Calls-in-advance and Interest on calls-in-advance – Calls-in-arrear and Interest on calls-in-arrear – Issue of shares for consideration other than cash – Forfeiture of Shares – Procedure for forfeiture of shares – Reissue of Forfeited shares – Full reissue and partial reissue – Reissue of forfeited shares at premium. Practical problems.								<b>CO1</b>
<b>UNIT-II</b>	<b>ACCOUNTING FOR PREFERENCE SHARES AND BONUS ISSUE</b>					<b>Periods: 15</b>		
Preference shares – Meaning and significance – Difference between equity and preference shares – Redemption of Preference Shares – Creation of Capital Redemption Reserve – Utilization of CRR – Issue of Bonus Shares – Types – Conversion of partly paid into fully paid shares using bonus – Rights Issue – Accounting Treatment of Rights shares. Sweat Equity Shares. Practical problems								<b>CO2</b>
<b>UNIT-III</b>	<b>ACCOUNTING FOR DEBENTURES</b>					<b>Periods: 15</b>		
Debentures – Features and Kinds – Difference between Debentures and Shares – Issue of debentures at par, at premium and at discount – Issue of Debentures for consideration other than cash – Issue of Debentures as Collateral Security – Debenture Interest – Computation and Accounting Treatment – Redemption of Debentures – Sources of Redemption – Debenture Redemption Reserve – Redemption by Conversion. Practical problems.								<b>CO3</b>
<b>UNIT-IV</b>	<b>UNDERWRITING AND PRE-INCORPORATION PROFITS</b>					<b>Periods: 15</b>		
Underwriting – Meaning and Significance – Features – Underwriting of Shares and Debentures – Types of Underwriting – Complete and Partial Underwriting – Firm/Committed Underwriting. Computation and Accounting Treatment of Underwriting Commission – Practical Problems. Profit or Loss Pre- and Post-Incorporation – Meaning – Methods for computation – Bases for Apportionment of items of incomes and expenses in pre- and post-incorporation periods – Treatment and use of Pre-Incorporation Profits and Losses – Practical Problems.								<b>CO4</b>

<b>UNIT-V</b>	<b>FINANCIAL STATEMENTS OF COMPANIES</b>	<b>Periods: 15</b>	
Financial Statements – Different Types of Financial Statements: Interim and Annual statements – Financial Statements Template and Form as per Schedule III of the Companies Act, 2013 – Excel - format of Financial Statements. Treatment of Special Items during Financial Statements Preparation: Depreciation Provisions and Reserves – Managerial Remuneration – Corporate Social Responsibility Spend – CSR Expenditure and Reporting. Practical Problems.			<b>CO5</b>
<b>Lecture Periods: 60</b>	<b>Tutorial Periods: 15</b>	<b>Practical Periods: -</b>	<b>Total Periods: 75</b>
<b>Text Books</b>			
1. Reddy & Murthy, “Corporate Accounting”, Margham Publications, 9 th Edition, 2018. 2. Hanif & Mukherjee, “Corporate Accounting”, Tata McGraw Hill, 2 nd Edition, 2015. 3. R. Rajasekaran & V. Lalitha, “Corporate Accounting”, Pearson Education, 1 st Edition, 2015.			
<b>Reference Books</b>			
1. M.C. Shukla, T.S. Grewal & S.C. Gupta, “Advanced Accounts – Vol.2”, S.Chand & Sons, 19th Edition, 2017. 2. R.L. Gupta & M. Radhaswamy, “Corporate Accounting – Vol.1”, Sultan Chand & Sons, 15th Edition, 2013. 3. P.C. Tulsian, “Corporate Accounting”, Tata McGraw Hill Education,			
<b>Web References</b>			
1. <a href="https://www.icsi.edu/media/webmodules/publications/5.%20Company%20Accounts%20and%20Auditing%20Practices.pdf">https://www.icsi.edu/media/webmodules/publications/5.%20Company%20Accounts%20and%20Auditing%20Practices.pdf</a> 2. <a href="https://resource.cdn.icai.org/61818bos50279-cp10-u2.pdf">https://resource.cdn.icai.org/61818bos50279-cp10-u2.pdf</a> 3. <a href="https://resource.cdn.icai.org/61819bos50279-cp10-u3.pdf">https://resource.cdn.icai.org/61819bos50279-cp10-u3.pdf</a> 4. <a href="https://resource.cdn.icai.org/38481bos28154-mod1-cp3.pdf">https://resource.cdn.icai.org/38481bos28154-mod1-cp3.pdf</a> 5. <a href="https://resource.cdn.icai.org/38483bos28154-mod1-cp2.pdf">https://resource.cdn.icai.org/38483bos28154-mod1-cp2.pdf</a>			

\* TE – Theory Exam

#### COs/POs/PSOs Mapping

COs	Program Outcomes (POs)				Program Specific Outcomes (PSOs)			
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
<b>1</b>	3	3	3	2	3	1	3	3
<b>2</b>	3	3	3	2	3	1	3	2
<b>3</b>	3	3	3	2	2	1	3	2
<b>4</b>	3	3	3	3	3	1	3	2
<b>5</b>	3	3	2	2	2	1	2	2

Correlation Level: 1 - Low, 2 - Medium, 3 – High

#### Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

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Department	Business Studies		Programme: B.Com. Computer Application							
Semester	THIRD		Course Category Code: DSC		*End Semester Exam Type: TE					
Course Code	A20CCT304		Periods / Week			Credit	Maximum Marks			
			L	T	P	C	CAM	ESE	TM	
Course Name	PROGRAMMING With C++		4	0	0	4	25	75	100	
Prerequisite	Basic Programming Knowledge.									
Pedagogy:	Classrooms lecture, tutorials, Group discussion, Seminar, Role play & field work etc.									
Course Objective	Define Encapsulation, Inheritance and Polymorphism.									
	Solve the problem with object oriented approach.									
	Analyze the problem statement and build object oriented system model.									
	Describe the characters and behavior of the objects that comprise a system.									
	Explain function overloading, operator overloading and virtual functions.									
Course Outcome	On completion of the course, the students will be able to							BT Mapping (Highest Level)		
	CO1	Learn programming of C++.							K2	
	CO2	Understand Object oriented approach for finding Solutions.							K2	
	CO3	Create C++ based solutions to Inheritance concepts.							K3	
	CO4	Learn various concepts Files and Exception Handling techniques.							K3	
	CO5	Develop the applications using object oriented programming with C++.							K2	
UNIT-I	INTRODUCTION TO C++ AND BASICS OF OOPS					Periods: 12				
Basic components of a C++ - Program and program structure - Compiling and Executing C++ Program - Basic Concepts of Object-Oriented Programming: Benefits of OOP – Object Oriented Languages – Applications of OOP.									CO1	
UNIT-II	PRINCIPLES OF OBJECT ORIENTED PROGRAMMING					Periods: 12				
Classes objects - data members - member functions –Access Specifiers- this Pointer - Friends - Friend Functions - Friend Classes - Friend Scope - Static Functions - Constructors and Destructors - Static variables and Functions in class - Operator Overloading in C++ - Overloading Unary Operators - Overloading binary operators.									CO2	
UNIT-III	INHERITANCE					Periods: 12				
Inheritance in C++ - Types of Inheritance - Multiple Inheritance. Virtual Functions - Polymorphism - Abstract classes.Real time examples in OOPS.									CO3	
UNIT-IV	POINTERS, EXCEPTION HANDLING AND FILES					Periods: 12				
Pointers - Objects and Pointers - Exception Handling: Exception – Basics – Exception Handling Mechanism – Throwing Mechanism – Catching Mechanism – Re-throwing Exception. Standard input and output operations: C++ Iostream hierarchy - File input and output: Reading a File - Managing I/O Streams - Opening a File – Different Methods - Checking for Failure with File Commands - Checking the I/O Status Flags - Dealing with Binary Files - Useful Functions.									CO4	
UNIT-V	TEMPLATES					Periods: 12				
Class templates: Implementing a class template - Implementing class template member functions - Using a classtemplate - Function templates - Implementing function templates - Using template functions.									CO5	
Lecture Periods: 60			Tutorial Periods: -		Practical Periods: -		Total Periods: 60			
Text Books										
1. E. Balagurusamy, “Object Oriented Programming with C++”, McGraw Hill, 7th Edition, 2018.										
2. Herbert Schildt, “C++ - The Complete Reference”, McGraw Hill Education, 4th Edition, 2017.										

**Reference Books**

1. Herbert Schildt, "C++ - From the Ground Up", McGraw Hill Education, 2nd Edition, 2010.
2. Thomas L. Floyd, "Electronic Devices", 9th Edition, Pearson Education, 2012.
3. Stanley B. Lippman, Stanley Lippman, Barbara Moo, "C++ Primer", Addison-Wesley Professional, 5th Edition 2012.

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1. <https://www.tutorialspoint.com/cplusplus/index.htm>
2. <http://www.cplusplus.com/doc/tutorial/>
3. <https://www.w3schools.com/cpp/>
4. <https://www.javatpoint.com/cpp-tutorial>
5. <https://www.geeksforgeeks.org/cpp-tutorial/>

\* TE – Theory Exam

**COs/POs/PSOs Mapping**

COs	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	1	2	-	1	3	2	1	2
2	1	3	1	-	2	2	2	1
3	-	1	2	2	3	2	1	2
4	1	2	-	1	2	2	1	1
5	1	2	1	-	2	2	3	1

Correlation Level: 1 - Low, 2 - Medium, 3 – High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100




Department	Mathematics		Programme: B.Com. Computer Application							
Semester	Third		Course Category Code: IDC			*End Semester Exam Type: TE				
Course Code	A20CCD303		Periods / Week			Credit	Maximum Marks			
			L	T	P	C	CAM	ESE	TM	
Course Name	STATISTICS FOR COMPUTER APPLICATION		3	0	0	3	25	75	100	
Prerequisite	Basic knowledge on computing Statistics Problems									
Course Objectives	To be conversant with the computation of measures of descriptive statistics									
	To understand the concept of correlation and regression and their application in business.									
	To understand the concept of test of hypothesis and design of experiments									
	To be familiar with the relevance and need of the index number in measuring economic changes.									
	To understand the importance and model of time series.									
Course Outcome	On completion of the course, the students will be able to							BT Mapping (Highest Level)		
	CO1	Solve problems related to central tendency and measures of dispersion.							K3	
	CO2	Demonstrate the Application of correlation and regression analysis.							K3	
	CO3	Apply the concept of testing of small samples .							K3	
	CO4	Apply the index number techniques in business.							K3	
	CO5	Conduct Time Series Analysis.							K3	
UNIT-I	MEASURES OF CENTRAL TENDENCY AND DISPERSION					Periods: 9				
Measures of central Tendency: Arithmetic Mean – Median – Mode - Empirical relation between Mean, Median and Mode. Measure of Dispersion: Range and Coefficient of range - Standard Deviation - Co-efficient of variation.									CO1	
UNIT-II	CORRELATION AND REGRESSION ANALYSIS					Periods: 9				
Karl Pearson’s co-efficient of correlation - spearman’s rank correlation coefficient - Regression analysis - simple regression equations									CO2	
UNIT-III	TEST OF HYPOTHESIS AND DESIGN OF EXPERIMENTS					Periods: 9				
Small samples: Test based on chi square test, t test and F test - Analysis of variance: One-way classifications and Two-way classifications:									CO3	
UNIT-IV	INDEX NUMBERS					Periods: 9				
Index number – problems in the construction of index numbers – methods of constructing index numbers – simple and weighted index numbers – Laspeyre’s, Paasche’s, Bowley’s and Fisher’s Index Number – Tests of an Ideal Index Number – Uses of index numbers.									CO4	
UNIT-V	TIME SERIES ANALYSIS					Periods: 9				
Time Series – Importance – Components: Secular Trends, Seasonal Variations, Cyclical Fluctuations, Irregular Variations – Models of Time Series: Free-hand, Semi-Average, Moving Average, and Fitting Mathematical Curve methods									CO5	
Lecture Periods: 45		Tutorial Periods:		Practical Periods: -			Total Periods: 45			
Text Books										
1. S.C. Gupta, “Fundamentals of Statistics”, Himalaya Publishing House, 7 <sup>th</sup> Edition, 2018.										
2. S.P. Gupta, “Business Statistics”, Sultán Chand & Sons, 11 <sup>th</sup> Edition, 2019.										
3. R.S.N. Pillai & Bagawathi, “Statistics – Theory & Practice”, S. Chand Publishing, 8 <sup>th</sup> Edition, 2018.										

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1. Richard Levin, David S. Rubin, "Statistics for Management", Pearson Education, 8<sup>th</sup> Edition, 2017.
2. Gupta. S. P., "Statistical Methods", Sultan Chand & Sons, 46<sup>th</sup> Edition, 2021.
3. Srivatsava. T.N. and Shailaja Rego, "Statistics for Management", Tata Mc Graw Hill, 3<sup>rd</sup> Edition, 2008.
4. Gupta. S. P., Gupta. P.K and Manmohan, "Business Statistics and Operations Research", Sultan Chand & Sons, 5<sup>th</sup> Edition, 2011.
5. Hooda, R. P., "Statistics for Business and Economics", Vikas Publishing House, 5<sup>th</sup> Edition, 2013.

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1. <https://www.icaai.org/post/sm-foundation-p3-may2021onwards>
2. [https://icmai.in/upload/Students/Syllabus-2012/Study\\_Material\\_New/Foundation-Paper4-Revised.pdf](https://icmai.in/upload/Students/Syllabus-2012/Study_Material_New/Foundation-Paper4-Revised.pdf)
3. <https://statlearning.class.stanford.edu>
4. [www.mit.edu](http://www.mit.edu)

\* TE – Theory Exam

**COs/POs/PSOs Mapping**

COs	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	3	3	3	3	3	3	3	3
2	3	3	3	3	3	3	3	3
3	3	2	3	3	3	3	3	3
4	2	3	3	2	3	3	2	3
5	3	3	3	2	3	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 – High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100



Department	Business Studies			Programme: B.Com. Computer Application							
Semester	THIRD			Course Category Code: DSE		*End Semester Exam Type: TE					
Course Code	A20CCE301			Periods / Week		Credit	Maximum Marks				
				L	T	P	C	CAM	ESE	TM	
Course Name	BASICS OF DATA SCIENCE			3	0	0	3	25	75	100	
Prerequisite	Basic Knowledge on Data Science.										
Course Objectives	Understand Data Scientist’s Role in the analysis Process.										
	Explain various mathematical concepts for Data Science.										
	Identify distribution properties of data using statistical concepts.										
	Evaluate models for multiple environments.										
	Interpret multiple techniques for solving Data science applications.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Describe the significance of data science and understand the Data Science process.								K1	
	CO2	Explain how data is collected, managed and stored for data science.								K2	
	CO3	Build, and prepare data for use with a variety of statistical methods and models								K2	
	CO4	Analyze Data using various Visualization techniques.								K3	
	CO5	Choose contemporary models, such as machine learning, AI, techniques to solve practical problems.								K3	
UNIT-I	Introduction To Data Science						Periods: 9				
Definition, Big Data and Data Science Hype, Datafication , Data Science Profile, Meta-Definition, Data Scientist, Statistical Inference, Populations and Samples, Populations and Samples of Big Data, Big Data Can Mean Big Assumptions, Modeling, Philosophy of Exploratory Data Analysis, The Data Science Process , A Data Scientist’s Role in this Process Case Study: RealDirect										CO1	
UNIT-II	Data Munging						Periods: 9				
Mathematical Preliminaries: Probability, Descriptive Statistics, Correlation Analysis. Data Munging: Properties of Data, Languages for Data Science, Collecting Data, Cleaning Data, Crowdsourcing.										CO2	
UNIT-III	Scores and Rankings, Statistical Analysis						Periods: 9				
Scores and Rankings: Developing Scoring Systems, Z-scores and Normalization, Advanced Ranking Techniques Statistical Analysis: Sampling from Distributions, Statistical Distributions, Statistical Significance, Permutation Tests and P-values										CO3	
UNIT-IV	Visualizing Data and Mathematical Models						Periods: 9				
Visualizing Data: Exploratory Data Analysis, Developing a Visualization Aesthetic, Chart Types, Great Visualizations Mathematical Models: Philosophies of Modeling, A Taxonomy of Models, Baseline Models, Evaluating Models, Evaluation Environment										CO4	
UNIT-V	Supervised Learning:						Periods: 9				
Supervised Learning: Linear Regression, Better Regression Models, Regression as Parameter Fitting, Simplifying Models through Regularization Classification and Logistic Regression, Issues in Logistic Classification, Naive Bayes, Decision Trees Classifiers										CO5	
Lecture Periods: 45			Tutorial Periods: -			Practical Periods: -			Total Periods: 45		
Text Books											
1. Steven S. Skiena, “The Data Science Design Manual”, Springer 2017.											
2. Rachel Schutt & O’neil, “Doing Data Science”, Straight Talk from The Frontline O’REILLY, ISBN:978-1-449-35865-5, 1st edition, October 2013											
3. R Programming for Data Science, Roger D. Peng, LeanPub, 2015.											



