



VELLALAR COLLEGE FOR WOMEN (AUTONOMOUS), ERODE-12

College with Potential for Excellence | An ISO 9001:2015 Certified Institution

Re-accredited with 'A+' Grade (CYCLE IV) by NAAC & Affiliated to Bharathiar University, Coimbatore



Skill Based Subjects - I

Name of the Department	Subject Code	Name of the Course
Tamil	21TLUS301	Thirai padakalai
English	21LTUS301	English for Life Skills
Mathematics	21MSUSP01	ICT Tools for Teaching and Learning
Mathematics (CA)	21MCUSP01	ICT Tools for Teaching and Learning
Physics	21PHUS301	Energy Management
Biochemistry	21BCUS301	Natural Remedies
Computer Science	21CSUSP01	Data Analysis for Biological Applications Lab
Computer Applications	21CAUSP01	Data Analysis for Biological Applications Lab
Information Technology	21ITUSP01	Data Analysis for Biological Applications Lab
Computer Technology	21CTUSP01	Data Analysis for Biological Applications Lab
Costume Design & Fashion	21CFUSP01	Fashion Accessories
Commerce	21COUS301	Women Entrepreneurship Development
Commerce [CA]	21CMUS301	Tax System in India
Commerce [CS]	21CCUS301	Financial Markets
Commerce [Cooperation]	21CPUS301	Women Entrepreneurship and Skill Development
Commerce [E-Commerce]	21CEUS301	Information Technology
Commerce [PA]	21PAUS301	Brand Management
Commerce [A&F]	21AFUS301	Management Information System
Commerce [B&I]	21BIUS301	Financial Services
Business Administration [CA]	21BAUS301	Executive Leadership
Computer Science with Data Analytics	21DAUSP01	Data Analysis for Biological Applications Lab
Geography	21GEUS301	Basics of Remote Sensing
Computer Science with (Artificial Intelligence)	22AIUSP01	Internet Basics
Computer Science with (Cyber Security)	22CYUSP01	Cyber Law Lab

Department of Tamil
Skill Based Subject
SEMESTER III

CODE	COURSE TITLE
21TLUS301	திரைப்படக்கலை THIRAIPPADAKKALAI

Category	CIA	ESE	L	T	P	Credit
SBS	50	50	71	4	-	3

Preamble:

திரைப்படத்தின் வரலாற்றை மாணவர்களுக்கு உணர்த்துதல்.

உலகின் சிறந்த திரைப்படங்களை மாணவர்களுக்கு அறிமுகப்படுத்துதல்.

திரைப்படங்கள் ஏற்படுத்தும் சமூகத் தாக்கங்கள் குறித்து விவாதித்தல்.

Course Outcome:

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level
CO 1	திரைப்படத்தின் வரலாற்றை அறிமுகப்படுத்துதல்.	K1
CO 2	உலகத் திரைப்படங்களின் வரலாற்றை அறிந்துகொள்ளுதல்.	K2
CO 3	இந்தியளவில் சிறந்த இயக்குநர்கள் பற்றி அறிதல்.	K3
CO 4	காலந்தோறும் திரைப்படங்களில் ஏற்படும் மாற்றத்தை அறிதல்.	K1
CO5	ஆவணப்படங்கள், குறும்படங்கள் குறித்து அறிதல்.	K2

Syllabus

அலகு1

திரைப்பட வரலாறு – தொடக்ககால திரைப்படக் கண்டுபிடிப்புகள் – உலகத் திரைப்படம்

அலகு2

ஹாலிவுட் – பிரெஞ்சு, கொரியா, ஈரான் திரைப்பட வரலாறுகள்.

அலகு 3

இந்திய திரைப்பட வரலாறு – தமிழ்த் திரைப்பட வரலாறு – சிறந்த இந்திய இயக்குநர்கள் – தமிழ் இயக்குநர்கள்

அலகு 4

திரைப்படம் – சில பார்வைகள் – உலகின் சிறந்த படங்கள் – சிறந்த பேட்டிகள்.

அலகு 5

குழந்தைகள் திரைப்படங்கள்– ஆவணப்படங்கள் - குறும்படங்கள் -- திரைப்பட விழாக்கள் – விளம்பரங்கள் – திரைப்பட எதிர்காலம்.

பாடநூல்:

1. உலக சினிமா, எஸ்.இராமகிருஷ்ணன், கனவுப்பட்டறை, நூங்கம்பாக்கம், சென்னை.
2. திரைக்கதை, எழுதுவது எப்படி? சுஜாதா, உயிர்மை பதிப்பகம், சென்னை.

பார்வை நூல்கள்:

உலக சினிமா – செழியன்.

Department of English

Skill Based Subject

SEMESTER III

CODE	COURSE TITLE
21LTUS301	Skill Based Subjects I ENGLISH FOR LIFE SKILLS

Category	CIA	ESE	L	T	P	Credit
Core	50	50	35	10	-	03

Aim

To enable the students to improve their accent and pronunciation in English

Objective

To train the students to engage themselves in interpersonal communication and prepare them for career opportunities

Syllabus

UNIT – I(Listening) – Instructor led Module – Classroom activity. **9 Hrs**

Stage 1 – Listening to the teacher/student narrating and describing events; to be followed by comprehension questions (Oral Skill)

Students need to answer orally and through the written mode which will strengthen their vocabulary and grammar.

UNIT – II (Reading and Writing) **9 Hrs**

Reading Basics and strategies.