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1. Joel Grus, "Data Science from Scratch" First Edition, April 2015.
2. Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani, "An Introduction to Statistical Learning-with Applications in R", 2013
3. Jure Leskovek, Anand Rajaraman and Jeffrey Ullman. Mining of Massive Datasets. v2.1, Cambridge University Press. 2 edition (30 September 2014)

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1. "Data science for engineers" <https://nptel.ac.in/noc/courses/noc20/SEM1/noc20-cs28>
2. <https://www.guru99.com/data-science-tutorial.html>
3. <https://www.geeksforgeeks.org/data-science-fundamentals/>
4. <https://www.mygreatlearning.com/blog/what-is-data-science/>
5. <https://www.upgrad.com/blog/basic-concepts-data-science/>

\* TE – Theory Exam

**COs/POs/PSOs Mapping**

COs	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	3	3	3	3	3	3	3	3
2	3	2	3	3	3	3	3	3
3	2	3	2	3	3	3	1	2
4	3	3	3	3	3	3	3	3
5	3	3	1	1	3	1	3	2

Correlation Level: 1 - Low, 2 - Medium, 3 – High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

Department	<b>Business Studies</b>	Programme: <b>B.Com. Computer Application</b>						
Semester	<b>THIRD</b>	Course Category Code: <b>DSC</b> *End Semester Exam Type: <b>LE</b>						
Course Code	<b>A20CCL302</b>	Periods / Week			Credit	Maximum Marks		
		L	T	P	C	CAM	ESE	TM
Course Name	<b>PROGRAMMING WITH C++ LAB</b>	0	0	4	2	50	50	100
<b>Pedagogy:</b>	Classrooms lecture, tutorials, Group discussion, Seminar, Role play & field work etc.							
Course Objective	To introduce the concepts of Basic Object Oriented concepts and Programming Basics.							
	To gain insight into the Functions and Array usages using C++.							
	To understand in depth about the Classes and Objects.							
	To study the Operator overloading and Inheritance concepts.							
	To acquaint the Files and Exception Handling concepts.							
Course Outcome	On completion of the course, the students will be able to						BT Mapping (Highest Level)	
	<b>CO1</b>	Understand the Object Oriented concepts.						<b>K2</b>
	<b>CO2</b>	Understand the Functions and Arrays.						<b>K2</b>
	<b>CO3</b>	Construct the Classes and Objects.						<b>K3</b>
	<b>CO4</b>	Explain the Operator overloading and Inheritance concepts.						<b>K3</b>
	<b>CO5</b>	Describe Files and Exception Handling Methods.						<b>K2</b>

#### List of Exercises

Write C++ Programs for the followings:

1. Class Declarations, Definition, and Accessing Class Members.
2. Constructor, parameterized constructor and copy constructors.
3. Friend Function and Friend Class.
4. Function Overloading and Constructor Overloading.
5. Operator Overloading.
6. Inheritances.
7. Virtual Classes and Abstract Classes.
8. Exception Handling.
9. IOSTream, IStream, Ostream classes and their usages.
10. FileStream Operations.
11. Template Based Program to Sort the Given List of Elements.

<b>Lecture Periods: -</b>	<b>Tutorial Periods: -</b>	<b>Practical Periods: 60</b>	<b>Total Periods: 60</b>
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\* LE – Lab Exam

**COs/POs/PSOs Mapping**

COs	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	3	1	-	-	1	2	-	2
2	2	2	1	-	-	2	1	1
3	-	1	1	2	1	2	2	2
4	1	2	-	1	1	3	1	1
5	1	2	1	1	-	2	3	1

Correlation Level: 1 - Low, 2 - Medium, 3 – High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)			End Semester Examination (ESE) Marks	Total Marks
	Model Exam	Record	Attendance		
Marks	30	10	10	50	100




Department	Business Studies		Programme: B.Com. Computer Application							
Semester	THIRD		Course Category Code: DSE		*End Semester Exam Type: TE					
Course Code	A20CCE302		Periods / Week			Credit	Maximum Marks			
			L	T	P	C	CAM	ESE	TM	
Course Name	SYSTEM SOFTWARE CONCEPTS		3	0	0	3	25	75	100	
Prerequisite	Concept of System Software									
Course Objectives	To understand the relationship between system software and machine Architecture.									
	To understand the processing of an HLL program for execution on a computer.									
	To know the design and implementation of assemblers, macro processor, linker and Compiler.									
	To have an understanding of Interpreter and compiler.									
	To have an understanding of likers and loader.									
Course Outcome	On completion of the course, the students will be able to							BT Mapping (Highest Level)		
	CO1	Compare various system software related to the given system.							K3	
	CO2	Understand the concepts of assemblers.							K3	
	CO3	Ability to make proper use of software tools.							K3	
	CO4	Understand the concepts of interpreter and Compiler.							K3	
	CO5	Acquire Knowledge on linkers and loader.							K3	
UNIT-I	Introduction to System Software and software tools					Periods: 9				
Language Processors: Introduction - Language Processing Activities - Fundamentals of Language Processing & Language Specification - Language Processor Development Tools. Data Structures for Language Processing: Search Data structures - Allocation Data Structures. Software Tools: Software Tools for Program Development – Editors - Debug Monitors - Programming Environments - User Interfaces.									CO1	
UNIT-II	Assemblers					Periods: 9				
Elements of Assembly Language Programming: A Simple Assembly Scheme - Pass Structure of Assemblers - Design of a Two Pass Assembler - A single pass Assembler for IBM PC.									CO2	
UNIT-III	Macros and Macro Processors					Periods: 9				
Macro Definition and Call - Macro Expansion - Nested Macro Calls - Advanced Macro Facilities - Design of a Macro Preprocessor.									CO3	
UNIT-IV	Interpreters and Introduction of Compilers					Periods: 9				
Interpreters: Use and overview of interpreters - Pure and impure interpreters. Phases of the Compiler Introduction of scanning and parsing - Aspects of compilation.									CO4	
UNIT-V	Linkers and Loaders					Periods: 9				
Introduction to linkers - Relocation and Linking Concepts - Design of a Linker - Self-Relocating Programs - A Linker for MS-DOS - Linking for Overlays and Loaders									CO5	
Lecture Periods: 45		Tutorial Periods:		Practical Periods: -			Total Periods: 45			
Text Books										
1. D. M. Dhamdhere, “Systems Programming and Operating Systems”, Second Revised Edition, Tata McGraw-Hill, 1999.										
2. "Compilers: Principles, Techniques, and Tools" by Alfred V. Aho, Monica S. Lam, Ravi Sethi, and Jeffrey D. Ullman.										
3. "Modern Operating Systems" by Andrew S. Tanenbaum and Herbert Bos.										
Reference Books										
1. Leland L. Beck, “System Software – An Introduction to Systems Programming”, 3rd Edition, Pearson Education Asia, 2000.										
2. Santanu Chattopadhyay, “System Software”, Prentice-Hall India, 2007										

3. Alfred V. Aho, Monica S. Lam, Ravi Sethi, Jeffrey D. Ullman, "Compilers: Principles, Techniques, and Tools", 2nd Edition, Pearson Education Asia
4. "Systems Programming: Designing and Developing Distributed Applications" by John J. Donovan.

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1. [https://www.tutorialspoint.com/basics\\_of\\_computers/basics\\_of\\_computers\\_software\\_concepts.htm](https://www.tutorialspoint.com/basics_of_computers/basics_of_computers_software_concepts.htm)
2. <https://www.siyavula.com/read/za/information-technology/grade-10/basic-concepts-of-system-software/04-basic-concepts-of-system-software>
3. <https://www.techtarget.com/whatis/definition/system-software>
4. <https://www.toppr.com/guides/computer-science/computer-fundamentals/software-concepts/system-software/>

\* TE – Theory Exam

#### COs/POs/PSOs Mapping

COs	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	3	3	3	3	3	3	3	3
2	3	3	3	3	3	3	3	3
3	3	2	3	3	3	3	3	3
4	2	3	3	2	3	3	2	3
5	3	3	3	2	3	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 – High

#### Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

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Department	BUSINESS STUDIES				Programme: B.Com. Computer Application							
Semester	THIRD				Course Category Code: SEC		End Semester Exam Type: - LE					
Course Code	A20CCS302				Periods / Week		Credit	Maximum Marks				
					L	T	P	C	CAM	ESE	TM	
Course Name	ACCOUNTING USING SOFTWARE				0	0	4	2	50	50	100	
Course Objectives	To make the students familiar with the operations of Computerised Accounting Software											
Course Outcomes	On completion of the course, the students will be able to									BT Mapping (Highest Level)		
	CO1	Demonstrate their understanding of working with Accounting Software									K3	
	CO2	Prepare different kinds of reports from the Accounting Software									K3	
	CO3	Generate the Financial Statements using the Accounting Software									K3	
EXERCISES												
<div>1. Getting started with an Accounting Software and Creation of Company</div> <div>2. Configuring and Altering Features of Company</div> <div>3. Chart of Accounts – Understanding of different Ledger Groups</div> <div>4. Ledger Creation – Single Ledger – Multi Ledger – Display and Deletion</div> <div>5. Understanding and Creating Inventory Masters</div> <div>6. Creation of Stock Items and Godown</div> <div>7. Preparation of Stock Reports</div> <div>8. Recording Transactions – Voucher Creation (Different types of vouchers)</div> <div>9. Accounts Receivables and Accounts Payables</div> <div>10. MIS Reports</div> <div>11. Generating Financial Statements – Balance Sheet, Profit and Loss Account, and CashFlow Statement</div> <div>12. Performing Analysis of Financial Statements using Accounting Ratios.</div>												
Lecture Periods: -		Tutorial Periods:		Practical Periods: 60				Total Periods: 60				

#### COs/POs/PSOs Mapping

COs	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
<b>1</b>	1	1	-	-	1	2	1	2
<b>2</b>	1	2	1	-	-	2	1	1
<b>3</b>	-	1	1	2	1	2	2	2
<b>4</b>	1	1	-	1	1	3	1	1
<b>5</b>	1	1	1	-	1	2	2	1

**Correlation Level: 1 - Low, 2 - Medium, 3 – High**

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)			End Semester Examination (ESE) Marks	Total Marks
	Model Exam	Record	Attendance		
Marks	30	10	10	50	100

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Department	BUSINESS STUDIES				Programme: B.Com. Computer Application						
Semester	THIRD				Course Category Code: DSE		End Semester Exam Type: TE				
CourseCode	A20CCE303				Periods/Week		Credit	Maximum Marks			
					L	T	P	C	CAM	ESE	TM
Course Name	BUSINESS STRATEGY				3	0	0	3	25	75	100
Prerequisite	Basic Knowledge on Business Strategy										
Course Objectives	To gain knowledge about business policy and strategic in Business.										
	To learn Strategic formulation.										
	To make the students understand about the corporate strategy.										
	To explain strategic alternatives and growth strategy.										
	To be familiar with strategic implementation.										
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)
	CO1	Understand the concepts of Business policy and strategic management.									K3
	CO2	Explain the concept of strategic formulation.									K3
	CO3	Develop their skills in corporate Strategy.									K3
	CO4	Demonstrate their ability in growth strategy.									K3
	CO5	Understand the concept of strategic formulation.									K3
UNIT-I	BUSINESS POLICY AND STRATEGIC MANAGEMENT							Periods:10			
Definition to Business Policy-Nature, Scope and significance of business policy-Elements and Process of business policy-Factors determining business policy - Definition to strategic management-Nature, Scope and Significance of Strategic Management-Elements of Strategic Management-Process of strategic management-Components of strategic management-Functions of strategic management.											CO1
UNIT-II	STRATEGIC FORMULATION							Periods:8			
Meaning of strategic formulation-Vision, Mission and purpose of strategy-Objectives and Goals of strategic formulation-Developing strategic perspectives-Fourteen processes of strategic planning.											CO2
UNIT-III	BUSINESS ENVIRONMENT AND CORPORATE STRATEGY							Periods:9			
Meaning of Business Environment-Components of Business Environment (Internal Environment and External Environment), Environmental Scanning-SWOT Analysis – Corporate strategy Nature and scope – Project life cycle – Portfolio analysis – Simple case studies											CO3
UNIT-IV	STRATEGIC ALTERNATIVES AND GROWTH STRATEGY							Periods: 9			
Meaning of strategic alternatives-Generating strategic alternatives-Classifying strategic alternatives- Horizontal expansion and diversification- Classification of strategies based on the desired rate of growth- Mergers and Acquisitions – Amalgamation – joint venture – Simple case studies											CO4
UNIT-V	STRATEGIC IMPLEMENTATION							Periods:09			
Implementation of strategy – Leadership and organizational climate – Planning and controlling – Evaluation and control - Simple case studies											CO5
Lecture Periods:45			Tutorial Periods:0			Practical Periods:-		Total Periods:45			
Text Books											
1. Azharkazmi, “Business policy and strategic management”, Tata McGraw Hill Publishers, 4 <sup>th</sup> Edition 2019.											
2. L. M. Prasad, “Business policy and strategic management”, Sultan Chand & Sons, 6 <sup>th</sup> Edition.											
3. Fred. R. David, “Strategic management”, Prentice Hall International, 5 <sup>th</sup> Edition 2018.											
Reference Books											
1. CA. MeetaMangal, “Strategic Management”, Commercial Law Publishers, 9 <sup>th</sup> Edition, 2019											
2. Charles W.L. Hill, Gareth r. Jones, “Strategic Management: An Integrated Approach”, Cengage Learning India											



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2. <https://www.geektonight.com/strategic-management-notes-pdf/>
3. [https://www.academia.edu/27553954/Strategic\\_Management\\_Notes\\_Power\\_Point\\_Chapter\\_1](https://www.academia.edu/27553954/Strategic_Management_Notes_Power_Point_Chapter_1)
4. <https://www.slideshare.net/KiruthikaRuthi/strategic-management-full-notes>
5. [http://studentzonengasce.nmims.edu/content/Strategic%20Management/Strategic\\_Management\\_IBdA3TJvQg.pdf](http://studentzonengasce.nmims.edu/content/Strategic%20Management/Strategic_Management_IBdA3TJvQg.pdf)

COs	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO 1	PO 2	PO 3	PO 4	PO 5	PSO 1	PSO 2	PSO 3
1	3	3	3	3	3	3	3	3
2	3	3	3	3	3	3	3	3
3	3	2	3	3	2	3	3	3
4	2	3	2	2	2	2	3	2
5	3	3	3	3	3	3	3	3

**Correlation Level:**

High	Moderate	Low
3	2	1

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	10		5	5	5	75	100

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## FOURTH SEMESTER

Department	BUSINESS STUDIES			Programme: B.Com. (Computer Application)							
Semester	FOURTH SEMESTER			Course Category Code: DSC		End Semester Exam Type: TE					
Course Code	A20CCT405			Periods / Week			Credit	Maximum Marks			
				L	T	P	C	CAM	ESE	TM	
Course Name	MANAGEMENT ACCOUNTING			4	1	0	5	25	75	100	
Prerequisite	Basics Knowledge on Management Accounting										
Course Objective	To help the students be aware of the basic principles and techniques of management Accounting.										
	To understand the application of financial statements analysis.										
	To give an insight knowledge of Ratio analysis.										
	To apply the cash flow and fund flow analysis in the company										
	To enable them apply the management techniques in preparation of budgets and reports										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Acquire knowledge in basic concepts in management accounting and it's relation with other subjects.								K1	
	CO2	Analyze and interpret the firm's performance through comparative and common-size financial statements and trend analyses.								K2	
	CO3	Apply the ratio analysis to evaluate the financial performance of an organization.								K2	
	CO4	Analyze the cash inflow and outflow changes in business through cash flow statements and fund flow statements.								K3	
	CO5	Prepare cash and flexible budgets and compose reports for decision-making under different situations.								K3	
UNIT-I	Management Accounting						Periods: 6				
Meaning – Definition – Characteristics – Scope -Objectives and Functions – Advantages – Limitations – Management Accounting Vs Financial Accounting – Management Accounting Vs. Cost Accounting – Tools and Techniques of Management Accounting.										CO1	
UNIT-II	Analysis and Interpretation of Financial Statements						Periods: 12				
Concept and types of Financial Statements - significance and importance of Financial Statement - methods of analysis of financial statements - techniques of analysis and interpretation – Comparative Income Statements - Comparative Balance Sheets - Common Size Income Statement - Common Size Balance Sheets - Trend Analysis (problems on the above topics).										CO2	
UNIT-III	Ratio Analysis						Periods: 12				
Meaning of Ratio - objectives of Ratio Analysis - Significance of Ratio Analysis - Limitations of Ratio Analysis - Classification of Ratios - calculation and interpretation of profitability ratios - liquidity ratios - solvency ratios – Simple problems on the above (including preparation of Income statement and Balance sheet).										CO3	
UNIT-IV	Fund flow statement and Cash flow statement						Periods: 15				
Introduction & Meaning of Funds Flow Statement - Concept of Fund - Concept of Flow of Fund - Uses and Limitations of Funds Flow Statement - Schedule of Changes in Working Capital - Calculation of Funds From Operations - Statement of Sources and Application of Funds – basic problems on the above. Introduction & meaning of CFS - differences between FFS and CFS - utility and limitations of CFS - Preparation of CFS – simple problems (only indirect method)										CO4	
UNIT-V	Budgetary Control and Management Reporting						Periods: 15				
Introduction – Meaning – Objectives – Essentials of Budgetary Controls – Classification of Budgets – Steps in Budgeting – Preparation of Cash Budget and Flexible Budget. Meaning of Reporting and Reports - Essentials of an ideal report - Designing and Installation of Reporting system - Types of Reports, Drafting of Reports under different situations.										CO5	
Lecture Periods: 60			Tutorial Periods: 15			Practical Periods: -		Total Periods: 75			
Text Books											
1. R.K. Sharma, Shashi Gupta (2015).Cost & Management Accounting. New Delhi: Kalyani Publishers.											
2. Management Accounting :Gorden P.Jeyaram, N.Sundaram, R.Jeyachandran											
3. Arora.M.N. (2012).Cost and Management Accounting. Mumbai: Himalaya Publishing House.											

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1. Khan, M.Y. & Jain, P.K. (2012). Management Accounting (4<sup>th</sup> edition), New Delhi: Tata McGraw Hill
2. Dr. Maheswari, S.N. (2012). Management Accounting. New Delhi: Sultan Chand & Sons.
3. E. Gordon, Sundram, N. (2011). Management Accounting. Mumbai: Himalaya Publishing House.
4. Management Accounting & Financial Control : S.N. Maheswari.
5. Management Accounting : T.S.Reddy and Y. Hari Prasad Reddy.

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2. <https://rccmindore.com/wp-content/uploads/2015/06/Management-Accounting-5th-sem.pdf>
3. [https://www.svtuition.org/p/bcom-3rd-year-management-accounting\\_3.html?m=1](https://www.svtuition.org/p/bcom-3rd-year-management-accounting_3.html?m=1)
4. <https://www.geektonight.com/management-accounting-notes/>
5. [https://www.tutorialspoint.com/accounting\\_basics/management\\_accounting\\_introduction.htm](https://www.tutorialspoint.com/accounting_basics/management_accounting_introduction.htm)

\* TE – Theory Exam

**COs/POs/PSOs Mapping**

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100




Department	BUSINESS STUDIES			Programme: B.Com. (Computer Application)							
Semester	FOURTH			Course Category Code: DSC		End Semester Exam Type: TE					
Course Code	A20CCT406			Periods / Week		Credit	Maximum Marks				
				L	T	P	C	CAM	ESE	TM	
Course Name	PROBLEM SOLVING WITH JAVA			4	0	0	4	25	75	100	
Prerequisite	Basics Knowledge on Java Programming.										
Course Objective	To gain and explore the knowledge of java programming.										
	To know the principles of Inheritances, Packages and Interfaces.										
	To get familiarized to generic programming, Multithreading concepts										
	To gain and explore the advanced concepts in Java.										
	To explore database connectivity.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Write a maintainable java program for a given algorithm and implement the same.								K1	
	CO2	Demonstrate the use of inheritance, interface and package in relevant applications.								K2	
	CO3	Create java applications using exception handling, thread and generic programming.								K2	
	CO4	Build java distributed applications using Collections and IO streams.								K3	
	CO5	Exemplify simple graphical user interfaces using GUI components and database programs.								K3	
UNIT-I	INTRODUCTION TO JAVA PROGRAMMING						Periods: 12				
The History and Evolution of Java – Byte code – Java buzzwords – Data types – Variables – Arrays – operators – Control statements – Type conversion and casting- Basic Concepts of OOPs – Concepts of classes and objects - Constructors – static keyword – Final with data – Access control – This key word – Garbage collection – Nested classes and inner classes – String class										CO1	
UNIT-II	INHERITANCE, PACKAGES AND INTERFACES						Periods: 12				
Inheritance: Basic concepts – Forms of inheritance – Super key word – method overriding – Abstract classes – Dynamic method dispatch – The Object class. Packages: Defining – Creating and Accessing – importing packages. Interfaces: Defining – Implementing – Applying – Variables and extending interfaces										CO2	
UNIT-III	EXCEPTION HANDLING AND MULTITHREADING						Periods: 12				
Concepts of Exception handling – Types of exceptions – Creating own exception – Concepts of Multithreading – creating multiple threads – Synchronization – Inter thread communication. Enumeration: Auto boxing – Generics.										CO3	
UNIT-IV	COLLECTIONS AND I/OSTREAM						Periods: 12				
Collections: List – Vector – Stack – Queue – De queue – Set – Sorted Set. Input / Output Basics – Streams – Byte streams and Character streams – Reading and Writing Console – Reading and Writing Files.										CO4	
UNIT-V	EVENT DRIVEN PROGRAMMING AND JDBC						Periods: 12				
Events – Delegation event model – Event handling – Adapter classes. AWT: Concepts of components – Font class – Color class and Graphics - Introduction to Swing - Layout management - Swing Components - Java Database Connectivity – JDBC Connections – JDBC Create Databases - Develop real time applications.										CO5	
Lecture Periods: 60		Tutorial Periods:		Practical Periods: -			Total Periods: 60				
Text Books											
1. Herbert Schildt, “Java: The Complete Reference”, TMH Publishing Company Ltd,11th Edition, 2018.											
2. Sagayaraj, Denis, Karthik, Gajalakshmi, “JAVA Programming for core and advanced learners”, Universities Press Private Limited, 2018.											
3. Herbert Schildt, “The Complete Reference JAVA 2”, TMH, Seventh Edition, 2006.											

## Reference Books

1. H.M.Dietel and P.J.Dietel, "Java How to Program", 11th Edition, Pearson Education/PHI, 2017.
2. Nageshvarrao, "Core Java and Integrated Approach", 1st Edition, Dreamtech, 2016.
3. Cay S. Horstmann, Gary Cornell, "Core Java Volume –I Fundamentals", Prentice Hall, 9th Edition, 2013.
4. P.J. Dietel and H.M Dietel, "Java for Programmers", Pearson Education, 9th Edition, 2011.
5. Cay.S.Horstmann and Gary Cornell, "Core Java 2", Pearson Education, 8th Edition, 2008.

## Web References

1. <http://www.ibm.com/developerworks/java/>
2. <http://docs.oracle.com/javase/tutorial/rmi/>
3. 4. <https://www.edureka.co/blog>
4. <https://www.geeksforgeeks.org>

\* TE – Theory Exam

## COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

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Department	COMPUTATIONAL STUDIES				Programme: <b>B.Com. (Computer Application)</b>							
Semester	FOURTH				Course Category Code: <b>DSC</b>		End Semester Exam Type: <b>TE</b>					
Course Code	<b>A20CPT408</b>				Periods / Week			Credit	Maximum Marks			
					L	T	P	C	CAM	ESE	TM	
Course Name	<b>DATABASE MANAGEMENT SYSTEMS</b>				<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>25</b>	<b>75</b>	<b>100</b>	
Common to B.Sc. (CS), B.C.A., B.Com. (CA)												
Prerequisite	Basics Knowledge on Database Management System											
Course Objective	To learn about Database Structure and Data Models.											
	To study SQL Commands for storing and retrieving data into the database.											
	To study the Relational database system design											
	To understand the concept of Transactions											
	To understand the concept procedural language/Structured Query Language											
Course Outcome	<b>On completion of the course, the students will be able to</b>									BT Mapping (Highest Level)		
	<b>CO1</b>	Understand the basic concepts of Database System.									<b>K1</b>	
	<b>CO2</b>	Design conceptual data model using Entity Relationship Diagram.									<b>K2</b>	
	<b>CO3</b>	Normalize relational database design of an application.									<b>K2</b>	
	<b>CO4</b>	Understand the concepts of SQL.									<b>K3</b>	
	<b>CO5</b>	Understand the strategies for procedural language/Structured Query Language.									<b>K3</b>	
<b>UNIT-I</b>	<b>INTRODUCTION</b>							<b>Periods: 12</b>				
Introduction: Database System – Database-System Applications – Purpose of Database Systems – Advantages of using DBMS approach - View of Data – Relational Database – Database Design – System Structure – Database Architecture.											<b>CO1</b>	
<b>UNIT-II</b>	<b>DATABASE DESIGN AND E-R MODEL</b>							<b>Periods: 12</b>				
Database Design and E-R Model: Overview of the Design Process – The E-R Model – Constraints – E-R Diagrams – Relational Algebra – Tuple Relational Calculus – Domain Relational Calculus.											<b>CO2</b>	
<b>UNIT-III</b>	<b>RELATIONAL DATABASE DESIGN</b>							<b>Periods: 12</b>				
Relational Database Design: Features of Good Relational Designs – Normalization Using Functional Dependencies - First Normal Form - Second Normal Form - Third Normal Form - Fourth Normal Form and BCNF.											<b>CO3</b>	
<b>UNIT-IV</b>	<b>SQL</b>							<b>Periods: 12</b>				
SQL Statements: Data Retrieval: SELECT, Data Definition Languages: CREATE, ALTER, DROP, RENAME, and TRUNCATE - Data Manipulation Language: INSERT UPDATE, DELETE - Transactional Control: COMMIT ROLLBACK, SAVEPOINT, and Data Control Language: GRANT, REVOKE.											<b>CO4</b>	
<b>UNIT-V</b>	<b>PL/SQL</b>							<b>Periods: 12</b>				
PL/SQL blocks – PL/SQL - Basic programs - Procedures – Functions – Cursor – Triggers - Exception Handling.											<b>CO5</b>	
<b>Lecture Periods: 60</b>			<b>Tutorial Periods:</b>			<b>Practical Periods: -</b>			<b>Total Periods: 60</b>			
<b>Text Books</b>												
1. Abraham Silberschatz, Henry F Korth, S Sudharshan, “Database System Concepts”, McGraw-Hill, 7 <sup>th</sup> edition. 2. Ramez Elmasri and Shamkant Navathe, Durvasula V L N Somayajulu, Shyam K Gupta, “Fundamentals of Database Systems”, Pearson Education, 2018. 3. Hector Garcia-Molina, Jeffrey D. Ullman, Jennifer Widom, “Database Systems The Complete Book” Prentice Hall, 2 <sup>nd</sup> Edition, 2014.												
<b>Reference Books</b>												
1. Raghu Ramakrishna, Johannes Gehrke, “Database Management Systems”, McGraw Hill, 3 <sup>rd</sup> Edition, 2014. 2. G.K.Gupta," Database Management Systems", Tata McGraw Hill, 2011. 3. Date CJ, Kannan A, Swamynathan S, “An Introduction to Database System”, Pearson Education, 8 <sup>th</sup> Edition, 2006. 4. Paul Beynon-Davies, “Database Systems”, Palgrave Macmillan, 3 <sup>rd</sup> Edition, 2003. 5. Mukesh Chandra Negi, “Fundamentals of Database Management System”, BPB Publications, 2019.												

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1. [https://docs.oracle.com/cd/E11882\\_01/server.112/e41084/toc.htm](https://docs.oracle.com/cd/E11882_01/server.112/e41084/toc.htm) MySQL Online Documentation
2. <http://dev.mysql.com/doc/>
3. <http://www.rjspm.com/PDF/BCA-428%20Oracle.pdf>
4. <https://nptel.ac.in/courses/106/106/106106095/>
5. <https://www.tutorialspoint.com/dbms/index.html>

\* TE – Theory Exam

## COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

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Department	BUSINESS STUDIES				Programme: B.Com. (Computer Application)							
Semester	FOURTH				Course Category Code: DSE		End Semester Exam Type: TE					
Course Code	A20CCE404				Periods / Week		Credit	Maximum Marks				
					L	T	P	C	CAM	ESE	TM	
Course Name	BASICS OF STOCK MARKET				3	0	0	3	25	75	100	
Prerequisite	Basic Knowledge on Stock Markets.											
Course Objective	To provide an in-depth understanding of Investment platform.											
	To explain purpose and need of investment to investor.											
	To explore various investment alternatives in Indian market.											
	To be familiar with Mutual Fund and its technical Analysis.											
	To understand the Security Valuation and concepts of CAPM & APT.											
Course Outcome	On completion of the course, the students will be able to									BT Mapping (Highest Level)		
	CO1	Understand the functions of Capital Market and Stock exchanges.									K1	
	CO2	Acquire knowledge about various types of investors.									K2	
	CO3	Provide insight about investment options and attributes.									K2	
	CO4	Know about the concepts of mutual fund and technical analysis.									K3	
	CO5	Recognise the security valuation and theoretical knowledge on capital asset rising theory (CAPT) and Arbitrage Pricing Model (APT).									K3	
UNIT-I	FINANCIAL MARKETS IN INDIA							Periods: 9				
Meaning of Security Markets, Features of capital markets and functioning, New issues market - IPO's, procedures - valuation of issues - fundamental and technical considerations - Stock exchanges - role and importance, trading procedures in securities, - brokers and Jobbers, Index's - Role of SEBI in brief.											CO1	
UNIT-II	NATURE & SCOPE OF INVESTMENTS							Periods: 9				
Basics of investment - Scope - Economic meaning and significance of income, savings, investments, security, speculation, and gambling Comparison between investment and speculation - Profile of Indian investors and factors influencing investment decisions - Internal and external factors, Legal framework of securities market in India, investors and stock exchanges, and its significance in Indian financial system.											CO2	
UNIT-III	INVESTMENT ALTERNATIVES							Periods: 9				
Investment Options & Attributes Characteristics features of financial instruments, Types of financial assets & Instruments, Various investments - Company Shares, Debentures, Bonds, Mutual funds, fixed deposits, Futures & Options, post office schemes, UTI, LIC & Global securities - Risk, Return, Security, Maturity & Optional features. Finance vs Investments.											CO3	
UNIT-IV	MUTUAL FUNDS AND SECURITY MARKET ANALYSIS							Periods: 9				
Mutual funds-concept and origin of the mutual funds; Types of mutual funds; Importance of mutual funds; Estimation of net asset value of mutual funds; Mutual funds in India; Security market analysis - fundamental analysis; Economic, industry and company analyses; Technical analysis											CO4	
UNIT-V	SECURITY VALUATION							Periods: 9				
Security pricing Security Valuation - Factors influence valuation - Valuation of fixed income instruments and equities - calculation of return on yield, calculations Net worth - Equity valuation - security pricing model - Assumptions of single period classical CAPM model. Characteristic line, Capital Market Line, Security market Line - Arbitrage Pricing Model (APT)											CO5	
Lecture Periods: 45			Tutorial Periods:			Practical Periods: -			Total Periods: 45			
Text Books												
1. Ronald Fisher & Jordan (2009). Investment Management. New Delhi. Tata Mc Graw Publication.												
2. Punithavathy & Pandian (2008). Security Analysis and Portfolio Management. New Delhi. Vikas Publishing House Pvt. Ltd.												



## Reference Books

1. Prasanna Chandra, Investment Analysis and Portfolio Management, 4th Edition, Tata McGraw Hill
2. M. Ranganathan and R. Madhumathi (2010). Investment Analysis and Portfolio Management. New Delhi. Pearson Education Press
3. V. A. Avadhani (2005). Security Analysis and Portfolio Management (7th ed.). New Delhi. Himalaya Publication.
4. V. K. Bhalla (2009). Security Analysis and Portfolio Management. New Delhi. Sultan Chand Publisher.

## Web References

1. <https://www.moneycontrol.com/stocksmarketsindia/>
2. [https://onlinecourses.swayam2.ac.in/imb24\\_mg26/preview](https://onlinecourses.swayam2.ac.in/imb24_mg26/preview)
3. <https://nptel.ac.in/courses/110104164>
4. <https://nptel.ac.in/courses/110107162>
5. <https://archive.nptel.ac.in/courses/110/105/110105035/>

\* TE – Theory Exam

## COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

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Department	<b>Business Studies</b>	Programme: <b>B. B.A. (Fintech and Digital Banking)</b>						
Semester	<b>Fourth</b>	Course Category Code: <b>DSE</b>		End Semester Exam Type: <b>TE</b>				
Course Code	<b>A20CCE405</b>	Periods / Week			Credit	Maximum Marks		
		L	T	P	C	CAM	ESE	TM
Course Name	<b>INSURANCE AND RISK MANAGEMENT</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>25</b>	<b>75</b>	<b>100</b>

Common to B.B.A. (FDB), B.Com. (CA)

Prerequisite	-
Course Objective	To understand the fundamental principles of Insurance.
	To learn about Life Insurance and its products.
	To know the Fire and Marine Insurance and their types.
	To understand the Legal Dimensions of Insurance in India.
	To know the requirement of Risk Management.

Course Outcome	<b>On completion of the course, the students will be able to</b>							BT Mapping (Highest Level)
	<b>CO1</b>	Demonstrate their understanding in Fundamentals of Insurance.						<b>K1</b>
	<b>CO2</b>	Attain proper knowledge with various types of Life Insurance Policies.						<b>K2</b>
	<b>CO3</b>	Develop a clear understanding of Fire and Marine Insurance.						<b>K2</b>
	<b>CO4</b>	Show an understanding on the legal framework of Insurance in India.						<b>K3</b>
	<b>CO5</b>	Explain the Risk Management and Risk Assessment.						<b>K3</b>

<b>UNIT-I</b>	<b>INTRODUCTION TO INSURANCE BUSINESS</b>	<b>Periods: 09</b>
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Definition of insurance - Characteristics of insurance – Principles of contract of insurance – General Concepts of Insurance – Insurance and hedging – Types of insurance – Insurance intermediaries - General Insurance Business - Fundamental principles of general insurance.

**CO1**

<b>UNIT-II</b>	<b>LIFE INSURANCE BUSINESS</b>	<b>Periods: 09</b>
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Define Life Insurance - Fundamental principles of life insurance – Basic features of life insurance contracts - Types of life insurance policies – Term insurance – Whole life insurance and its variants – Endowment insurance and its variants – Annuities – Policies for children and females – Policies for handicapped lives – Pension plans – Health insurance – Claims settlement.

**CO2**

<b>UNIT-III</b>	<b>FIRE AND MARINE INSURANCE</b>	<b>Periods: 09</b>
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Fire Insurance – Meaning and Definition – Features – Hazards – Fundamental Principles of Fire Insurance – Kinds of Fire Policies – Settlement of Fire Claims.

Marine Insurance – Meaning and Definition – Kinds of Marine Insurance – Types of Marine Policies – Clauses in Marine Policies – Types of Marine Losses – Settlement of Marine Claims.

**CO3**

<b>UNIT-IV</b>	<b>LEGAL DIMENSIONS OF INSURANCE</b>	<b>Periods: 09</b>
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The Insurance Act, 1938 – Life Insurance Act, 1956 – Insurance Regulatory and Development Act, 1999 – Consumer Protection Act, 1986.

**CO4**

<b>UNIT-V</b>	<b>RISK MANAGEMENT AND RISK ASSESSMENT</b>	<b>Periods: 09</b>
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Risk management – Objectives of risk management – Risk management process – Identifying and evaluating potential losses – Selecting appropriate technique for treating loss exposure – Risk financing – Implementing and administering risk management program – Personal risk management – Loss forecasting - Risk Assessment, Analysis, Evaluation, Risk Control and Treatment – Risk Reduction - Transfer and Sharing of Risk - Elimination and Retention of Risk.