Brainstorming Collocations

Discussing of reports

Role play

(Through the reading skill, speaking skill is strengthened)

Writing

Report Writing

Note-taking/making

UNIT - III (Non-verbal Language)	9 Hrs
Personal appearance	
Posture	
Gestures	
Facial Expression	
UNIT – IV Job Skills – Role Play	9 Hrs
Career plans	
Dream Job	
Describing your company	
Product profiles	
UNIT – V (Speaking) Instructor led Workshop – Role Play	9 Hrs
Sounds of English	
Note:	
Questions would be from Units II –V only	
Unit I meant for class room activity only	
TOTAL	45 Hrs

BOOKS FOR REFERENCE:

1. **Dr. PRAKASH C. L.**, *An Advanced Course in Communication and Media Awareness*, Cambridge University Press, New Delhi, 2007.
2. **KRISHNA MOHAN & MEERA BANERJI**, *Developing Communication Skills*, Macmillan, India, 2009.
3. **SASIKUMAR V., et al.**, *Oral Communication Skill*, Foundation Books, Cambridge University Press, New Delhi, 2009.

Department of Mathematics

Skill Based Subject

SEMESTER III

SEMESTER III

CODE	COURSE TITLE
21MSUSP01	ICT TOOLS FOR TEACHING AND LEARNING

Category	CIA	ESE	L	T	P	Credit
Skill Based Subject - I	50	50	15	-	30	3

Objectives:

- To help students to become competent and confident users of ICT tools in teaching and learning
- To prepare students for the world of tomorrow
- To apply their ICT skills and knowledge to their learning in other areas
- To use their ICT skills to develop their language and communication skills
- To equip students with the skills necessary to use technology to become independent learners

Syllabus

UNIT I

(9 Hrs.)

Google Classroom: Hands-on with Google Classroom – Introduction to Google Classroom – Creating your Classroom – Understanding the Interface – Adding Teachers and Students – Structuring your Course Contents – Adding Course Material – Adding and Evaluating Assignments - Creating and Evaluating Quizzes

UNIT II

(7 Hrs.)

Google Docs: Introduction to Google Docs – Working with Google Docs – Eight Utilities of Google Docs – **Google Forms:** Hands-on with Google Forms – Introduction to Google Forms – Working with Google Forms

UNIT III

(11 Hrs.)

Google Sites: Hands-on with Google Sites – Introduction to Google Sites – Working with Google Sites – **Video-conferencing Tool:** Hands-on– Introduction– Working with Video-conferencing Tool–**Creating E-Content – Videos:** Open Broadcaster Software (OBS)– Introduction to OBS – Hands-on with OB

UNIT IV

(10 Hrs.)

Creating E-Content – Videos OpenShot – Introduction to OpenShot – Hands-on with OpenShot– Uploading Videos on YouTube –**Creating E-Content - Visualization Tools:** Creating Live Charts – Step by Step Process to create Live Charts– Creating Diagrams – Step by Step process to create Flowcharts and Diagrams

UNIT V

(8 Hrs.)

Creating E-content - Concept Visualization: Mind Maps– Hands-on with Mind Maps–**Creating E-Content – Animated Videos:**Art of creating Animated Videos with Render forest– Hands-on with Render forest.

Pedagogy

- Lecture, PPT, Quiz, Group Discussion and Seminar

Web Resources

- classroom.google.com
- docs.google.com
- [docs.google.com › forms](https://docs.google.com/forms)
- sites.google.com
- meet.google.com
- <https://obsproject.com/>
- <https://www.openshot.org/>
- <https://lvcharts.net/>
- <https://live.amcharts.com/>
- <https://www.mindmapping.com/>
- <https://www.renderforest.com/>
- <https://www.owlabs.com/blog/video-conferencing-tools>
- <https://getvoip.com/blog/2016/11/21/free-web-conferencing/>
- <https://www.g2.com/categories/video-conferencing/free>

DEPARTMENT OF MATHEMATICS (CA)

Skill Based Subject

SEMESTER III

CODE	COURSE TITLE
21MCUSP01	SKILL BASED SUBJECT - I ICT TOOLS FOR TEACHING AND LEARNING

Category	CIA	ESE	L	T	P	Credit
CORE	50	50	15	-	30	3

Objectives:

- To help students to become competent and confident users of ICT tools in teaching and learning
- To prepare students for the world of tomorrow
- To apply their ICT skills and knowledge to their learning in other areas
- To use their ICT skills to develop their language and communication skills
- To equip students with the skills necessary to use technology to become independent learners

Syllabus

UNIT I

(9 Hrs.)

Google Classroom: Hands-on with Google Classroom – Introduction to Google Classroom – Creating your Classroom – Understanding the Interface – Adding Teachers and Students – Structuring your Course Contents – Adding Course Material – Adding and Evaluating Assignments - Creating and Evaluating Quizzes

UNIT II

(7 Hrs.)

Google Docs: Introduction to Google Docs – Working with Google Docs – Eight Utilities of Google Docs – **Google Forms:** Hands-on with Google Forms – Introduction to Google Forms – Working with Google Forms

UNIT III

(11 Hrs.)

Google Sites: Hands-on with Google Sites – Introduction to Google Sites – Working with Google Sites – **Video-conferencing Tool:** Hands-on – Introduction – Working with Video-conferencing Tool – **Creating E-Content – Videos:** Open Broadcaster Software (OBS) – Introduction to OBS – Hands-on with OB

UNIT IV

(10 Hrs.)

Creating E-Content – Videos OpenShot – Introduction to OpenShot – Hands-on with OpenShot– Uploading Videos on YouTube – **Creating E-Content - Visualization Tools:** Creating Live Charts - Step by Step Process to create Live Charts – Creating Diagrams – Step by Step process to create Flowcharts and Diagrams

UNIT V

(8 Hrs.)

Creating E-content - Concept Visualization: Mind Maps– Hands-on with Mind Maps – **Creating E-Content – Animated Videos:** Art of creating Animated Videos with Render forest – Hands-on with Render forest.

List of Practicals

1. Create a class and invite your fellow teachers and students in your Google classroom.
2. As a teacher, how do you give different types of class test in classwork tab. Demonstrate it with your own example.
3. How do you join as a student in Google classroom and briefly explore the students overview after joining in it?
4. Explain elaborately how to ask different types of questions in class work tab by using all options in Google classroom.
5. Explain different stream tab settings by switching between teacher and student window in Google classroom.
6. What are all settings available for a teacher in Google classroom? Explain it clearly.
7. Create a single classroom for all subjects or separate classroom for each subject and clearly show how you will deliver titles and materials.
8. Create a sample Google doc in the topic of your interest by using basic features of Google docs.
9. Create a sample Google doc in the topic of your interest by using advanced features of Google docs.
10. How do you insert table and images in Google docs? Explain clearly with an example by using all its properties.