**CO5**

<b>Lecture Periods: 45</b>	<b>Tutorial Periods:</b>	<b>Practical Periods: -</b>	<b>Total Periods: 45</b>
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#### Text Books

1. A.Murthy "Elements of Insurance Risk Management & Insurance", Tata Mc Graw Hill, 5<sup>th</sup> Edition, 2006.
2. George Rejda, Principles of Risk Management and Insurance, Pearson Education 19<sup>th</sup> Edition 2017.
3. Gupta, P. K, Insurance and Risk Management, Himalaya Publishing House.

**Reference Books**

1. R.S.Sharma, "Insurance Principles & Banking Practice"
2. A.Murthy "Elements of Insurance", Margham Publications, 2<sup>nd</sup> Edition, 2019.
3. Panda.G.S, "Principles and Practices of Insurance", Kalyani Publishers, 7<sup>th</sup> Edition, 2012.

**Web References**

1. <https://www.insuranceinstituteofindia.com/documents/10156/4877353c-4bd1-4bc9-bfc1-140acaebce8d>
2. <http://www.markowitzherbold.com>
3. <https://www.ebooksread.com>
4. <http://www.mikerussonline.com>

\* TE – Theory Exam

**COs/POs/PSOs Mapping**

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
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4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

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Department	BUSINESS STUDIES			Programme: B.Com. (Computer Application)							
Semester	FOURTH			Course Category Code: DSE		End Semester Exam Type: TE					
Course Code	A20CCE406			Periods / Week			Credit	Maximum Marks			
				L	T	P	C	CAM	ESE	TM	
Course Name	FINANCIAL MARKETS AND SERVICES			3	0	0	3	25	75	100	
Prerequisite	Basic Knowledge on Financial Market.										
Course Objective	To know about the role and importance of Indian financial markets.										
	To have an exposure of Indian money market.										
	To understand the security market regulations.										
	To have an exposure on mutual funds and venture capital.										
	To keep abreast of recent financial market services.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Understand the role and function of the financial system in reference to macro economy.								K1	
	CO2	Demonstrate an awareness of the current structure and regulation of the Indian money market sector.								K2	
	CO3	Determine how the value of stocks, bonds and securities are calculated.								K2	
	CO4	Analyse the concepts relevant to mutual funds and venture capital.								K3	
	CO5	Evaluate and create strategies to promote financial products and services.								K3	
UNIT-I	FINANCIAL MARKETS						Periods: 9				
Introduction – Indian Financial systems and development – Overview of Financial Markets in India – Financial Rates of return – Financial Intermediaries – Government Securities Markets - Financial Markets Regulation Department (FMRD) – SEBI Regulations and Guidelines - Global Financial Market – Basic concepts, functions and Pros and Cons of IMF, FDI, World Bank.										CO1	
UNIT-II	MONEY MARKET						Periods: 9				
Types of Financial market – Money Market Vs Capital Market – Importance of Money Market – Characteristics and features of Developed Money Market – Composition of Money Market - Money Market Instruments – Interbank Participation Certificate – Repo Instruments – Structure of Indian Money market – Institutions in Capital Market and Money market -Deficiencies of Indian Money Market – Recent Developments – Discounts and Finance House of India (DFHI).										CO2	
UNIT-III	SECONDARY MARKET						Periods: 9				
Functions/Services of stock Exchange – Recognition of Stock Exchange – Procedure – Organization of stock exchange in India – Stock Brokers – Methods of Trading in a Stock Exchange – Current Settlement Procedure of Trading Transactions – Online Trading – BSE Bolt System – Mobile Trading – Algo Trading – Merits of Online Trading – Kinds of Speculators – Defects of Indian Stock/Capital Market – Genuine Trading Vs. Speculative Trading – OTCE – Trading in OTCE Exchange - Need for Investors’ Protection – Factors affecting Investor’s Interest – Investor’s Protection measures.										CO3	
UNIT-IV	FINANCIAL SERVICES: MUTUAL FUNDS AND VENTURE CAPITAL						Periods: 9				
Meaning, Scope and Innovations – Importance of Financial Services – Mutual Fund – Origin – Definition – Types – Importance of Mutual Fund – General guidelines – Reasons for slow growth – Future of Mutual Fund Industry – Venture Capital – Concept – guidelines – The Indian Scenario – Suggestions for the growth of Venture Capital Funds – Nitin Desai Committee’s Recommendations.										CO4	
UNIT-V	CREDIT RATING AND CREDIT CARDS						Periods: 9				
Meaning of Credit Rating – Functions and Benefits of Credit Rating in India – Benefits to Rated Companies – New Symbols of Credit Rating – Future Credit Rating in India – Credit Cards: - What is Credit Card? – Who can be a Credit Cardholder? – Types of Credit Card -Procedure at the time of purchase of member establishments – Facilities offered to Cardholders – Benefits and Demerits – Credit Card business in India – Recent trends in Financial Market services.										CO5	
Lecture Periods: 45		Tutorial Periods:		Practical Periods: -			Total Periods: 45				

**Text Books**

1. Khan M.Y., "Financial Services", Tata MC Graw Hill 1998.
2. Varshney, P.N., "Indian Financial System", Sultan Chand & Sons 2000.
3. Gordon. E and Natarajan. K., "Financial Markets and Services, Himalaya Publishing House, 2003.

**Reference Books**

1. SEBI guidelines, Nabhi publications New Delhi.
2. Sontomero and Babbel, "Financial Markets, Instruments and Institutions, MC Graw Hill 1998.
3. Vasant Desai, "The Indian Financial System", Himalayan Publishing House.
4. Reports and guidelines of RBI and SEBI on different types.

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1. <https://pwnonlyias.com/upsc-notes/financial-market/>
2. <https://testbook.com/ias-preparation/financial-market>
3. <https://prepp.in/news/e-492-financial-markets-indian-economy-notes>
4. [www.ibef.org/industry/financialservices.aspx](http://www.ibef.org/industry/financialservices.aspx)
5. [www.financialseervicesbiz.com/](http://www.financialseervicesbiz.com/)

\* TE – Theory Exam

**COs/POs/PSOs Mapping**

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

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Department	BUSINESS STUDIES			Programme: B.Com. (Computer Application)							
Semester	FOURTH			Course Category Code: DSC		End Semester Exam Type: LE					
Course Code	A20CCL403			Periods / Week			Credit	Maximum Marks			
				L	T	P	C	CAM	ESE	TM	
Course Name	PROGRAMMING WITH JAVA LAB			0	0	4	2	50	50	100	
Prerequisite	Basics Knowledge on Database Management System										
Course Objective	To acquire programming skill in core java.										
	To learn how to design java program and applications.										
	To acquire object oriented skills in java.										
	To develop the skill of designing applications.										
	To explore database connectivity.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Apply and practice logical formulations to solve simple problems leading to specific applications.								K1	
	CO2	Demonstrate the use of inheritance, interface and package in relevant applications.								K2	
	CO3	Create java applications using exception handling multithread.								K2	
	CO4	Build java distributed applications using Collections and IO streams.								K3	
	CO5	Develop simple database programs								K3	
LIST OF EXERCISES											
1. Develop simple programs using java technologies and testing tools.											
2. Develop a java program that implements class and object.											
3. Write a java program to demonstrate inheritance.											
4. Develop a simple program to illustrate the use of Multithreads.											
5. Implement simple applications using Collections.											
6. Create java applications using Exception Handling for error handling.											
7. Develop a java program that implements the Packages.											
8. Develop a simple application and use JDBC to connect to a back-end database.											
9. Create a student application with Add, Edit, Delete, Show functions using JDBC.											
10. Create a Bill Application to store sales details using JDBC.											
Lecture Periods:		Tutorial Periods:		Practical Periods: 60			Total Periods: 60				
Reference Books											
1. Sagayaraj, Denis, Karthik, Gajalakshmi, "JAVA Programming for core and advanced learners", Universities Press Private Limited, 2018.											
2. Paul Deitel Harvey Deitel, "JAVA How to program (Early Objects)", 19th Edition, 2011											
3. Cay.S.Horstmann and Gary Cornell, "Core Java 2", Vol 2, Advanced Features, Pearson Education, Seventh Edition, 2010.											
4. HerbertSchildt, "The Complete Reference JAVA 2", TMH, Seventh Edition, 2006.											
5. E. Balaguruswamy, "Programming with Java", TMH, 2nd Edition, 2005.											
Web References											
1. http://www.ibm.com/developerworks/java/											
2. http://docs.oracle.com/javase/tutorial/rmi/.											
3. IBM's tutorials on Swings, AWT controls andJDBC.											
4. https://www.edureka.co/blog											
5. https://www.geeksforgeeks.org											

\* LE - Lab Exam

**COs/POs/PSOs Mapping**

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)				End Semester Examination (ESE) Marks	Total Marks
	Model Exam	Observation	Record	Attendance		
Marks	20	10	10	10	50	100






Department	BUSINESS STUDIES			Programme: B.Com. (Computer Application)							
Semester	FOURTH			Course Category Code: DSC		End Semester Exam Type: LE					
Course Code	A20CCL404			Periods / Week		Credit	Maximum Marks				
				L	T	P	C	CAM	ESE	TM	
Course Name	DBMS LAB			0	0	4	2	50	50	100	
Prerequisite	Basics Knowledge on Database Management System										
Course Objective	To learn and understand DDL & DML										
	To learn and understand DCL.										
	To implement basic SQL Commands.										
	To Execute PL/SQL Programs.										
	To develop GUI applications in any Platform.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Implement DDL and DML commands.								K1	
	CO2	Implement DCL commands.								K2	
	CO3	Analyze PL/SQL programs.								K2	
	CO4	Understand PL/SQL programs.								K3	
	CO5	Develop GUI applications in their known platform.								K3	
LIST OF EXERCISES											
1. Create Table using Data Definition Language (DDL). 2. Modify Table using Data Manipulation Language (DML). 3. Store and Retrieve data through Data Control Language (DCL). 4. Implement Constraints and Built-in functions in various tables. 5. Perform Joins and Group-by functions. 6. Implement Simple Programs in PL/SQL. 7. Create PL/SQL programs using functions. 8. Create PL/SQL programs using Cursor. 9. Create PL/SQL programs using triggers. 10. Developing GUI applications. <ul style="list-style-type: none"><li>Student Information System.</li><li>Inventory Management.</li><li>Payroll Processing.</li></ul>										CO1	
Lecture Periods:		Tutorial Periods:		Practical Periods: 60			Total Periods: 30				
Reference Books											
1. Ramez Elmasri, Durvasul VLN Somyazulu, Shamkant B Navathe, Shyam K Gupta, Fundamentals of Database Systems, Pearson Education, 7 <sup>th</sup> Edition, 2016. 2. 2. Raghu Ramakrishna, Johannes Gehrke, Database Management Systems, McGraw Hill,3 <sup>rd</sup> Edition, 2014. 3. 3. Abraham Silberschatz, Henry F Korth, S Sudharshan, Database System Concepts”, McGraw-Hill Indian Edition, 7 <sup>th</sup> Edition, 2013. 4. 4. Kuhn,"RMAN Recipes for Oracle Database", Apress, 2 <sup>nd</sup> Edition,2013. 5. 5. Date CJ, Kannan A, Swamynathan S, An Introduction to Database System, Pearson Education, 8 <sup>th</sup> Edition, 2006.											
Web References											
1. <a href="https://docs.oracle.com/cd/E11882_01/server.112/e41084/toc.htm">https://docs.oracle.com/cd/E11882_01/server.112/e41084/toc.htm</a> MySQL Online Documentation 2. <a href="http://dev.mysql.com/doc/">http://dev.mysql.com/doc/</a> 3. 3. <a href="http://www.rjspm.com/PDF/BCA-428%20Oracle.pdf">http://www.rjspm.com/PDF/BCA-428%20Oracle.pdf</a>											

\* LE - Lab Exam



**COs/POs/PSOs Mapping**

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)				End Semester Examination (ESE) Marks	Total Marks
	Model Exam	Observation	Record	Attendance		
Marks	20	10	10	10	50	100




Department	BUSINESS STUDIES			Programme: B.Com. (Computer Application)						
Semester	FOURTH			Course Category Code: SEC		End Semester Exam Type: -				
Course Code	A20CCS403			Periods / Week			Credit	Maximum Marks		
				L	T	P	C	CAM	ESE	TM
Course Name	ENTREPRENEURIAL SKILLS			0	0	4	2	100	- 100	
Prerequisite	Basic Knowledge on Financial Market.									
Course Objective	To develop the knowledge of basic concepts in the area of entrepreneurship.									
	To generate innovative business ideas in the emerging industrial scenario									
	To be familiar with the key steps in the elaboration of business idea.									
	To help students to develop personal creativity and entrepreneurial initiative.									
	To acquire requisite knowledge and skills for becoming successful entrepreneurs.									
Course Outcome	On completion of the course, the students will be able to							BT Mapping (Highest Level)		
	CO1	Familiarize with the concepts of entrepreneurship							K1	
	CO2	Analyse the business environment in order to identify business opportunities.							K2	
	CO3	Understand the institutional support to entrepreneurial development.							K2	
	CO4	Understand the ethical challenges and social responsibility in a business setting.							K3	
	CO5	Demonstrate the ability to create business plan and interpret their own business plan							K3	
UNIT-I	ENTREPRENEUR AND ENTREPRENEURSHIP						Periods: 12			
Introduction - Entrepreneurship - concept, characteristics, types - Entrepreneurship in India - Entrepreneurship in developing countries - Intrapreneurs - Women Entrepreneurs - problems and prospects - Rural Entrepreneurs - problems and prospects - Social Entrepreneurs.									CO1	
UNIT-II	ENTREPRENEURIAL DEVELOPMENT						Periods: 12			
Factors influencing Entrepreneurship - Entrepreneurial process - EDP - objective, phases of EDP - Tools for Environmental Scanning: SWOT Analysis – PESTLE Analysis – Michael Porter's Approach to Industry Analysis.									CO2	
UNIT-III	ENTREPRENEURSHIP IN ACTION						Periods: 12			
Concept and Definition of MSME - Scope, Role of Government in promoting SSI - Business idea generation techniques - Registration of Industries and licensing - Marketing, Financial, Technical, Legal feasibility - Locational feasibility - Government rules and regulations. Simple Case Studies on Entrepreneurial Challenges. .									CO3	
UNIT-IV	INSTITUTIONAL FINANCE TO ENTREPRENEURS						Periods: 12			
Central Government store purchase program - National small Industrial corporation - SIDBI, IDBI, TCO, IIFT, IFCI, ICICI, IRBI, Export Import Bank, Trade Development Authority, ECGC, MDA, EDII, IRDP, DIC, SSIB, SISI, SFC, Seed capital. Start-ups and Mudra Banks.									CO4	
UNIT-V	EMERGING TRENDS IN ENTREPRENEURSHIP						Periods: 12			
Introduction - Venture capital financing concept, Venture capital in India - Social and Ethical responsibility of Entrepreneurs – Franchising and acquisition - Successful Entrepreneurs.									CO5	
Lecture Periods: -			Tutorial Periods: -			Practical Periods: 60		Total Periods: 60		
Text Books										
1. C.B.Gupta & N.P.Srinivasan, "Entrepreneurial Development", Sultan Chand & Sons, 1st Edition, 2013. 2. S.S. Khanka, "Entrepreneurial Development", Sultan Chand & Sons, 1st Edition, 1999. 3. E. Gordon & K. Natarajan, "Entrepreneurship Development", Himalaya Publishing house, 5th Edition, 2015.										
Reference Books										
1. Abhijit Chatterjee & V. Sharma, "Entrepreneurship Development", Vayu Education of India, 1st Edition, 2020. 2. Vasant Desai, "Dynamics of entrepreneurial development", Wiley Eastern limited, 2nd Edition, 2016. 3. Lall, M & Sahai. S, "Entrepreneurship", Excel Book Publishers, 2nd Edition, 2013. 4. Jayshree Suresh, "Entrepreneurial Development", Margham Publications, 5th Edition, 2019.										

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1. <https://www.crectirupathi.com/entrepreneurialdevelopment-notes/>
2. <http://simplynotes.in/entrepreneurialdevelopment>
3. <https://lecturenotes.in/subject/35/entrepreneurship-development-ed>
4. <http://msme.gov.in/allschemes>
5. <http://www.mbaexamnotes.com/businessidea.html>

### COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

### Evaluation Method

Assessment	Continuous Assessment Marks (CAM)				Total Marks
	CAT 1	CAT 2	Assignment	Attendance	
Marks	70		20	10	100

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Department	BUSINESS STUDIES				Programme: B.Com. (Computer Application)							
Semester	FOURTH				Course Category Code: AECC		*End Semester Exam Type: -					
Course Code	A20AET403				Periods / Week		Credit	Maximum Marks				
					L	T	P	C	CAM	ESE	TM	
Course Name	VALUE EDUCATION				2	0	0	2	100	0	100	
Pedagogy:	Classrooms lecture, tutorials, Group discussion, Seminar, Role play & field work etc.											
Course Objective	To explain the importance of value education.											
	To understand the importance of family values.											
	To be familiar with ethical values											
	To explain the importance of social values.											
	To teach the importance of effect of international affairs on values of life.											
Course Outcome	On completion of the course, the students will be able to										BT Mapping (Highest Level)	
	CO1	Demonstrate the concepts of human values.										K2
	CO2	Realise the importance of family values.										K2
	CO3	Understand the importance of ethical values.										K3
	CO4	Think and act on social values.										K3
	CO5	Understand the effect of international affairs on values of life.										K2
UNIT-I	VALUE EDUCATION							Periods: 6				
Definition – Relevance to present day – Concept of Human Values – Self-introspection – Self-Esteem.											CO1	
UNIT-II	FAMILY VALUES							Periods: 6				
Components, Structure and Responsibilities of Family – Neutralization of anger – Adjustability – Threats of family life – Status of women in family and society – Caring for needy and elderly – Time allotment for sharing ideas and concerns											CO2	
UNIT-III	ETHICAL VALUES							Periods: 6				
Professional Ethics – Mass Media Ethics – Advertising Ethics – Influence of Ethics on family life – Psychology of children and youth – Leadership qualities – Personality Development.											CO3	
UNIT-IV	SOCIAL VALUES							Periods: 6				
Faith, service and secularism – Social sense and commitment – Students and Politics – Social Awareness, Consumer Awareness, Consumer rights and responsibilities – Redressal mechanisms.											CO4	
UNIT-V	EFFECT OF INTERNATIONAL AFFAIRS ON VALUES OF LIFE							Periods: 6				
Issue of Globalization – Modern warfare – Terrorism. Environmental issues – mutual respect of different cultures, religious and their beliefs.											CO5	
Lecture Periods: 30			Tutorial Periods: -			Practical Periods: -			Total Periods: 30			
Text Books												
1. M. Sivakumar & S. Mugilarasi, “Value Education”, Tricy Publishers, 1 <sup>st</sup> Edition, 2018.												
2. N. Venkataiah, “Value Education”, A P H Publishing Corporation, 4 <sup>th</sup> Edition, 2013.												
3. Kiruba Charles & V. Arul Selvi, “Value Education”, Neelkamal Publishers, 1 <sup>st</sup> Edition, 2016.												
Reference Books												
1. S.P. Ruhela, ”Human Values and Education”, Sterling Publications, 1 <sup>st</sup> Edition, 1986.												
2. D.D. Bandiste, “Humanist Values: A Source Book”, B.R. Publishing Corporation, 1 <sup>st</sup> Edition, 1999.												
3. M.S. Das & V.K. Gupta, “Social Values among Young Adults: A changing scenario”, M.D. Publications, 1 <sup>st</sup> Edition, 1995.												
Web References												
1. <a href="https://www.youtube.com/watch?v=gw07USDCtBo">https://www.youtube.com/watch?v=gw07USDCtBo</a>												
2. <a href="https://gupshups.org/value-education/">https://gupshups.org/value-education/</a>												
3. <a href="https://www.yourarticlelibrary.com/education/values-education/value-education-meaning-objectives-and-needs-india/86967">https://www.yourarticlelibrary.com/education/values-education/value-education-meaning-objectives-and-needs-india/86967</a>												
4. <a href="https://impoff.com/importance-of-values/">https://impoff.com/importance-of-values/</a>												
5. <a href="https://www.iberdrola.com/talent/value-education">https://www.iberdrola.com/talent/value-education</a>												

**COs/POs/PSOs Mapping**

COs	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	1	1	-	-	1	2	1	2
2	1	2	1	-	-	2	1	1
3	-	1	1	2	1	2	2	2
4	1	1	-	1	1	3	1	1
5	1	1	1	-	1	2	2	1

Correlation Level: 1 - Low, 2 - Medium, 3 – High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)				End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Assignment	Attendance		
Marks	70		20	10	0	100




# FIFTH SEMESTER

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Department	BUSINESS STUDIES			Programme: B.Com. Computer Application							
Semester	FIFTH			Course Category Code: DSC		End Semester Exam Type: TE					
Course Code	A20CST512			Periods / Week			Credits	Maximum Marks			
				L	T	P	C	CAM	ESE	TM	
Course Name	INCOME TAX LAW AND PRACTICE			4	0	0	4	25	75	100	
Common to B.Com. (CA), B.Com. (CS)											
Prerequisite	Basic understanding of tax system in India										
Course Objective	To gain the knowledge of the provisions of income tax law relating to the topics.										
	To gain ability to solve simple concerning assesses with the status of Individual.										
	To Compute the assessment procedure of income from house property.										
	To effectively gain in depth knowledge on income from business and capital gains.										
	To compute the deductions from gross total income.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Acquire the complete knowledge of basic concepts of income tax.								K1	
	CO2	Compute the taxable income under salary.								K2	
	CO3	Analyse the assessment procedure for Income under house property.								K2	
	CO4	Calculate the Income from business or profession and capital gains.								K3	
	CO5	Assess the income from other sources and the deductions from GTI.								K3	
UNIT-I	CONCEPTS OF INCOME TAX							Periods: 12			
Brief History of Indian Income Tax -- Important Definitions: Assessment, Assessment Year, Previous Year (including Exceptions), Assessee, person, Income, casual Income, Gross Total Income, Agricultural Income-Residential status and scope of total income -Exempted Incomes u/s 10.										CO1	
UNIT-II	UNIT II INCOME FROM SALARY							Periods: 12			
Meaning - Definition - Basis of Charge- Advance Salary - Arrears of Salary - Allowances - Perquisites- Provident Fund - Profits in Lieu of Salary - Gratuity - Pension - Encashment of Earned leave - Compensation for voluntary retirement - Deductions from Salary U/S 16 - Computation of Income from Salary.										CO2	
UNIT-III	INCOME FROM HOUSE PROPERTY							Periods: 12			
Basis of Charge - Deemed Owners - Exempted Incomes from House Property -Composite Rent - Annual Value - Determination of Annual Value - Treatment of Unrealized Rent - Loss due to Vacancy - Deductions from Annual value - computation of Income from House property.										CO3	
UNIT-IV	INCOME FROM BUSINESS OR PROFESSION - CAPITAL GAINS							Periods: 12			
Income from Business or Profession- Basic principle of arriving at business incomes-Losses incidental to trade- Capital gains- Definition of Capital Assets - Long term and short term - Transfers -Cost of acquisition - Cost of improvement - Exemptions on Capital gains.										CO4	
UNIT-V	INCOME FROM OTHER SOURCES							Periods: 12			
Income from other sources: Definition - computation - Grossing up - Deductions and other relevant provisions. Set -off or carry forward and set off of losses - Deductions from Gross Total Income (GTI).										CO5	
Lecture Periods: 60			Tutorial Periods:		Practical Periods: -			Total Periods: 60			
Text Books											
1. Gaur and Narang - Income Tax Law and Practice -Kalyani Publications – 2024											
2. Dr. M.C. Mehrotra – Income Tax Law and Accounts – Sahithya Bhavan Publishers -2019.											
3. Dr. Vinod K Singhania -Direct Tax Law & Practice -Taxmann Publications -2019.											

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**Reference Books**

1. B.B.Lal -Direct Taxes -Konark Publisher P (Ltd) – 2019.
2. Bhagwati Prasad – Direct Taxes Law and Practice – Wishwa Prakashana Publications-2019.
3. Taxmann's - Income Tax Act - 66<sup>th</sup> Edition-2021

**Web References**

1. <https://www.incometaxindia.gov.in/pages/tools/income-tax-calculator.aspx>
2. <https://cleartax.in/s/deductions-under-section24-income-from-house-property>
3. [https://www.icsi.edu/media/webmodules/FINAL\\_TL&P.pdf](https://www.icsi.edu/media/webmodules/FINAL_TL&P.pdf)
4. <https://taxguru.in/income-tax/notes-income-sources.html>
5. <http://www.jiwaji.edu/pdf/ecourse/management/INCOME%20FROM%20SALARIES2.pdf>

\* TE - Theory Exam

**COs/POs/PSOs Mapping**

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100






Department	BUSINESS STUDIES			Programme: B.Com. Computer Application						
Semester	FIFTH			Course Category Code: DSC		End Semester Exam Type: TE				
Course Code	A20CMT512			Periods / Week		Credit	Maximum Marks			
				L	T	P	C	CAM	ESE	TM
Course Name	COST ACCOUNTING			3	1	0	4	25	75	100
Common to	B.Com. (General), B.Com. (CA)									
Prerequisite	Basic knowledge on Accounting									
Course Objective	To explain the concepts of cost accounting and computation of various costs.									
	To analyze the various levels of stock.									
	To compute the labour cost and apportionment of overheads.									
	To get an insight knowledge on preparation of Costing									
	To compute the operating cost and contract costing.									
Course Outcome	On completion of the course, the students will be able to									BT Mapping (Highest Level)
	CO1	Analyze the concepts of cost accounting and preparation of cost sheet.								K1
	CO2	Gain the knowledge on different types of Stock Level, Economic Order Quantity and Methods of valuation of Material.								K2
	CO3	Compute the labour cost, remuneration, incentives and allocation & apportionment of overheads to production & service departments.								K2
	CO4	Gain the knowledge on different types of process accounting.								K3
	CO5	Solve the problems in operating costing and contract costing.								K3
UNIT-I	INTRODUCTION AND COST SHEET						Periods: 12			
Introduction, Meaning of Costing and Cost Accounting, Scope, Objectives of Cost Accounting, Advantages of Cost Accounting, Financial accounting Vs. Cost accounting, Costing - An Aid to Management, General Principles of Cost Accounting – Characteristics of an Ideal Costing System – Installation of a Costing System and Methods of Costing, Limitations of Cost Accounting. Elements of cost – Concepts of costs – Cost Classification – Preparation of cost sheet – Statement of Cost and Profit and Treatment of Stock.										CO1
UNIT-II	MATERIALS: ISSUES AND CONTROL						Periods: 12			
Material Control, Meaning, Objectives of Material Control - Essentials of Material Control – Levels of Materials, Ordering Level and Re-ordering Level, EOQ, Minimum Level – Maximum Level – Danger Level, Average Stock Level, Stores Records and Bin Card – Issue of Materials – FIFO – LIFO – Average Stock Method – HIFO – Inflated Price Method, Specific Price-Base Stock Method, Market Price Method, Standard Price Method- Material Loses, Control of Wastage of Scrap, Defectives and Spoilage.										CO2
UNIT-III	LABOUR AND OVERHEADS COSTS						Periods: 12			
Labour Cost - Types of Labour – Labour Turn over, Causes of Labour Turnover – System of Wage Payment, Essentials of a good Wage System –Time Wage System – Piece Rate System - Premium and Bonus Plans - Group Bonus Scheme. Overheads - Meaning, Importance and Characteristics of overhead –Classification of Overheads Cost -Types of Departments, Allocation of Overheads - Apportionment of Overhead expenses, Bases of Apportionment – Reapportionment and absorption of Overheads.										CO3
UNIT-IV	PROCESS COSTING						Periods: 12			
Process costing - Introduction - Features of Process costing - Fundamental Principles of Process Costing – Advantages and Disadvantages of Process Costing - Process Losses, Normal Process Loss - Abnormal Process Loss (Excluding Equivalent Production and Stock Adjustments) – Abnormal Gain										CO4
UNIT-V	OPERATING AND CONTRACT COSTING						Periods: 12			
Operating costing - Meaning –Transport Costing - Classification of Costs – Ascertainment of Cost – Service Cost and Management Decisions - Contract costing - Introduction - Features of Contract Costing - Types of Contracts - Procedure for recording the costs of contracts - Recording of Value and Profit on Contracts.										CO5
Lecture Periods: 45			Tutorial Periods: 15			Practical Periods: -		Total Periods: 60		

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**Text Books**

1. S.N. Pillai & V. Bagavathi -Cost Accounting- Revised Edition - S. Chand Publications.
2. M.N. Arora, "Cost Accounting", Sultan Chand and Sons, 18<sup>th</sup> Edition, 2019.
3. S. P. Jain and K. L. Narang, Cost Accounting – Revised Edition 2017- Kalyani Publishers.

**Reference Books**

1. Murthy and S. Guruswamy, Cost Accounting – Edition 2014, Tata Mc Graw - Hill Education Pvt. Ltd.
2. M. C. Shukla, T. S. Grewal and M. P. Gupta, - Cost Accounting - Edition 2014 - Sultan Chand Publishers.
3. S.P.Iyyengar, "Cost Accounting Principles and Practice", Sultan Chand, New Delhi. 2005.

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1. <https://www.dynamicictutorialsandservices.org/2018/10/management-accounting-notes.html>
2. <https://www.lkouniv.ac.in/site/writereaddata/siteContent/202005272153381522au- Marginal%20Costing-2.pdf>
3. <https://corporatefinanceinstitute.com/resources/knowledge/finance/cash-flow/>
4. <https://www.umeschandracollege.ac.in/pdf/study-material/accountancy/Budget-Budgetary- Control-Sem-IV.pdf>

\* TE – Theory Exam

**COs/POs/PSOs Mapping**

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100




Department	BUSINESS STUDIES			Programme: B.Com. Computer Application							
Semester	FIFTH			Course Category Code: DSC		End Semester Exam Type: TE					
Course Code	A20BAT512			Periods / Week		Credit	Maximum Marks				
				L	T	P	C	CAM	ESE	TM	
Course Name	FINANCIAL MANAGEMENT			3	1	0	4	25	75	100	
Common to B.B.A. (General), and B.B.A. (FDB), B. Com. (CA)											
Prerequisite	-										
Course Objective	To help the students be aware of the basic principles and techniques of financial management.										
	To analyse and apply capital budgeting decisions.										
	To help learner to understand the application of working capital in finance.										
	To provide a detailed understanding on long-term and short-term financing.										
	To enable them to understand the dividend policy and computation.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Explain the nature of financial management and concept of time value of money.								K1	
	CO2	Prepare Capital Budgeting and Cost of Capital.								K2	
	CO3	Estimate Working Capital Needs of a business enterprise.								K2	
	CO4	Analyse the long-term and short-term financing needs and options.								K3	
	CO5	Develop an appropriate dividend policy and decision.								K3	
UNIT-I	INTRODUCTION AND TIME VALUE OF MONEY						Periods: 12				
Nature of financial management: introduction – scope of finance- Finance functions - Financial Managers role - Financial goal profit maximization vs wealth maximization. Time value of money- introduction- future value – present value. Simple Problems on Time Value of Money.										CO1	
UNIT-II	LONG-TERM INVESTMENT DECISIONS						Periods: 12				
Capital budgeting decisions: Introduction- nature and features of capital budgeting decisions-investment evaluation criteria- net present value- profitability index - payback.The cost of capital: introduction – significance of the cost of capital. Determining component costs of capital: cost of debt – cost of preference capital – cost of equity capital – Determining weighted average cost of capital using book value and market value weights. Simple Problems.										CO2	
UNIT-III	SHORT-TERM INVESTMENT DECISIONS						Periods: 12				
Introduction- concepts of working capital- operating and cash conversion cycle- permanent and variable working capital - determinants of working capital – estimating working capital needs- Working Capital Financing. Simple Problems.										CO3	
UNIT-IV	FINANCING DECISIONS						Periods: 12				
Long term finance: shares, debentures and term loans – introduction-ordinary shares or equity – rights issue of equity shares – preference shares – debentures-term loans- working capital finance: introduction – trade credit- bank finance for working capital- commercial paper.										CO4	
UNIT-V	DIVIDEND DECISIONS						Periods: 12				
Introduction – objectives of dividend policy- stability of dividends – forms of dividends-issues in dividend policy- dividend relevance: Walter’s model - Gordon’s model.										CO5	
Lecture Periods: 45		Tutorial Periods: 15		Practical Periods: -			Total Periods: 60				
Text Books											
1. S.K. Sharma & Rachan Sareen, “Fundamentals of Financial Management”, Sultan Chand, 3 <sup>rd</sup> Edition, 2019. 2. S.N. Maheswari, “Financial Management”, Sultan Chand & Sons, 15 <sup>th</sup> Edition, 2020. 3. L.M. Prasad, “Principles and Practice of Management”, Sultan Chand & Sons, 9 <sup>th</sup> Edition, 2015. 4. V.R. Palanivel, “Financial Management”, S. Chand & Co Ltd., 12 <sup>th</sup> Edition, 2019.											

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## Reference Books

1. I.M. Pandey, "Financial Management", Pearson Education, 1<sup>st</sup> Edition, 2021.
2. Prasanna Chandra, "Financial Management", 7<sup>th</sup> Edition.
3. Khan & Jain, "Financial Management", 5<sup>th</sup> Edition.