11. How do you evaluate assignment as a teacher by using default method? Explain all the possible ways to return Student's grade.
12. Create an assignment using Rubric as a teacher and also explain how do you Review the assignment.
13. How do you assign collaborative assignment as a teacher? Collect one sample data using this collaborative assignment.
14. What is an archived class and explain its features. How do you delete a classroom? Is there any possibility to retrieve deleted classroom?
15. Explain Google drive folder for Google classroom.
16. Develop and publish your own website with your personal/given biodata using blank template.
17. Develop and publish your own website with your personal/given biodata using anyone of the available templates.
18. Explain, on hand, the uses of google sites with suitable data.
19. Create a google meet by explaining step by step procedure and the options available before entering into the meet.
20. Create a google meet by explaining step by step procedure and the options available after entering into the meet.
21. Use openshot editor and its features to edit videos (from importing to exporting videos). Keep openshot editor downloaded in your device and keep two or more videos and images ready for editing
22. Upload a video on youtube. Keep a video ready for uploading; this video must be on explanation about how to upload a video on youtube
23. Create a live chart, online, for your own data/given data and explain step by step process.
24. Create a flowchart, online, for your own data/given data and explain step by step process.
25. Draw diagram, online, for your own data/given data and explain step by step process.
26. Draw a mindmap, online, to take notes of one of your lessons in the current Semester.
27. Draw a mindmap, online, to a project plan of constructing a dam.

28. Use Whiteboard animation toolkit in Renderforest (Add scene) to animate a video and explain the options edit, style, colour, music and preview before playing the animated video.

29. Use Whiteboard animation toolkit in Renderforest (Load preset) to animate a video for online educational platform promotion and explain the options edit, style, colour, music and preview before playing the animated video.

30. Use Explainer video toolkit in Renderforest (Add scene) to animate a video for online educational platform promotion and explain the options edit, style, colour, music and preview before playing the animated video.

Pedagogy

- Lecture, PPT, Quiz, Group Discussion and Seminar

Web Resources

- classroom.google.com
- docs.google.com
- [docs.google.com › forms](https://docs.google.com/forms)
- sites.google.com
- meet.google.com
- <https://obsproject.com/>
- <https://www.openshot.org/>
- <https://lvcharts.net/>
- <https://live.amcharts.com/>
- <https://www.mindmapping.com/>
- <https://www.renderforest.com/>
- <https://www.owllabs.com/blog/video-conferencing-tools>
- <https://getvoip.com/blog/2016/11/21/free-web-conferencing/>
- <https://www.g2.com/categories/video-conferencing/free>

Department of Physics

Skill Based Subject

SEMESTER - III

CODE	COURSE TITLE
21PHUS301	ENERGY MANAGEMENT

Category	CIA	ESE	L	T	P	Credit
SBS	50	50	41	4	-	3

Preamble

The main goal is to achieve and maintain optimum energy procurement and utilization for managing the energy consumption of house hold appliances. Also to create awareness to minimize energy costs without affecting production and quality.

Unit I: (9 Hrs)

Conventional Energy Sources:

Introduction-An initial idea of energy in science-Types of conventional energy-thermal energy-hydro thermal energy-Nuclear energy (Qualitative Analysis only).

Unit II: (9 Hrs)

Need for Non-Conventional Energy Sources:

Constraints in the conventional energy sources - Global energy trends - Global warming and the green house effect-Non-Conventional energy Sources-Energy consumption as a measure of prosperity -World energy futures.

Unit III: (9 Hrs)

General introduction to Non-Conventional Sources:

Introduction - Solar Energy - Wind Energy - Energy from Biomass and Bio Gas – Ocean thermal energy conversion-Tidal Energy-Geothermal energy.

Unit IV: (9 Hrs)

Solar energy applications:

Solar Cooker-Solar water heater-Solar Distillation-Solar space heater-Solar cell

Unit V: (9Hrs)

Energy Audit and Energy Security:

Energy Conservation-Energy audit: Definition, Objectives -Calculation of energy audit
Energy Security: Meaning - Definition - Importance - Energy security threats -short term security-long term security.

Text Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	John Andrews & NickJelley	EnergyScience Principles, Technologies and Impacts”	Oxford University Press, Newyork	2010
2.	G.D.Rai	Non - Conventional Energy Sources	Khanna Publishers, Delhi	1996
3.	Satyesh C.Chakraborty	Energy opportunities &social responsibility	Jaico Publishing House, Mumbai.	2009 & 1 st Edition

Unit V-Study Material: Provided by the Department of Physics.

Reference Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Janet Ramage	Energy, A Guide book	Oxford University Press, New york	1983

WebResources

- <https://www.toppr.com/guides/physics/sources-of-energy/conventional-sources-of-energy>
- https://warmheartworldwide.org/climate-change/?gclid=EAIAIQobChMIjsa855at8gIVs5NmAh08yQYQEAAAYASAAEgKCA_D_BwE
- <https://www.irena.org/geothermal#:~:text=Geothermal%20energy%20is%20heat%20derived,harnessed%20to%20generate%20clean%20electricity.>
- <https://www.energy.gov/energysaver/water-heating/solar-water-heaters>
- http://elion.co.in/elion-energy-audit-conservation/?gclid=EAIAIQobChMIRNyan5et8gIVGJ1LBR34cAC9EAAAYASAAEgLKwFD_BwE

Pedagogy

- Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar

Department of Biochemistry

Skill Based Subject

SEMESTER III

CODE	COURSE TITLE
21BCUS301	SKILL BASED SUBJECT- I NATURAL REMEDIES

Category	CIA	ESE	L	T	P	Credits
SBS	50	50	44	1	-	3

SUBJECT DESCRIPTION: This course emphasizes the students to understand the medicinal values of natural foods.

OBJECTIVES: On successful completion of the course, the students will acquire knowledge on Medicinal values of vegetables and Fruits, Medicinal values of Spices. Medicinal values of Cereals and Pulses and Home remedies.

UNIT I

9 Hrs

Medicinal values of vegetables:

Introduction, Origin, Description, composition and curative properties of Onion, Ginger, Garlic, Drum stick, Ash gourd, *Bitter gourd and Radish*.

UNIT II

9 Hrs

Medicinal values of Fruits:

Introduction, Origin, Description, composition and curative properties of Gooseberry, *Lemon, Orange*, Banana, Papaya, Pomegranate and Guava.

UNIT III

9 Hrs

Medicinal values of Spices:

Introduction, Origin, Description, composition and curative properties of Turmeric, Cuminseeds, Clove, Cardamom, Coriander, Fenugreek, *Pepper and Curry leaves*.

UNIT IV**9 Hrs**

Medicinal values of Cereals and Pulses:

Introduction, Origin, Description, composition and curative properties of Rice, Wheat,

Barley, Millet, Corn, Oats, Soya beans and Bengal grams.**UNIT V****9 Hrs**

Miscellaneous remedies:

Introduction, Origin, Description, composition and curative properties of Almond,

Coconut, Cheese, Honey, *Tea, Coffee*, Vegetable oils.**Note: *Italics* denote Self Study Topics****Reference Books****Text Books**

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Dr. Aziz Ahmad Syed & Dr. Shiv Charan Sharma	Herbal Cure	Pustak Mahal, New Delhi	2004, 2 nd edition.
2.	Sunitha Pant Bansal	Healing power of Foods	Pustak Mahal, New Delhi	2002, 2 nd edition.

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	H.K.Bakhru	<i>Herbs That Heal Natural Remedies For Good Health</i>	Orient Paperbacks, New Delhi	2005, 1 st edition.
2.	Dr. S.Suresh Babu	<i>A Treatise on Home Remedies</i>	Pustak Mahal, New Delhi	2004, 2 nd edition.

Department of Computer Science

Skill Based Subject

SEMESTER III

Skill Based Course I: Data Analysis for Biological Applications Lab

Sub.Code :21CSUSP01

Max. Marks: 100

CIA: 50; ESE: 50 Credits: 3

Objective: To solve Biological problems using Data management Tool

1. Create a PIE chart to show the Blood Group of 95 Pharmacy students

Category of Blood Group	A	B	AB	O
Number of Students	49	27	15	04

2. For the data given below, calculate relative frequency and draw a bar chart with category in X axis and Relative frequency in Y axis

Blood Pressure Category	Frequency
Normal	1206
Pre-Hypertension	1452
Stage I Hypertension	653
Stage II Hypertension	222

3. Human Phenotype of 10 people is given in the table. Calculate summary statistics for Height, Weight and Age fields and create a Pivot table for the columns Sex and Hair Color.

Id	Height	Weight	Age	Sex	Hair Color
1	163.20	55.71	23	Female	Black
2	164.80	54.26	24	Male	Brown
3	153.72	52.54	21	Male	Brown
4	168.60	51.12	23	Male	Red
5	158.24	54.61	22	Female	Brown
6	151.25	53.72	24	Male	Black
7	156.25	51.22	22	Female	Red
8	168.72	57.21	24	Female	Red
9	159.67	53.75	21	Male	Brown
10	166.39	58.56	22	Male	Black

4. The size of breeding pairs of penguins is tabulated here. Check if there is correlation between the sizes of the two sexes using scatter graph and both correlation coefficients. (Use both Pearson and Spearman Correlation)

Pair	Female	Male
1	17.1	16.5
2	18.5	17.4
3	19.7	17.3
4	16.2	16.8
5	21.3	19.5
6	19.6	18.3

5. The effect of enzyme concentration on rate of a reaction was investigated with the following results.

Enzyme concentration (mM)	0	0.1	0.2	0.5	0.8	1.0
Rate (arbitrary units)	0	0.8	1.1	3.2	6.6	7.2

Plot a graph of these results, fit a straight line to the data, and find the slope of this line. Use the slope to predict the rate at an enzyme concentration of 0.7mM.

6. In a test of two drugs 8 patients were given one drug and 8 patients another drug. The number of hours of relief from symptoms was measured with the following results:

Drug A	3.2	1.6	5.7	2.8	5.5	1.2	6.1	2.9
Drug B	3.8	1.0	8.4	3.6	5.0	3.5	7.3	4.8

Find out which drug is better by calculating the mean and 95% confidence limit for each drug, then use an appropriate statistical test to find if it is significantly better than the other drug.

7. The pulse rate of 8 individuals was measured before and after eating a large meal. Find out if there is any significant change in pulse rate after eating.

Pulse rate		
Person	Before Eating	After Eating
1	105	109
2	79	87
3	79	86
4	103	109
5	87	90
6	74	78
7	73	78
8	82	89

8. The drug was administered to 500 people out of a total of 800 included in the sample to test its efficacy against typhoid. The results are shown below. Find the effectiveness of the drug against the disease using chi-square test Chi-square (χ^2) table value at 5% level is 3.84

Test the Efficiency of Drug	Typhoid	No Typhoid	Total
Administering the drug	200	300	500
Without Administering the drug	280	20	300
Total	480	320	800

Department of Computer Application

Skill Based Subject

SEMESTER III

Skill Based Subject I: Data Analysis for Biological Applications - Lab	
Sub.Code : 21CAUSP01	
Max.Marks: CIA-50; ESE-50	Credits: 3
Instructional Hrs. 45	

Objective: To solve Biological problems using Data management Tool

1. Create a PIE chart to show the Blood Group of 95 Pharmacy students

Category of Blood Group	A	B	AB	O
Number of Students	49	27	15	04

2. For the data given below, calculate relative frequency and draw a bar chart with category in X axis and Relative frequency in Y axis

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6	151.25	53.72	24	Male	Black
7	156.25	51.22	22	Female	Red

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10	166.39	58.56	22	Male	Black

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4	16.2	16.8
5	21.3	19.5
6	19.6	18.3

5. The effect of enzyme concentration on rate of a reaction was investigated with the following results.

Enzyme concentration (mM)	0	0.1	0.2	0.5	0.8	1.0
Rate (arbitrary units)	0	0.8	1.1	3.2	6.6	7.2

Plot a graph of these results, fit a straight line to the data, and find the slope of this line. Use the slope to predict the rate at an enzyme concentration of 0.7mM.