## Web References

1. <https://www.investopedia.com/terms/c/capitalbudgeting.asp>
2. <https://www.youtube.com/watch?v=ZOaGNDmKpzo>
3. <https://mdu.ac.in/UpFiles/UpPdfFiles/2020/Jan/FinancialManagement.pdf>
4. <https://www.youtube.com/watch?v=825TSuxTiQU>

\* TE – Theory Exam

## COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

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Department	BUSINESS STUDIES			Programme: : B.B.A. Fintech and Digital Banking							
Semester	FIFTH			Course Category Code: DSE		End Semester Exam Type: TE					
Course Code	A20CCE507			Periods / Week		Credit	Maximum Marks				
				L	T	P	C	CAM	ESE	TM	
Course Name	FINANCIAL DERIVATIVES			3	0	0	3	25	75	100	
Common to B.Com (CA), B.B.A (FDB)											
Course Objective	To understand about the concept of Derivatives and its types										
	To learn about advantages, disadvantages and mechanics of future contracts.										
	To acquaint the knowledge on Options.										
	To gain Knowledge regarding financial swaps										
	To know about Hedging and the development position of Derivatives in India										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Understand the emerging structure of derivatives market in India.								K1	
	CO2	Describe the concept of financial futures contracts.								K2	
	CO3	Compute call and put options payoffs.								K2	
	CO4	Distinguish between different types of interest rates and currency swaps.								K3	
	CO5	Knowledge on strength and weaknesses of Indian Derivatives market.								K3	
UNIT-I	INTRODUCTION						Periods: 9				
Derivatives - History of Derivatives Markets - Uses of Derivatives - Critiques of Derivatives - Need for Derivatives - Evolution of Derivatives in India - Major Recommendations of Dr. L.C. Gupta Committee - Benefits of Derivatives in India - Types of Derivatives - Derivatives Trading at NSE/BSE										CO1	
UNIT-II	FORWARD AND FUTURES						Periods: 11				
Financial Derivatives - Features, Types - Forward: Pricing and Trading Mechanism - Forward Contract - Features of Forward Contract Classification of Forward Contracts - Forward Trading Mechanism. Futures: Types of Financial Futures Contract - Evolution of Futures Market in India - Traders in Futures Market in India - Functions and Growth of Futures Markets - Futures Market Trading Mechanism - Forward Contract Vs. Futures Contracts.										CO2	
UNIT-III	OPTIONS						Periods: 8				
Concept of Options Types Option Valuation - Option Positions: Naked and Covered Option - Underlying Assets in Exchange-traded Options - Determinants of Option Prices - Basic Principles of Option Trading.										CO3	
UNIT-IV	SWAP						Periods: 8				
Concept, Nature, Evolution and Features of Swap - Types of Financial Swaps - Interest Rate Swaps - Currency Swap - Debt Equity Swap - Commodity Swaps - Equity Index Swaps										CO4	
UNIT-V	HEDGING						Periods: 9				
Concepts - Model - Basic Long and Short Hedges - Cross Hedging - Basis Risk and Hedging - Basis Risk Vs Price Risk - Hedging Effectiveness - Devising a Hedging Strategy - Hedging Objectives - Management of Hedge.										CO5	
Lecture Periods: 45		Tutorial Periods:		Practical Periods: -			Total Periods: 45				
Text Books											
1. Gupta S.L., Financial Derivatives Theory, Concepts and Problems Phi, Delhi, Kumar S.S.S. Financial Derivatives, PHI, New Delhi, 2007.											
2. Chance, Don M: Derivatives and Risk Management Basics, Cengage Learning, Delhi.											
3. Stulz M. Rene, Risk Management and Derivatives, Cengage Learning, New Delhi Varshney, P.N., "Indian Financial System", Sultan Chand & Sons 2000.											
Reference Books											
1. Prafulla Kumar Swain, "Fundamentals of Financial Derivatives, Himalaya Publishing House, 2015.											
2. Sontomero and Babbel, "Financial Markets, Instruments and Institutions, MC Graw Hill 1998.											
3. Vasant Desai, "The Indian Financial System", Himalayan Publishing House.											
4. Reports and guidelines of RBI and SEBI on different types.											

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**Web References**

1. <https://www.mlritm.ac.in/assets/img/FINANCIAL%20DERIVATIVES.pdf>
2. <https://icmai.in/Knowledge-Bank/upload/Financial-Derivatives.pdf>
3. <https://prepp.in/news/e-492-financial-markets-indian-economy-notes>

\* TE – Theory Exam

**COs/POs/PSOs Mapping**

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

Department	BUSINESS STUDIES			Programme: B.Com. Computer Application							
Semester	FIFTH			Course Category Code: DSE		End Semester Exam Type: TE					
Course Code	A20CCE508			Periods / Week		Credit	Maximum Marks				
				L	T	P	C	CAM	ESE	TM	
Course Name	BANKING AND INSURANCE			3	0	0	3	25	75	100	
Prerequisite	-										
Course Objective	To make the students understand the various services offered and various risks faced by Banks.										
	To learn about Negotiable Instruments.										
	To make them aware of various Banking Innovations after Nationalization to give them an overview about Insurance Industry										
	To understand the lending functions and utility services of a Bank.										
	To know the banking risks and recent developments.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Acquire knowledge in risk and insurance.								K1	
	CO2	Demonstrate their understanding in Fundamentals of Negotiable Instruments.								K2	
	CO3	Develop a clear understanding overview of Banking Industry.								K2	
	CO4	Show an understanding on the lending functions of a Bank..								K3	
	CO5	Explain the Banking Risks and Recent Developments.								K3	
UNIT-I	RISK AND INSURANCE						Periods: 09				
Defining risk, nature and types of risk, risk management process, Risk and its relation with insurance. Concept and significance of insurance, classification of insurance life and non-life, general principles of insurance.										CO1	
UNIT-II	NEGOTIABLE INSTRUMENTS						Periods: 09				
Definition - Characteristics - Types - Parties to negotiable instruments -Cheques - Types of Cheques - Crossing of Cheques - Drafts - Cheques vs. Draft - Endorsement – Significance - Regularity of endorsement - Liability of endorser - Electronic payments.										CO2	
UNIT-III	OVERVIEW OF BANKING INDUSTRY						Periods: 09				
Banking structure in India- RBI, Commercial, Rural and Cooperative banks their role and significance, Functions, SLR, and CRR: Concepts, Banking Ratios.										CO3	
UNIT-IV	LENDING FUNCTIONS OF A BANK AND UTILITY SERVICES OF A BANK						Periods: 09				
Types of Advances- Secured & Unsecured- Loans: Short, Medium and Long term –Methods of Granting Advances-Remittance through Bank Drafts-E-Banking- Internet Banking- Safe Deposit Lockers.										CO4	
UNIT-V	BANKING RISKS AND RECENT DEVELOPMENTS						Periods: 09				
Banking Risks and recent Developments - Credit, liquidity, market, operation, interest rate solvency, Universal Banking, E-banking, Mobile banking. ALM Process. AMI.										CO5	
Lecture Periods: 45		Tutorial Periods:		Practical Periods: -			Total Periods: 45				
Text Books											
1. Risk Management and Insurance by M.R. Mehra and A.K. Singh (2020) 2. The Law of Insurance by R.K. Sharma (2023) 3. The Law of Negotiable Instruments by S.C. Kuchhal (2022)											
Reference Books											
1.Sethi & Bhatia: Elements of Banking and Insurance, PHI, 2006 2. Sundaram and Varsheney: Banking theory law and practice, 2008 3. Mithani & Gordon: Financial Services: Banking and Insurance, Himalaya , 5th Edition											

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1. [https://onlinecourses.swayam2.ac.in/imb24\\_mg50/preview](https://onlinecourses.swayam2.ac.in/imb24_mg50/preview)
2. [https://onlinecourses.swayam2.ac.in/cec20\\_mg08/preview](https://onlinecourses.swayam2.ac.in/cec20_mg08/preview)
3. <https://www.iibf.org.in/BFSI2.asp>

\* TE: Theory Exam

## COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100



Department	BUSINESS STUDIES			Programme: B.Com. Computer Application							
Semester	FIFTH			Course Category Code: DSE		End Semester Exam Type: TE*					
Course Code	A20CCE509			Periods / Week			Credit	Maximum Marks			
				L	T	P	C	CAM	ESE	TM	
Course Name	SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT			3	0	0	3	25	75	100	
Course Objective	To understand the security analysis and need for fundamental analysis.										
	To learn about risk and return associated with securities and portfolio.										
	To know the capital assets pricing model and assumption of security market line.										
	To understand the portfolio performance using various indices.										
	To know the principles of portfolio management and construct an efficient portfolio.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Understand the relevance of Fundamental Analysis.								K1	
	CO2	Attain the ability to measure risk and return associated with securities and Portfolio.								K2	
	CO3	Explain the ability to use diversification strategy and CAPM to reduce risk in Investment decisions.								K2	
	CO4	Develop skills to evaluate and measure Portfolio performance using various indexes.								K3	
	CO5	Apply the principles of portfolio management and construct an efficient portfolio.								K3	
UNIT-I	SECURITY ANALYSIS						Periods: 09				
Meaning of Security Analysis - Need for Fundamental analysis - Economic analysis - Tools of Economic analysis – Industry Analysis – Industry analysis - Tools of Industry analysis - Company analysis - Tools of Company analysis - Technical analysis – Introduction Assumptions of the theory – The Dow theory – Charts – Line charts , Bar Charts – Construction of charts – Moving average analysis. (Theory Only).										CO1	
UNIT-II	PORTFOLIO ANALYSIS						Periods: 09				
Risk management - Risk of Securities -. Systematic Risk - Interest Rate Risk - Market Risk - Purchasing Power Risk - Unsystematic Risk - Business Risk - Financial Risk – Efficient Market Theory - Measurement of Risk and Return, Portfolio Analysis. Traditional Vs Modern - Rationale of Diversification- Markowitz Theory - Effect of Combining two securities - Measurement of Expected Return of Portfolio - Portfolio Risk.										CO2	
UNIT-III	PORTFOLIO SELECTION						Periods: 09				
Portfolio Selection - efficient set of Portfolios - Optimal portfolio, capital asset pricing model: Assumptions- Security market line (SML)- Capital Asset Pricing Model (CAPM) –Assumptions of CAPM - Limitations of CAPM										CO3	
UNIT-IV	PORTFOLIO EVALUATION						Periods: 09				
Measures of portfolio performance - Reward to variability and rewards to volatility - Sharpe's performance index - Treynor's performance index - Jenson's performance index										CO4	
UNIT-V	PORTFOLIO REVISION						Periods: 09				
Passive Management – Active Management – The Formula plans for the purchase & sale of securities – Rupee cost averaging – Constant rupee plan – Constant ratio plan – Portfolio revision & cost (theory only)										CO5	
Lecture Periods: 45		Tutorial Periods:		Practical Periods: -			Total Periods: 45				
Text Books											
1. Fisher Donald E & Ronald J Jordan: Securities Analysis & Portfolio Management, PHI, 3 <sup>rd</sup> Edition 2009. 2. Punithavathi Pandiyan: Securities Analysis & Portfolio Management, Vikas, 2 <sup>nd</sup> Edition 2011 3. Avadhani, V.A: International finance, Himalaya, 7 <sup>th</sup> Edition 2013											
Reference Books											
1. Reilly: Investment Analysis and Portfolio Management, Thomson, 11 <sup>th</sup> Edition 2015 2. Avadhani, V.A: Investment & Security Management in India, Himalaya. 9 <sup>th</sup> Edition 2018 3. Sulochana M: Investment Management, Kalyani, 3 <sup>rd</sup> Edition 2016											



## Web References

1. <https://new.himpub.com/product/security-analysis-and-portfolio-management/>
2. <https://managementstudyguide.com/security-analysis-and-portfolio-management.htm>
3. [https://ebooks.lpude.in/management/mba/term\\_3/DCOM504\\_DMGT511\\_SECURITY\\_ANALYSIS\\_AND\\_PORTFOLIO\\_MANAGEMENT.pdf](https://ebooks.lpude.in/management/mba/term_3/DCOM504_DMGT511_SECURITY_ANALYSIS_AND_PORTFOLIO_MANAGEMENT.pdf)
4. <https://link.springer.com/book/10.1007/978-981-16-2520-6>

\* TE – Theory Exam

## COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

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Department	<b>BUSINESS STUDIES</b>		Programme: <b>B.Com. Computer Application</b>					
Semester	<b>FIFTH</b>		Course Category Code: <b>DSC</b>			End Semester Exam Type: <b>LE*</b>		
Course Code	<b>A20CCL505</b>		Periods / Week			Credit	Maximum Marks	
			L	T	P	C	CAM	ESE TM
Course Name	<b>DATA VISUALIZATION</b>		<b>0</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>50</b>	<b>50 100</b>
Prerequisite	Basics programming skills							
Course Objectives	To gain knowledge on creating data visualization.							
	To understand various Univariate charts.							
	To understand various Bivariate charts							
Course Outcome	<b>On completion of the course, the students will be able to</b>						BT Mapping (Highest Level)	
	<b>CO1</b>	Understand the basics of Data Visualization					<b>K1</b>	
	<b>CO2</b>	Creates various Univariate charts					<b>K2</b>	
	<b>CO3</b>	Creates various Bivariate charts					<b>K2</b>	

#### LIST OF EXERCISES

Develop a Python program to create the following charts.

1. Histograms
2. Box Plot
3. Count Plot
4. Line Plot
5. Area Plot
6. Pie Plot
7. Joint Plot
8. Scatter Plot
9. Pair Plot
10. Linear Regression Model Plot
11. Strip Plot
12. Swarm Plot

**Lecture Periods: -**      **Tutorial Periods: -**      **Practical Periods: 60**      **Total Periods: 60**

#### Reference Books

1. Reema Thareja "Python Programming Using Problem Solving Approach" Oxford University Press.
2. Allen B. Downey, "Think Python: How to Think Like a Computer Scientist", 2<sup>nd</sup> Edition, Green Tea Press, 2015.
3. Jake VanderPlas "Python Data Science Handbook" 1st Edition, O'REILLY.

\* LE - Lab Exam

#### COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
<b>1</b>	2	1	2	3	1	2	3	2
<b>2</b>	3	3	2	3	2	1	2	2
<b>3</b>	2	3	3	2	1	3	1	3
<b>4</b>	3	2	2	2	2	2	2	3
<b>5</b>	3	3	3	2	2	3	2	3

**Correlation Level: 1 - Low, 2 - Medium, 3 - High**

#### Evaluation Method

Assessment	Continuous Assessment Marks (CAM)			End Semester Examination (ESE) Marks	Total Marks
	Model Exam	Record	Attendance		
Marks	30	10	10	50	100

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Department	BUSINESS STUDIES				Programme: B.Com. Computer Application							
Semester	FIFTH				Course Category Code: DSC				End Semester Exam Type: Viva Voce Exam			
Course Code	A20CCP501				Periods / Week			Credit	Maximum Marks			
					L	T	P	C	CAM	ESE	TM	
Course Name	MINI PROJECT				0	0	4	2	40	60	100	
Prerequisite	Basics research skills											
Course Objectives	To enhance critical thinking and problem-solving skills.											
	To gain experience in conducting research.											
	To Improve communication and presentation skills.											
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)			
	CO1	Develop critical thinking and problem-solving skills.								K1		
	CO2	Gain experience in conducting research.								K2		
	CO3	Refine communication and presentation skills.								K2		
Step 1: Identify the Problem.												
Step 2: Evaluate the Literature.												
Step 3: Create Hypotheses.												
Step 4: The Research Design.												
Step 5: Describe Population.												
Step 6: Data Collection.												
Step 7: Data Analysis.												
Step 8: The Report-writing.												
Lecture Periods: -			Tutorial Periods: -			Practical Periods: 60			Total Periods: 60			

#### COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
<b>1</b>	2	1	2	3	1	2	3	2
<b>2</b>	3	3	2	3	2	1	2	2
<b>3</b>	2	3	3	2	1	3	1	3
<b>4</b>	3	2	2	2	2	2	2	3
<b>5</b>	3	3	3	2	2	3	2	3

**Correlation Level: 1 - Low, 2 - Medium, 3 - High**

#### Evaluation Method

Assessment	Continuous Assessment Marks (CAM)			End Semester Examination (ESE) Marks	Total Marks
	Review 1	Review 2	Review 3		
Marks	10	10	20	60	100

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Department	BUSINESS STUDIES			Programme: B.B.A. Fintech and Digital Banking							
Semester	FIFTH			Course Category Code: SEC		End Semester Exam Type: -					
Course Code	A20BFS504			Periods / Week			Credit	Maximum Marks			
				L	T	P	C	CAM	ESE	TM	
Course Name	BUSINESS RESEARCH METHODS			0	0	4	2	100	0	100	
Common to B.Com. (CA), B.B.A. (FDB)											
Course Objective	To develop understanding of the basic framework of research process.										
	To develop an understanding of various research designs and techniques.										
	To gain knowledge on various sampling techniques.										
	To identify various sources of collecting data.										
	To enable the students in analysing the collected data and writing the research report.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Understand various kinds of research, objectives of doing research and research process.								K2	
	CO2	Formulate research design for an identified research problem.								K5	
	CO3	Understand various sampling techniques.								K2	
	CO4	Develop an deeper understanding on various data collection methods.								K2	
	CO5	Develop independent thinking for critically analysing the data and writing research reports.								K3	
UNIT-I	INTRODUCTION TO RESEARCH						Periods: 12				
Business Research - Objectives & motivations for research - Types of Research - Introduction to Qualitative Research & Quantitative Research - Research Problem - Steps in Research Process.										CO1	
UNIT-II	RESEARCH DESIGN AND PROCESS						Periods: 12				
Research Design - Features of a good research design - Process of research design - Types of research design - Factors affecting research design.										CO2	
UNIT-III	SAMPLING AND SAMPLING TECHNIQUES						Periods: 12				
Population - Sample - Statistical Terms in Sampling - Sampling and Non-sampling errors - Probability and Non-Probability Sampling - Simple Random Sampling - Stratified Random Sampling - Systematic Random Sampling - Cluster Random Sampling - Convenience Sampling - Judgment Sampling - Quota Sampling - Snowball Sampling.										CO3	
UNIT-IV	DATA COLLECTION METHODS						Periods: 12				
Introduction to Primary and Secondary data - Methods of primary data collection - Methods of secondary data collection - Scales of Measurement: Nominal, Ordinal, Interval, Ratio - Likert Scaling - Questionnaire Designing - Criterion for a good questionnaire.										CO4	
UNIT-V	DATA ANALYSIS & REPORT WRITING						Periods: 12				
Descriptive Statistics - Univariate analysis - Correlation - Inferential Statistics - Hypothesis Testing Process - Report Writing - Key Elements of Report Writing.										CO5	
Lecture Periods: -		Tutorial Periods:		Practical Periods: 60			Total Periods: 60				
Text Books											
1. Kothari, C. R. & Gaurav Garg, "Research Methodology- Methods & Techniques", New age International Publishers, 4th Edition, 2020. 2. S.L Gupta & Hitesh Gupta, "Business Research Methods", Tata McGraw Hill Education, 2017. 3. Ranjit Kumar, "Research Methodology: A Step-by-Step Guide for Beginners", Sage Publications,5th edition, 2019.											
Reference Books											
1. Roger Bougie, Uma Sekaran & Mala Srivastava, "Research Methods for Business - An Indian Adaptation: A Skill - Building Approach", Wiley publication, 2021. 2. John W. Creswell & J. David Creswell, "Research Design: Qualitative, Quantitative, and Mixed Methods Approaches ", SAGE Publications, 2017											

3. Pamela S Schindler, "Business Research Methods", McGraw Hill; 13th edition, 2021.
4. Norman K. Denzin, Yvonna S. Lincoln, "The SAGE Handbook of Qualitative Research", SAGE Publications, 5th edition, 2017
5. Uwe Flick, "Introducing Research Methodology: A Beginner's Guide to Doing a Research Project", SAGE Publications, 2015.