6. In a test of two drugs 8 patients were given one drug and 8 patients another drug. The number of hours of relief from symptoms was measured with the following results:

Drug A	3.2	1.6	5.7	2.8	5.5	1.2	6.1	2.9
Drug B	3.8	1.0	8.4	3.6	5.0	3.5	7.3	4.8

Find out which drug is better by calculating the mean and 95% confidence limit for each drug, then use an appropriate statistical test to find if it is significantly better than the other drug.

7. The pulse rate of 8 individuals was measured before and after eating a large meal. Find out if there is any significant change in pulse rate after eating.

Pulse rate		
Person	Before Eating	After Eating
1	105	109
2	79	87
3	79	86
4	103	109
5	87	90
6	74	78
7	73	78
8	82	89

8. The drug was administered to 500 people out of a total of 800 included in the sample to test its efficacy against typhoid. The results are shown below. Find the effectiveness of the drug against the disease using chi-square test Chi-square (χ^2) table value at 5% level is 3.84

Test the Efficiency of Drug	Typhoid	No Typhoid	Total
Administering the drug	200	300	500
Without Administering the drug	280	20	300
Total	480	320	800

Department of Information Technology

Skill Based Subject

SEMESTER III

Skill Based Subject I: Data Analysis for Biological Applications - Lab		
Sub.Code: 21ITUSP01		
Max. Marks: 100	CIA: 50; ESE: 50	Credits: 3
Instructional Hrs. 45		

Preamble

To solve Biological problems using Data management Tool

1. Create a PIE chart to show the Blood Group of 95 Pharmacy students

Category of Blood Group	A	B	AB	O
Number of Students	49	27	15	04

2. For the data given below, calculate relative frequency and draw a bar chart with category in X axis and Relative frequency in Y axis

Blood Pressure Category	Frequency
Normal	1206
Pre-Hypertension	1452
Stage I Hypertension	653
Stage II Hypertension	222

3. Human Phenotype of 10 people is given in the table. Calculate summary statistics for Height, Weight and Age fields and create a Pivot table for the columns Sex and Hair Color.

Id	Height	Weight	Age	Sex	Hair Color
1	163.20	55.71	23	Female	Black
2	164.80	54.26	24	Male	Brown
3	153.72	52.54	21	Male	Brown
4	168.60	51.12	23	Male	Red
5	158.24	54.61	22	Female	Brown
6	151.25	53.72	24	Male	Black
7	156.25	51.22	22	Female	Red
8	168.72	57.21	24	Female	Red

9	159.67	53.75	21	Male	Brown
10	166.39	58.56	22	Male	Black

4. The size of breeding pairs of penguins is tabulated here. Check if there is correlation between the sizes of the two sexes using scatter graph and both correlation coefficients. (Use both Pearson and Spearman Correlation)

Pair	Female	Male
1	17.1	16.5
2	18.5	17.4
3	19.7	17.3
4	16.2	16.8
5	21.3	19.5
6	19.6	18.3

5. The effect of enzyme concentration on rate of a reaction was investigated with the following results.

Enzyme concentration (mM)	0	0.1	0.2	0.5	0.8	1.0
Rate (arbitrary units)	0	0.8	1.1	3.2	6.6	7.2

Plot a graph of these results, fit a straight line to the data, and find the slope of this line. Use the slope to predict the rate at an enzyme concentration of 0.7mM.

6. In a test of two drugs 8 patients were given one drug and 8 patients another drug. The number of hours of relief from symptoms was measured with the following results:

Drug A	3.2	1.6	5.7	2.8	5.5	1.2	6.1	2.9
Drug B	3.8	1.0	8.4	3.6	5.0	3.5	7.3	4.8

Find out which drug is better by calculating the mean and 95% confidence limit for each drug, then use an appropriate statistical test to find if it is significantly better than the other drug.

7. The pulse rate of 8 individuals was measured before and after eating a large meal. Find out if there is any significant change in pulse rate after eating.

Person	Pulse rate	
	Before Eating	After Eating
1	105	109
2	79	87
3	79	86
4	103	109
5	87	90
6	74	78
7	73	78
8	82	89

8. The drug was administered to 500 people out of a total of 800 included in the sample to test its efficacy against typhoid. The results are shown below. Find the effectiveness of the drug against the disease using chi-square test .Chi-square (χ^2) table value at 5% level is 3.84

Test the Efficiency of Drug	Typhoid	No Typhoid	Total
Administering the drug	200	300	500
Without Administering the drug	280	20	300
Total	480	320	800

Department of Computer Technology
Skill Based Subject
SEMESTER III

Skill Based Subject I: Data Analysis for Biological Applications - Lab		
Sub.Code: 21CTUSP01		
Max.Marks:100	CIA:50;ESE:50	Credits:3
Instructional Hrs:45		

Objective: To solve Biological problems using Data management Tool

1. Create a PIE chart to show the Blood Group of 95 Pharmacy students

Category of Blood Group	A	B	AB	O
Number of Students	49	27	15	04

2. For the data given below, calculate relative frequency and draw a bar chart with category in X-axis and Relative frequency in Y-axis

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3. Human Phenotype of 10 people is given in the table. Calculate summary statistics for Height, Weight and Age fields and create a Pivot table for the columns Sex and Hair Color.

Id	Height	Weight	Age	Sex	Hair Color
1	163.20	55.71	23	Female	Black
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3	153.72	52.54	21	Male	Brown
4	168.60	51.12	23	Male	Red
5	158.24	54.61	22	Female	Brown
6	151.25	53.72	24	Male	Black
7	156.25	51.22	22	Female	Red
8	168.72	57.21	24	Female	Red
9	159.67	53.75	21	Male	Brown
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4. The size of breeding pairs of penguins is tabulated here. Check if there is correlation between the sizes of the two sexes using scatter graph and both correlation coefficients. (Use both Pearson and Spearman Correlation)

Pair	Female	Male
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Plot a graph of these results, fit a straight line to the data, and find the slope of this line. Use the slope to predict the rate at an enzyme concentration of 0.7mM.

6. In a test of two drugs 8 patients were given one drug and 8 patients another drug. The number of hours of relief from symptoms was measured with the following results:

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Find out which drug is better by calculating the mean and 95% confidence limit for each drug, then use an appropriate statistical test to find if it is significantly better than the other drug.

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5	87	90
6	74	78
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8	82	89

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Test the Efficiency of Drug	Typhoid	No Typhoid	Total
Administering the drug	200	300	500
Without Administering the drug	280	20	300
Total	480	320	800

Department of Costume Design & Fashion

Skill Based Subject

SEMESTER III

CODE	COURSE TITLE
21CFUSP01	FASHION ACCESSORIES

Category	CIA	ESE	L	T	P	Credit
SBS - I	50	50	-	-	45	3

Preamble

To gain knowledge about the Fashion Accessories and Jewelry Making

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level
CO1.	Design different types of fashion accessories	K2
CO2.	Developing skills in preparation of bags	K2,K3
CO3.	Innovating the trendy accessories	K2,K3
CO4	Assess the enrichment of making slippers	K2
CO5	Estimating the cost particulars for the developed jewelry making	K4

Mapping with Programme Outcomes

COs	PO1	PO2	PO3	PO4	PO5
CO1.	S	S	M	M	S
CO2.	S	S	M	M	M
CO3.	S	S	M	M	M
CO4	S	S	S	S	S
CO5	S	S	S	S	S

S- Strong; M-Medium; L-Low

Syllabus

UNIT I

(10 hrs.)

Prepare the samples for the following

Design hand bags using different textures – two styles

UNIT II

(10 hrs.)

Design watch strap –2 styles, design hair clips, hair bands –2 styles

UNIT III		(10 hrs.)
	Surface enrichment of the slippers – 2 styles	
UNIT IV		(10 hrs.)
	Traditional jewelry making	
UNIT V		(5 hrs.)
	Design trendy jewelry making	

Reference Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Christine And Sylvie Hooghe	Crystal Beaded Jewellery	Serch press	2005
2.	Phyllis Tortora	Encyclopedia of Fashion Accessories	Fairchild publications	2003
3.	Pauline Bruce	Fashion Accessories	Cassel	2000

Pedagogy

- Lecture, PPT, , Assignment, Group Discussion,

Department of Commerce

Skill Based Subject

SEMESTER III

CODE	COURSE TITLE
21COUS301	WOMEN ENTREPRENEURSHIP DEVELOPMENT

Category	CIA	ESE	L	T	P	Credit
Skill Based	50	50	45	-	-	3

Objectives

- To impart knowledge on the concept of entrepreneurship and women entrepreneurship development.
- To instill ideas on identification, selection and preparation of projects and to have awareness on the institutions promoting entrepreneurship.

Syllabus

Unit I 10 Hrs.

Definition of Entrepreneur – Entrepreneurial Characteristics – Functions of Entrepreneurs – Types – Concept of Entrepreneurship - Intra-preneurship – Economic and Social benefits – Barriers to Entrepreneurship – Eco-preneurship – Edupreneurship.

Unit II 10 Hrs.

Women Entrepreneurship – Concept of Women Entrepreneurs – Features of Women Entrepreneurs – Women Entrepreneurship in India – Growth and Problems of Women Entrepreneurs – Suggestions to Promote Women Entrepreneurship.

Unit III 8 Hrs.

Rural Entrepreneurship – Meaning, Need and Problems - Small Scale Sector in India – Rationale and Objectives of SSI – Problems of SSI.
Concept of Self-help Group – Role of Government and NGO's in promoting Self – Help Groups – Micro Enterprises.

Unit IV 8 Hrs.

Meaning of Project – Project Identification and Selection. Guidelines for preparing Project Reports – Meaning and Contents – Feasibility Analysis.

Unit V 9 Hrs

Institutional Support and Incentives : Need for Incentives , DIC – SIPCOT – TIIC – IFCI – Commercial Banks – Subsidies and Incentives in Tamilnadu.

Text Books

S. No.	Author	Title of the Book	Publisher	Year and Edition
1	Shukla M.B	Entrepreneurship and Small Business Management	KitabMahal Agencies, Allahabad	2009 & 3 rd Edition
2	Gupta C.B. and Srinivasan N.P	Entrepreneurial Development	Sultan Chand and Company, New Delhi,	2021 (Reprint) & 1 st Revised Edition
3.	Khanka S.S	Entrepreneurial Development	Sultan Chand and Company Ltd., New Delhi	2020 (Reprint) & 4 th Edition

Pedagogy

- Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar

Department of Commerce (Computer Application)

Skill Based Subject

SEMESTER III

CODE	COURSE TITLE
21CMUS301	TAX SYSTEM IN INDIA

Category	CIA	ESE	L	T	P	Credit
Skill Based Subject-III	50	50	42	3	-	3

Preamble

- ❖ To students should have understood the features of Tax System in India.

Syllabus

UNIT I (9 Hrs)

Tax system in India - Features and problems of Indian Tax System - Goods and services tax: Meaning – scope - GST council - Function and role - Impact of GST on the Indian economy.