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1. <https://bizfluent.com/info-8032498-definition-business-research-methods.html>
2. <https://fuelcycle.com/blog/the-best-research-techniques-for-your-business/>
3. <https://towardsdatascience.com/sampling-techniques-a4e34111d808>
4. <https://people.uwec.edu/piercech/researchmethods/data%20collection%20methods/data%20collection%20methods.htm>
5. <https://www.adelaide.edu.au/writingcentre/sites/default/files/docs/learningguide-writingaresearchreport.pdf>

\* TE – Theory Exam

#### COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

#### Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					Total Marks
	CAT 1	CAT 2	Assignment 1	Assignment 2	Attendance	
Marks	50		20	20	10	100

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Department	<b>BUSINESS STUDIES</b>	Programme: <b>B.Com. Computer Application</b>						
Semester	<b>FIFTH</b>	Course Category Code: <b>OC</b>			End Semester Exam Type: -			
Course Code	<b>A20CCM501</b>	Periods / Week			Credit	Maximum Marks		
		L	T	P	C	CAM	ESE	TM
Course Name	<b>MOOC - CERTIFICATE COURSE</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>100</b>	<b>-</b>	<b>100</b>

Students shall choose any MOOC - Certificate Course from any MOOC platform. They shall proceed the course with self-paced. Students have to complete the course successfully.

<b>Lecture Periods:</b>	<b>Tutorial Periods:</b>	<b>Practical Periods: 60</b>	<b>Total Periods: 60</b>
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## SIXTH SEMESTER

### SYLLABI

Department	BUSINESS STUDIES			Programme: B.Com. Computer Application						
Semester	SIXTH			Course Category Code: DSC		End Semester Exam Type: TE				
Course Code	A20CCT607			Periods / Week			Credit	Maximum Marks		
				L	T	P	C	CAM	ESE	TM
Course Name	FINANCIAL REPORTING AND ANALYSIS			3	1	0	4	25	75	100
Course Objective	To understand the Fundamentals of financial reporting.									
	To learn about the importance of Accounting Standards.									
	To know the Conceptual Framework of Financial Reporting.									
	To understand the Structure of financial reports.									
	To know the principles IFRS and Its importance.									
Course Outcome	On completion of the course, the students will be able to							BT Mapping (Highest Level)		
	CO1	Understand the relevance of Fundamentals of Financial Reporting.							K1	
	CO2	Attain the ability to understand the Accounting Standards.							K2	
	CO3	Understand the Conceptual Framework of Financial Reporting.							K2	
	CO4	Develop skills to evaluate Structure of financial reports.							K3	
	CO5	Apply the principles IFRS and Its Importance.							K3	
UNIT-I	BASICS OF FINANCIAL REPORTING						Periods: 12			
Meaning of Financial Reporting – Users of Financial Reporting – Financial Reporting Vs Management Reporting – Objectives of Financial Reporting – Benefits of Financial Reporting – Limitation of Financial Reporting.										CO1
UNIT-II	ACCOUNTING STANDARDS						Periods: 12			
Meaning of Accounting Standards – Objectives of Accounting Standards – Accounting Standards in India – Benefits of Accounting Standards – Indian Accounting Standards – Need for Accounting Standard – Advantages and Disadvantages of Accounting Standards.										CO2
UNIT-III	CONCEPTUAL FRAMEWORK OF FINANCIAL REPORTING						Periods: 12			
Introduction – Objectives of conceptual framework of financial reporting - Scope of conceptual framework of financial reporting - Limitation of conceptual framework of financial reporting – Qualitative Characteristics of useful Financial Information.										CO3
UNIT-IV	STRUCTURE OF FINANCIAL REPORTS						Periods: 12			
Introduction - Disclosure in Corporate Governance Report with reference to Board of Directors, Audit Committee, Remuneration Committee, Grievance Committee, General Body Meeting and other disclosures - Auditor's Report - Director's Report.										CO4
UNIT-V	INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS)						Periods: 12			
Introduction – Objectives of IFRS – Need and convergence towards Global Standards - Benefits and convergence to IFRS in India – Difference Between GAAP and IFRS – Comparison Between Indian Accounting Standards and IFRS.										CO5
Lecture Periods: 45		Tutorial Periods: 15		Practical Periods: -			Total Periods: 60			
Text Books										
1. Sanjay Dhamija, Financial Reporting and Analysis, Sultan Chand & Sons, 9 <sup>th</sup> Edition 2020. 2. Revsine, Daniel Collins, Bruce Johnson, Fred Mittelstaedt and Leonard Soffer, Financial Reporting and Analysis, Tata Mcgraw Hill, 8 <sup>th</sup> Edition 2021. 3. Dr.Jawaher Lal, Financial Reporting and Analysis, Himalayas Publishing House, 2 <sup>th</sup> Edition 2018										
Reference Books										
1. Battachariyya, Corporate Reporting and Analysis, PHI publications,7 <sup>th</sup> Edition 2019 2. Dr. Sukhpreet Kaur, Financial Reporting and Analysis, Lovely Professional University , 1 <sup>st</sup> Edition 2017. 3. Meenu Gupta, Financial Reporting and Analysis, JRS Publishing House, 2 <sup>nd</sup> Edition 2020										

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1. [https://www.sultanchandandsons.com/images/BookImages/Chapters/567\\_TC-009.pdf](https://www.sultanchandandsons.com/images/BookImages/Chapters/567_TC-009.pdf)
2. <https://www.whizconsulting.net/in/services/financial-reporting-services/>
3. <https://elearn.nptel.ac.in/shop/nptel/financial-statement-analysis-and-reporting/>
4. <https://online.pubhtml5.com/kcvf/mnhb/mnhb.pdf>

\* TE - Theory Exam

## COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100



Department	BUSINESS STUDIES			Programme: B.Com. (Computer Application)							
Semester	SIXTH			Course Category Code: DSC			End Semester Exam Type: TE				
Course Code	A20CST618			Periods / Week			Credit	Maximum Marks			
				L	T	P	C	CAM	ESE	TM	
Course Name	GOODS AND SERVICES TAX			3	1	0	4	25	75	100	
Common to B.Com. (Corporate Secretaryship), B.Com. (CA)											
Course Objective	To acquaint the students with basic principles underlying the provisions of indirect tax laws and to develop a broad understanding of the tax laws and accepted tax practices.										
	To understand the importance of indirect taxes (GST) in the Indian and global economy and its contribution to the economic development.										
	To give an understanding on various aspect of indirect taxes (GST) like, Registration and Concept of Supply										
	To acquire knowledge on self-assessment and audit.										
	To make them to understand about appeals, offences and penalties.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Understand the reasons behind the implementation of GST and its effect on all the sectors of Economy.								K1	
	CO2	Understand the importance of Indirect taxes and the journey of GST in India since the year 2004								K2	
	CO3	List out the accounts to be maintained as per GST laws and various returns to be filed to get the input tax credit.								K2	
	CO4	Understand the type of assessment and inspection of goods in movement.								K3	
	CO5	To Know about the Appeal mechanism of GST in Tribunal.								K3	
UNIT-I	INTRODUCTION TO GST						Periods: 12				
Introduction – Direct tax and Indirect tax – meaning - Stages of Evolution of Goods and Services Tax-Subsuming of taxes - constitutional background - Structure of GST – CGST, SGST, UTGST & IGST-Benefits of implementing GST-GSTN – Structure, features and functions-HSN Code – SAC code -GST council and its Structure -Power and Functions of GST Council - Important concepts and definitions under CGST Act and IGST Act.										CO1	
UNIT-II	LEVY AND COLLECTION OF TAX						Periods: 12				
Levy and Collection of Tax - Rates of GST - Scope of Supply - Composite and Mixed Supplies and E-commerce under GST regime -Liability to pay tax - Reverse Charge Mechanism and composition scheme Time of Supply of Goods - Place of supply - Cascading Effect of Taxation - Input Tax Credit –Benefits of Input Tax Credit - Manner of claiming input tax credit in different situations -Input Service Distribution – Recovery of Credit- Reversal of credit- Input Service Distribution – Recovery of Credit -Reversal of credit- Cases in which input tax credit is not available- Unauthorized Collection of Tax-Tax Invoice – Credit Notes - Debit Notes, Bill of Supply, Electronic Cash Ledger - Credit Ledger-liability ledger.										CO2	
UNIT-III	REGISTRATION AND PAYMENT OF TAX						Periods: 12				
Registration – Persons Liable for Registration - Compulsory Registration - Deemed Registration-Procedure for Registration- GSTIN and its structure - Amendment of Registration – Cancellation of Registration - Revocation of cancellation - Returns – Furnishing Details of Supplies - Payment of Tax, Interest, Penalty - Tax Deduction at Source - Collection of Tax at Source- Refunds.										CO3	
UNIT-IV	ASSESSMENT AND AUDIT						Periods: 12				
Assessment – meaning - Types of Assessment – Self Assessment – Provisional Assessment Scrutiny Assessment - Types of Assessment – Summary Assessment – Best Judgment Assessment– Assessment of Non-Filers – Assessment of Unregistered Persons. Audit- Search and Seizure -Inspection of Goods in Movement - Power of Authorities and Suppression of Facts – Liabilities -Provisional Attachment.										CO4	
UNIT-V	APPEALS						Periods: 12				
Appellate Authorities – Powers - Procedure for appeal - Appeals before Tribunal - Appeals by the Department (CGST/SGST) before the AA/Tribunal - Revision by Commissioner (CGST/SGST) - Appeal to High Court - Supreme Court - Offences and Penalties.										CO5	
Lecture Periods: 45			Tutorial Periods: 15			Practical Periods: -		Total Periods: 60			

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**Text Books**

1. Dr. H.C. Mehrotra and Prof. V.P. Agarwal, "Goods and Services Tax (G.S.T)", Sahitya Bhawan Publications, 8<sup>th</sup> Edition, 2021.
2. CA Vivek Kr Agrawal "GST guide for Students: Making GST - Good & Simple Tax", Independently Published, 2020.
3. Nikita Maheshwari, "GST Assessments and Audits", Bharat Law House Pvt. Ltd., 2022.

**Reference Books**

1. Taxman, "Taxman's GST Acts with Rules & Forms – Covering Amended, Updated & Annotated text of the GST Acts along with Relevant Rules & Reference to Relevant Forms, Notifications & Circulars", Taxman publication, 2022
2. Sanjay Malhotra, Baljit Singh Khara, Anil Sharma & Anil Kumar Gupta, "Handbook on GST Audit by Tax Authorities", Bloomsbury Professional India, 2<sup>nd</sup> edition, 2021.
3. Avadhesh Ojha & Satyadev Purohit, "GST Practice Oriented Queries with Replies", Tax Publishers, 2021

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1. <https://dor.gov.in/tax/concept-note-gst>
2. <https://www.drishtiiias.com/to-the-points/paper3/goods-and-services-tax-gst-1>
3. <https://idtc.icaai.org/gst-topic-wise-study-material-list.html>
4. <https://www.wirc-icaai.org/images/material/BASICS-GST.pdf>
5. <https://gstcouncil.gov.in/gst-council>

\* TE - Theory Exam

**COs/POs/PSOs Mapping**

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

**Evaluation Method**

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100




Department	BUSINESS STUDIES			Programme: B.Com. Computer Application							
Semester	SIXTH			Course Category Code: DSC		End Semester Exam Type: TE					
Course Code	A20CAT613			Periods / Week		Credit	Maximum Marks				
				L	T	P	C	CAM	ESE	TM	
Course Name	INTERNET OF THINGS			4	0	0	4	25	75	100	
Common to B. Com. (CA), B.C.A.											
Prerequisite	Basic Understanding of Working of Internet.										
Course Objective	To understand Internet of Things (IoT) and its key characteristics.										
	To understand different IoT architectures and their functionalities.										
	To explore the various enabling technologies for IoT.										
	To understand the role of data analytics in processing and managing data generated by IoT systems.										
	To identify security challenges and solutions.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Understanding the fundamental concepts and technologies behind the Internet of Things.								K1	
	CO2	Design basic IoT systems using sensors, actuators, and communication protocols.								K2	
	CO3	Identify the functionalities of IoT access technologies.								K2	
	CO4	Apply big data analytics for IoT data.								K3	
	CO5	Analyse the security challenges and privacy concerns in IoT applications.								K3	
UNIT-I	INTRODUCTION TO IOT						Periods: 12				
Definition, Evolution, Characteristics and Applications of IOT – Enabling Technologies – Network Protocols – IoT World Forum.										CO1	
UNIT-II	IOT ARCHITECTURE AND DESIGN						Periods: 12				
IoT Architectures - Three-layer IoT Architecture – Perception layer, Network layer, Application layer - Simplified IoT Architecture – Sensors- Actuators- Smart Objects and Connecting Smart Objects.										CO2	
UNIT-III	IOT PROTOCOLS						Periods: 12				
IoT Access Technologies- Physical and MAC layers- topology – Network Layer- IP versions- Constrained Nodes and Constrained Networks – Application Transport Methods- Supervisory Control and Data Acquisition.										CO3	
UNIT-IV	DATA ANALYTICS AND SECURITY						Periods: 12				
Big Data Analytics for IoT - Data Processing and Management in IoT - Structured Vs Unstructured – Data No SQL Databases – Hadoop Ecosystem – Apache Kafka- Apache Spark – Python Web Application Framework – Django – AWS for IoT.										CO4	
UNIT-V	SECURITY AND PRIVACY IN IOT						Periods: 12				
Security challenges in IoT - Data breaches, Denial-of-service attacks, Device hijacking – Security solutions - Authentication, Authorization, Encryption – Privacy concerns - Data collection, User consent, Data anonymization										CO5	
Lecture Periods: 60		Tutorial Periods:		Practical Periods: -			Total Periods: 60				
Text Books											
1. Jonathan Follett, “Designing for Emerging - UX for Genomics, Robotics, and the Internet of Things Technologies” O’Reilly, 2014. 2. CharalamposDoukas, — “Building Internet of Things with the Arduinoll, Create space”, April 2012. 3. Donald Norris, —” The Internet of Things: Do-It-Yourself at Home Projects for Arduino, Raspberry Pi and Beagle Bone Blackll”, McGraw Hill,2015.											
Reference Books											
1. Vijay Madiseti and ArshdeepBahga, “Internet of Things: A Hands-On Approach”, VPT edition1, 2014. 2. David Hanes, Gonzalo Salgueiro, Patrick Grossetete, Rob Barton and Jerome Henry, —IoT Fundamentals: Networking Technologies, Protocols and Use Cases for Internet of Things, Cisco Press, 2017											

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2. <https://www.ibm.com/blogs/internet-of-things/what-is-the-iot/>
3. <https://www.geeksforgeeks.org/edge-computing/>
4. <https://www.i-scoop.eu/internet-of-things-guide/edge-computing-iot/>

\* TE – Theory Exam

## COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

Department	BUSINESS STUDIES				Programme: B. Com (Computer Application)							
Semester	SIXTH				Course Category Code: DSE		End Semester Exam Type: TE					
Course Code	A20CCE610				Periods / Week		Credit	Maximum Marks				
					L	T	P	C	CAM	ESE	TM	
Course Name	ETHICAL HACKING				3	0	0	3	25	75	100	
Prerequisite	Basic understanding of Hacking											
Course Objective	To Gain foundational knowledge of cyber security concepts.											
	To Understand Network Basics.											
	To Understand Basic Linux Concepts.											
	To Gain Knowledge on Information Gathering tools.											
	To Understand Penetration testing process.											
Course Outcome	On completion of the course, the students will be able to									BT Mapping (Highest Level)		
	CO1	Understand defensive vs. offensive security and the role of ethical hacking.									K1	
	CO2	Apply networking knowledge to identify potential security vulnerabilities.									K2	
	CO3	Leverage Linux skills for ethical hacking tasks									K2	
	CO4	Utilize scanning tools and techniques for system enumeration and privilege escalation.									K3	
	CO5	Conduct ethical penetration testing with different tools.									K3	
UNIT-I	Introduction to Cyber Security							Periods: 09				
Cyber Security – Concepts – Terminologies – Importance – Defensive Security – Basics of Network security – Offensive Security – Ethical hacking – Offensive Vs Defensive Security.										CO1		
UNIT-II	Pre-Security Fundamentals							Periods: 09				
Networking – Networking topology and Protocols – IP Addressing – Subnetting – Routing – Switching Concepts – Network Security Fundamentals – Firewalls, IDS, VPNs.										CO2		
UNIT-III	Linux Fundamentals							Periods: 09				
Linux OS – Basic Commands – Flags or Switches – Common Directories – Permissions – Shell Scripting.										CO3		
UNIT-IV	Vulnerability Assessment and Exploitation							Periods: 09				
Information gathering – Passive, Active, OSINT - Vulnerabilities – Exploits – Scanning tools and Techniques – System Enumeration – Privilege escalation.										CO4		
UNIT-V	Penetration Testing and Tools							Periods: 09				
Penetration testing – Process – Password Cracking tools – Sniffing tools – Network traffic analysis tools – SQL Injection.										CO5		
Lecture Periods: 45			Tutorial Periods:			Practical Periods: -			Total Periods: 45			
Text Books												
1. Cyber Security: Understanding Cyber Crimes, Computer Forensics and Legal Perspectives" authored by Nina Godbole and Sunit Belpure, published by Wiley.												
2. "Computer Forensics: Investigating Network Intrusions and Cyber Crime" by EC-Council, Cengage Learning), 3rd Edition.												
3. Cyber Security Essentials, James Graham, Richard Howard and Ryan Otson, CRC Press.												
4. Introduction to Cyber Security, Chwan-Hwa(john) Wu,J. David Irwin, CRC Press T&F Group.												
Reference Books												
1. "The Basics of Hacking and Penetration Testing: Ethical Hacking and IT Security Explained" by Patrick Engebretson												
2. "Networking Fundamentals" by Khanna Publishing House.												
3. "Violent Python: A Cookbook for Hackers, Forensic Analysts, Penetration Testers and Curious Minds" by TJ O'Connor												
4. "CEH Certified Ethical Hacker All-in-One Exam Guide (Fourth Edition)" by Matt Walker												