UNIT II (9 Hrs)

Types of GST in India - CGST, SGST, IGST and UTGST - GST Impact on central and state government.

UNIT III (9 Hrs)

Service exempted from GST - Supply under GST.

UNIT IV (9 Hrs)

Levy and collection of GST – Provision - Input tax credit- Exports Imports - Goods and services.

UNIT V (9 Hrs)

GST – Registration – Procedure – Cancellation – Electronic Ledger

Reference Books

S. No.	Author	Title of the Book	Publisher	Year and Edition
1	T.S.Reddy & Y.Hariprasad Reddy	Business Taxation	Margham Publications, Chennai.	2019 & First Edition
2	Dr.R.Parameswaran & CA.P.Viswanathan	Indirect Taxes – GST and custom Laws	Kavin Publication, Coimbatore.	2018 & First Edition

Pedagogy

- Lecture, Chalk & Talk and Assignment

Department of Commerce (Corporate Secretaryship)

Skill Based Subject

SEMESTER III

CODE	COURSE TITLE
21CCUS301	FINANCIAL MARKETS

Category	CIA	ESE	L	T	P	Credit
Skill Based Subject – I	50	50	45	-	-	3

Preamble

The subject helps the Students to acquire the knowledge regarding various financial instruments.

Syllabus

UNIT I

8Hrs.

Financial Market: Investment – Meaning, Options for Investment –Types of Investment. Options-Types of Financial Markets: Equity, debt, derivatives, commodities.

UNIT II

8Hrs.

Securities Markets: Securities – Functions – Role and Functions of SEBI – Participants Involved.

UNIT III

9Hrs.

Primary Market: Role of Primary Market – Issue of shares- Different kinds of Issue – Price of Issue – Registrar – Prospectus – Listing Agreement.

UNIT IV

12 Hrs.

Secondary Market: Role of Secondary Market – Meaning of Stock Exchange – Stock Trading – NEAT – Contract Note –Precautions before investing in Stock Markets.

UNIT V

8Hrs.

Depositories : Meaning – Benefits – Depository Participants - Dematerialisation of shares –Process Involved.

Reference Books

1. **Gangadhar .V, Ramesh Babu.G, Investment Management**, Anmol publications Pvt., Ltd., New Delhi, 1st Edition, 2003.

2. **Joseph Anbarasu.D, Boominathan.V.K, Manoharan.P, Financial Services**, Sultan Chand & Sons, new Delhi, 2nd Edition, 2004.

3. **Radha.V, Oomen P.T, Capital Market & Financial services**, Prasanna & Co, Chennai, 2005.

Department of Cooperation

Skill Based Subject

SEMESTER – III

CODE	COURSE TITLE
21CPUS301	WOMEN ENTREPRENEURSHIP AND SKILL DEVELOPMENT

Category	CIA	ESE	L	T	P	Credit
SBS	50	50	43	2	-	3

Preamble

To provide students with an understanding of entrepreneurship and innovation and create awareness on Financial and non-financial support by institutions with special programme for women.

Syllabus

UNIT I (9 hrs.)

Entrepreneurship: Meaning and Definition - Competencies of Entrepreneur, Functions – Types – Socio Cultural factors influencing Entrepreneurship - Functions and Problems.

UNIT II (9 hrs.)

Small Enterprises: Definition – Classification- Project Formation – Steps involved setting up of Micro Business – Government assistance for Small Enterprises Development.

UNIT III (9 hrs.)

Institutional Finance to Entrepreneurs: Commercial Banks, Cooperative Banks and Development Banks - SFC, SIDCO, SIDBI, TIIIC – Micro, Small and Medium Enterprises ACT 2006, Types Capital requirements of MSME (Micro, Small, Medium Enterprises).

UNIT IV (9 hrs.)

Institutional Non Financial Support to Entrepreneurs- Need for Support- NSIC, SIDCI, SISI, DIC, Kadij and Village Industrial Commission, Industrial Estates.

UNIT V (9 hrs.)

Special Programmes for Women - Education for Unemployed Youth- DWCRA, IRDP, TRYSEM, JRY, SGRY (SHG), MUDRA Scheme – Women Entrepreneurs. Recent Trends and Development in Women Entrepreneurship.

Text Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Mukesh Gupta	Theory of Entrepreneurship	Raj Publishing House, Jaipur	2006, 1 st Edition.
2.	Jayshree Suresh	Entrepreneurial Development	Margham Publications	2003, 2 nd Edition

Reference Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Rayindranath	Entrepreneurship	VRINDIA Publishers	2007, 1 st Edition.
2.	Khanka S.S	Entrepreneurial Development	S.Chand Company, New Delhi	2007, 1 st Edition.

DEPARTMENT OF E-COMMERCE
Skill Based Subject
SEMESTER III

CODE	COURSE TITLE
21CEUS301	INFORMATION TECHNOLOGY

Category	CIA	ESE	L	T	P	Credit
Skill Based Subject - I	50	50	41	4	-	3

Preamble

After the successful completion of the course the students should have basic knowledge about concepts and principles of Information technology.

Syllabus

UNIT – I (9 Hrs.)

Introduction to Information Technology: Information – Characteristics of Information – Definition –Importance –Generations of Computers.

UNIT – II (9 Hrs.)

Fundamentals of Computers: Classification of Computers –Input, Output and Storage devices.

UNIT – III (9 Hrs.)

Data Processing: Data Processing Concepts– Objectives –Methods of Data Processing.

UNIT – IV (9 Hrs.)

Network: Introduction to Network – Types of Networks. E-Waste – E-waste Management

UNIT – V (9 Hrs.)

Management Information System: Introduction – Characteristics – Background of MIS – Designing of MIS – Benefits of MIS.