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- 1 [https://onlinecourses.nptel.ac.in/noc23\\_cs127/preview](https://onlinecourses.nptel.ac.in/noc23_cs127/preview)
- 2 <https://www.comptia.org/certifications/network#examdetails>
- 3 <https://tryhackme.com/dashboard>
- 4 [https://onlinecourses.swayam2.ac.in/nou19\\_cs08/preview](https://onlinecourses.swayam2.ac.in/nou19_cs08/preview)

\* TE - Theory Exam

## COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100



Department	BUSINESS STUDIES			Programme: B.Com. Computer Application							
Semester	SIXTH			Course Category Code: DSE		End Semester Exam Type: TE					
Course Code	A20CCE611			Periods / Week			Credit	Maximum Marks			
				L	T	P	C	CAM	ESE	TM	
Course Name	CYBER SECURITY AND DIGITAL FORENSICS			3	0	0	3	25	75	100	
Prerequisite	Basics Knowledge of Cyber Security.										
Course Objective	To understand various types of cyber-attacks and cyber-crimes.										
	To have an overview of the cyber laws & concepts of cyber forensics.										
	To study the defensive techniques against these attacks.										
	To learn threats and risks within context of the cyber security.										
	To Understand the privacy issues and policies.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Analyze cyber-attacks, types of cybercrimes and cyber laws.								K1	
	CO2	Interpret and forensically investigate security incidents.								K2	
	CO3	Design and develop secure software modules.								K2	
	CO4	Identify the organisations implications in cybercrime.								K3	
	CO5	Apply policies and procedures to manage Privacy issues.								K3	
UNIT-I	Introduction to Cyber Security						Periods: 9				
Basic Cyber Security Concepts, layers of security, Vulnerability, threat, Harmful acts, Internet Governance – Challenges and Constraints, Computer Criminals, CIA Triad, Assets and Threat, motive of attackers, active attacks, passive attacks, Software attacks, hardware attacks										CO1	
UNIT-II	Cyber Forensics						Periods: 9				
Introduction, Historical background of Cyber forensics, Digital Forensics Science, The Need for Computer Forensics, Cyber Forensics and Digital evidence, Forensics Analysis of Email, Digital Forensics Lifecycle, Forensics Investigation, Challenges in Computer Forensics										CO2	
UNIT-III	Cybercrime: Mobile and Wireless Devices						Periods: 9				
Introduction, Proliferation of Mobile and Wireless Devices, Trends in Mobility, Credit card Frauds in Mobile and Wireless Computing Era, Security Challenges Posed by Mobile Devices, Registry Settings for Mobile Devices, Authentication service Security, Attacks on Mobile/Cell Phones, Organizational security Policies and Measures in Mobile Computing Era, Laptops.										CO3	
UNIT-IV	Cyber Security: Organizational Implications						Periods: 9				
Introduction, cost of cybercrimes and IPR issues, web threats for organizations, security and privacy implications, social media marketing: security risks and perils for organizations, social computing and the associated challenges for organizations.										CO4	
UNIT-V	Privacy Issues						Periods: 9				
Basic Data Privacy Concepts: Fundamental Concepts, Data Privacy Attacks, Datalinking and profiling, privacy policies and their specifications, privacy policy languages, privacy in different domains- medical, financial, etc										CO5	
Lecture Periods: 45		Tutorial Periods:		Practical Periods: -			Total Periods: 45				
Text Books											
1. "Cyber Security: Understanding Cyber Crimes, Computer Forensics and Legal Perspectives" authored by Nina Godbole and Sunit Belpure, published by Wiley. 2. "Computer Forensics: Investigating Network Intrusions and Cyber Crime" by EC-Council, (Cengage Learning), 3 <sup>rd</sup> Edition. 3. "Computer Forensics and Cyber Crime: An Introduction" by Marjie T. Britz, Pearson, 4 <sup>th</sup> Edition,2020											

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1. "Digital Evidence and Computer Crime: Forensic Science, Computers, and the Internet" by Eoghan Casey, Academic Press, 3<sup>rd</sup> Edition, 2011
2. Digital Forensics: Threatscape and Best Practices" by John Sammons, Syngress, 1<sup>st</sup> Edition, 2019
3. Cyber Security Essentials, James Graham, Richard Howard and Ryan Otson, CRC Press.
4. Introduction to Cyber Security, Chwan-Hwa (john) Wu, J. David Irwin, CRC Press T&F Group.

## Web References

1. <https://www.itgovernance.co.uk › what-is-cybersecurity>
2. <https://www.coursera.org/in/articles/computer-forensics>
3. <https://www.geeksforgeeks.org/types-of-wireless-and-mobile-device-attacks/>
4. <https://www.geeksforgeeks.org/cyber-security-in-context-to-organisations/>
5. <https://www.columbiasouthern.edu/blog/blog-articles/2022/may/privacy-issues-in-cyber-security/>

\* TE - Theory Exam

## COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

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Department	BUSINESS STUDIES			Programme: B.Com. Computer Application							
Semester	SIXTH			Course Category Code: DSE		End Semester Exam Type: TE*					
Course Code	A20CCE612			Periods / Week			Credit	Maximum Marks			
				L	T	P	C	CAM	ESE	TM	
Course Name	PERSONAL FINANCE			3	0	0	3	25	75	100	
Prerequisite	-										
Course Objective	To develop a financial plan and Create and maintain a budget.										
	To understand different investment options and to manage your debt and build good credit.										
	To understand different personal investment options.										
	To gain knowledge about the personal Taxation.										
	To understand the various retirement plans.										
Course Outcome	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Understand the meaning and relevance of financial planning, time value of money & process of financial planning.								K1	
	CO2	Explain the concept of investment planning and its methods.								K2	
	CO3	Analyze and choose suitable investment options.								K2	
	CO4	Examine the concept of personal tax planning.								K1	
	CO5	Understand retirement planning.								K2	
UNIT-I	FINANCIAL PLANNING						Periods: 9				
Time Value of Money, Need and Importance of Personal Financial Planning, Principles of Personal Finance, Financial Planning Process, Factors Influencing Personal Financial Planning. Financial Statements and Ratios Analysis: Personal Financial Statements, Income and Expenditure Statement, Balance Sheet, Budget, Analyzing Financial Statements via Ratios.										CO1	
UNIT-II	INVESTMENT FUNDAMENTALS						Periods: 9				
Saving and Investment, Rules of Investing, Debt and Equity. Banking Products: Deposit and Loan Products, Other Special products for Senior Citizens, NRIs, Understanding credit Score and Credit Information Report. Insurance Products: Meaning and Features of Insurance, Principles of Insurance, Types of Insurance - Life, Health, Personal Accident Insurance.										CO2	
UNIT-III	PERSONAL INVESTMENT ALTERNATIVES						Periods: 9				
Investment in Equity: NSE/BSE, Investment Strategies and Portfolio Construction, Fundamental and Technical Analysis, Demat Account, Derivatives. Investment in Mutual Funds: Meaning, Structure of Mutual Funds in India, Mutual Funds Schemes, Systematic Investment Plan (SIP).										CO3	
UNIT-IV	PERSONAL TAXATION						Periods: 9				
Introduction to Personal Income Tax Planning, Methods of Accounting for Various Heads of Income, Tax Avoidance, Tax Evasion and Tax Planning, Income Tax Deductions, Gift Tax, Wealth Tax. Regulatory Guidelines: Know Your Customer (KYC) Norms, Anti Money Laundering (AML) Standards, Permanent Account Number (PAN).										CO4	
UNIT-V	DYNAMICS OF REAL ESTATE						Periods: 9				
Estate Planning: Meaning, Objectives, Estate Planning Tools, Will, Power of Attorney. Documentation, Verification, Real Estate and Bank Loan, Buying vs. Renting, Tax Implications of Real Estate. Introduction to Retirement Planning: Need of Retirement Planning, Rules of Retirement Planning, Retirement Planning Process, Estimation of Retirement Expenses, Basic Retirement Plans.										CO5	
Lecture Periods: 45		Tutorial Periods:		Practical Periods: -			Total Periods: 45				
Text Books											
1. Personal Financial Planning, Dr. Suresh Seth, Dr. Pooja Ohri, Thakur publication private Ltd, Jalandhar. 2. Madura, Jeff, Personal Finance, Pearson. 3. Introduction to Financial Planning (4th Edition 2017) – Indian Institute of Banking & Finance 4. Sinha, Madhu. Financial Planning: A Ready Reckoner July 2017, McGraw Hill.											
Reference Books											
1. Halan, Monika. Lets Talk Money: You've Worked Hard for It, Now Make It Work for You July 2018 Harper Business 2. Pandit, Amar The Only Financial Planning Book that You Will Ever Need , Network 18 Publications Ltd.											

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1. [https://onlinecourses.nptel.ac.in/noc23\\_mg38/preview](https://onlinecourses.nptel.ac.in/noc23_mg38/preview)
2. <https://archive.nptel.ac.in/courses/110/105/110105144/>
3. <https://archive.nptel.ac.in/courses/110/105/110105166/>
4. <https://www.incometax.gov.in/iec/foportal/>
5. <https://www.realestateindia.com/>

\* TE - Theory Exam

## COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	2	3	1	2	3	2
2	3	3	2	3	2	1	2	2
3	2	3	3	2	1	3	1	3
4	3	2	2	2	2	2	2	3
5	3	3	3	2	2	3	2	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment	Attendance		
Marks	10		5	5	5	75	100

Department	BUSINESS STUDIES				Programme: B.Com. (Computer Application)							
Semester	SIXTH				Course Category Code: SEC		End Semester Exam Type: -					
Course Code	A20CCS605				Periods / Week		Credit	Maximum Marks				
					L	T	P	C	CAM	ESE	TM	
Course Name	LIFE SKILLS DEVELOPMENT AND MENTORING				0	0	4	2	100	-	100	
Course Objective	To develop a greater sense of self-awareness and appreciation for others.											
	To instill Moral and Social Values, Loyalty and also to learn to appreciate the rights of others.											
	To promote critical thinking, creative thinking and problem solving.											
	To build confidence in spoken skills for group collaboration and cooperation.											
	To help the students to take leadership roles in their studies, career and life.											
Course Outcome	On completion of the course, the students will be able to									BT Mapping (Highest Level)		
	CO1	Define and Identify different life skills required in personal and professional life.									K1	
	CO2	Develop an awareness of the self and apply well-defined techniques to cope with emotion and stress.									K2	
	CO3	Explain the basic mechanics of effective communication and demonstrate these through presentations and Take part in group discussions.									K2	
	CO4	Use appropriate thinking and problem solving techniques to solve new problems.									K3	
	CO5	Understand the basics of teamwork and leadership.									K3	
UNIT-I	Overview of Life Skills									Periods:10		
Meaning and significance of life skills, Life skills identified by WHO: Self- awareness, Empathy, Critical thinking, Creative thinking, Decision making, problem solving, Effective communication, interpersonal relationship, coping with stress, coping with emotion.										CO1		
UNIT-II	Self-awareness, Stress Management, Moral Values & Ethics									Periods: 14		
Self-awareness: definition, need for self-awareness; Coping With Stress and Emotions. Stress Management: Stress, reasons and effects, identifying stress, techniques. Coping with emotions: Identifying and managing emotions, harmful ways of dealing with emotions, PATH method and relaxation techniques. Morals, Values and Ethics: Integrity, Civic Virtue, Respect for Others, Living Peacefully. Caring, Sharing, Honesty, Courage, Time management, Co-operation, Commitment, Empathy, Self-Confidence, Character, Spirituality.										CO2		
UNIT-III	21 <sup>st</sup> Century skills									Periods: 12		
Creativity, Critical Thinking, Collaboration, Problem Solving, Decision Making, Need for Creativity in the 21st century, Sources of Creativity, Lateral Thinking, Myths of creativity, Critical thinking Vs Creative thinking, Convergent & Divergent Thinking, Critical reading and Multiple Intelligence. Steps in problem solving: Problem Solving Techniques, Six Thinking Hats, Mind Mapping.										CO3		
UNIT-IV	Group and Team Dynamics									Periods: 12		
Introduction to Groups: Composition, formation, Cycle, thinking, Clarifying expectations, Problem Solving, Group vs Team, Team Dynamics, Virtual Teams.										CO4		
UNIT-V	Leadership									Periods: 12		
Leadership framework, entrepreneurial and moral leadership, Growing as a leader, turnaround leadership, Types of Leadership, Traits, Styles, VUCA Leadership, Levels of Leadership, Transactional vs Transformational Leaders, Leadership Grid.										CO5		
Lecture Periods: -			Tutorial Periods:			Practical Periods: 60		Total Periods: 60				
Text Books												
1. Barun K. Mitra, "Personality Development & Soft Skills", Oxford Publishers, Third impression, 2017.												
2. Caruso, D. R. and Salovey P, "The Emotionally Intelligent Manager: How to Develop and Use the Four Key Emotional Skills of Leadership", John Wiley & Sons, 2004.												
3. Larry James, "The First Book of Life Skills"; First Edition, Embassy Books, 2016.												

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## Reference Books

1. Caruso, D. R. and Salovey P, "The Emotionally Intelligent Manager: How to Develop and Use the Four Key Emotional Skills of Leadership", John Wiley & Sons, 2004.
2. Shalini Verma, "Development of Life Skills and Professional Practice"; First Edition; Sultan Chand (G/L) & Company, 2014.
3. Daniel Goleman, "Emotional Intelligence"; Bantam, 2006.
4. Remesh S., Vishnu R.G., "Life Skills for Engineers", Ridhima Publications, First Edition, 2016.

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2. [http://www.who.int/school\\_youth\\_health/media/en/sch\\_skills4health\\_03.pdf](http://www.who.int/school_youth_health/media/en/sch_skills4health_03.pdf)
3. [http://wikieducator.org/Introduction\\_to\\_life\\_skills\\_education](http://wikieducator.org/Introduction_to_life_skills_education)
4. <https://www2.ed.gov/offices/OVAE/AdultEd/OCE/LifeSkills/intro.html>
5. <https://www.britishcouncil.gr/sites/default/files/life-skills-developing-active-citizens-en.pdf>
6. <http://www.macmillanenglish.com/uploadedFiles/wwwmacmillanenglishcom/Content/Campaigns/life-skills/The-Life-Skills-Handbook.pdf>
7. [https://www.unodc.org/pdf/youthnet/action/message/escap\\_peers\\_07.pdf](https://www.unodc.org/pdf/youthnet/action/message/escap_peers_07.pdf)

\* TE – Theory Exam

## COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	2	2	1	2	1	3	2
2	1	3	2	1	2	3	2	2
3	1	1	2	2	1	2	3	1
4	2	2	1	2	3	1	3	2
5	2	3	2	1	2	3	2	1

Correlation Level: 1 - Low, 2 - Medium, 3 - High

## Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					Total Marks
	CAT 1	CAT 2	Assignment 1	Assignment 2	Attendance	
Marks	50		20	20	10	100

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Department	<b>BUSINESS STUDIES</b>	Programme: <b>B.Com. Computer Application</b>						
Semester	<b>SIXTH</b>	Course Category Code: <b>DSC</b>				End Semester Exam Type: <b>Viva Voce Exam</b>		
Course Code	<b>A20CCP602</b>	Periods / Week			Credit	Maximum Marks		
		L	T	P	C	CAM	ESE	TM
Course Name	<b>MAJOR PROJECT</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>5</b>	<b>40</b>	<b>60</b>	<b>100</b>
Prerequisite	Basics research skills.							
Course Objectives	To enhance critical thinking and problem-solving skills.							
	To gain experience in conducting research.							
	To Improve communication and presentation skills.							
Course Outcome	<b>On completion of the course, the students will be able to</b>						BT Mapping (Highest Level)	
	<b>CO1</b>	Develop critical thinking and problem-solving skills.					<b>K1</b>	
	<b>CO2</b>	Gain experience in conducting research.					<b>K2</b>	
	<b>CO3</b>	Refine communication and presentation skills.					<b>K2</b>	

Step 1: Identify the Problem.

Step 2: Evaluate the Literature.

Step 3: Create Hypotheses.

Step 4: The Research Design.

Step 5: Describe Population.

Step 6: Data Collection.

Step 7: Data Analysis.

Step 8: The Report-writing.

#### COs/POs/PSOs Mapping

Cos	Program Outcomes (POs)					Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
<b>1</b>	2	1	2	3	1	2	3	2
<b>2</b>	3	3	2	3	2	1	2	2
<b>3</b>	2	3	3	2	1	3	1	3
<b>4</b>	3	2	2	2	2	2	2	3
<b>5</b>	3	3	3	2	2	3	2	3

**Correlation Level: 1 - Low, 2 - Medium, 3 - High**

#### Evaluation Method

Assessment	Continuous Assessment Marks (CAM)			End Semester Examination (ESE) Marks	Total Marks
	Review 1	Review 2	Review 3		
Marks	10	10	20	60	100

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