Text Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Saravanakumar.R, R. Parameswaran and T. Jayalakshmi	A Text book of Information Technology	S. Chand Co. Pvt. Ltd., New Delhi	2010 and 1 st Edition

Reference Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Richard Brightman and W. Dimsdale	Using Micro Computers	Galgotia Publications Pvt. Ltd., New Delhi	2001
2.	Taxali.R.K	P.C. Software made Simple	Tata McGraw Hill Publishing Company Ltd, New Delhi	2001 and 1 st Edition
3.	Alexis and Mathews Leon	Introduction to Computers	Leon (Tech) World, Chennai	2008

Web Resources

- <https://www.geeksforgeeks.org/generations-of-computer/>
- <http://cfeed.blogspot.com/2014/08/114-classification-of-computers.html>
- [https://courses.lumenlearning.com/informationliteracy/chapter/computer-devices/#:~:text=There%20are%20three%20different%20types,%2C%20flash%20drives%2C%20etc.\)](https://courses.lumenlearning.com/informationliteracy/chapter/computer-devices/#:~:text=There%20are%20three%20different%20types,%2C%20flash%20drives%2C%20etc.))
- <https://planningtank.com/computer-applications/data-processing-methods-types>
- <https://www.guru99.com/types-of-computer-network.html>
- <https://www.geeksforgeeks.org/management-information-system-mis/>
- <https://www.ewaste1.com/what-is-e-waste/>

Pedagogy

- Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar

Department of Commerce (Professional Accounting)

Skill Based Subject

SEMESTER III

CODE	COURSE TITLE
21PAUS301	BRAND MANAGEMENT

Category	CIA	ESE	L	T	P	Credit
SBS	50	50	42	3	-	3

Preamble

To familiarize graduates with various aspects of branding a product.

Syllabus

UNIT I (10 Hrs.)

Brand: Definition – Difference between a Product and a Brand – Benefits – Types of Brands – Challenges – Ways to Overcome Challenges. Strategic Planning for Brand – Designing Brand Identity – Brand Image.

UNIT II (9 Hrs.)

Brand Equity: Definition – Need – Steps in Building a Brand – Sources of Brand Equity. Researching for Brand Equity: Tracking a Brand – Research Techniques.

UNIT III (9 Hrs.)

Consumer Behaviour and Brand Buying Decisions: Consumer Attitude – Consumer Decision Making – Factors Affecting Consumer Behaviour – Brand Loyalty and Brand Commitment.

UNIT IV (8 Hrs.)

Brand Positioning: Definition – Brand Values – Crafting the Positioning Strategy – Principles for Positioning – Repositioning – Repositioning Strategies.

UNIT V (9 Hrs.)

E-branding: E-business Strategy – Marketing Internet – Marketing Communication and Promotion – Communication Options.

Text Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Kirti Dutta	Brand Management Principles & Practices	Oxford University Press, New Delhi	2016 (Reprint), 6 th Edition
2.	Kevin Lane Keller, Ambi M.G.Parameswaran and Isaac Jacob	Strategic Brand Management	Pearson India Education Services Private Limited, New Delhi	2015

Reference Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Jean Noel, Kapferer	Strategic Brand Management	Kogan Page India Private India Limited, New Delhi	2010 (Reprint), 1 st Edition

Pedagogy

- Lecture, Chalk & Talk, Power Point Presentation, Quiz, Assignment, Seminar

DEPARTMENT OF COMMERCE WITH ACCOUNTING AND FINANCE**Skill Based Subject****SEMESTER III**

CODE	COURSE TITLE
21AFUS301	MANAGEMENT INFORMATION SYSTEM

Category	CIA	ESE	L	T	P	Credit
Skill Based Subject	50	50	42	3	-	3

Preamble

To acquaint students with the basic aspects of Management Information System and the application of MIS in business decisions

Syllabus**UNIT I (8 Hrs.)**

Management Information System – Definitions – Characteristics – Classification – MIS and Levels of Management – Design of an MIS – Implementation of MIS – Approaches of MIS Development.

UNIT II (8 Hrs.)

Information System for Decision Making – Types – Transaction Processing Systems – Management Information Systems – Intelligent Support systems.

UNIT III (10 Hrs.)

Office Information systems – Office Automation – Tools – Types – Document Management Systems – Communication Systems – Teleconferencing Systems – Office Support System.

UNIT IV (10 Hrs.)

Information System in Business – Manufacturing Information Systems – Marketing Information systems – Quality Information Systems – Financial and Accounting Information Systems – Research and Development Information systems – Human Resource Information Systems – Geographical Information Systems – Cross Functional Systems.

UNIT V (9 Hrs.)

Artificial Intelligence – Introduction – Areas of AI – Expert Systems – Components – Advantages and Disadvantages – Business Applications of Expert Systems – Neural Networks.

Text Book

S.No.	Author	Title of the Book	Publisher	Year and Edition
1	A.K.Gupta	Management Information Systems	S.Chand & Company Ltd., New Delhi	2010 (Reprint, 3 rd Revised Edition)

Reference Books

S.No.	Author	Title of the Book	Publisher	Year and Edition
1	D.P.Goyal	Management Information Systems	Macmillan India Ltd. Delhi.	2008 2 nd Edition
2	Dr.S.P.Rajagopalan	Management Information Systems	Margam Publications, Chennai	2012 2 nd Edition

Pedagogy

- Lecture, Chalk & Talk, PowerPoint Presentation and Assignment

DEPARTMENT OF COMMERCE (BANKING AND INSURANCE)

Skill Based Subject

SEMESTER III

CODE	COURSE TITLE
21BIUS301	FINANCIAL SERVICES

Category	CIA	ESE	L	T	P	Credit
Skill Based	50	50	45	-	-	3

Preamble

To enable the students to know the functioning of Indian financial markets and understand the various services offered in India

Syllabus

Unit I

10 Hrs.

Financial Services: Meaning - Objectives - Characteristics - Constituents - Challenges Facing the Financial Services Sectors - Merchant Banking: Meaning – Functions – SEBI Guidelines.

Unit II

10 Hrs.

Leasing: Concept - Steps - Types – Advantages and Limitations - Depository Services: Introduction - Constitution and Functions of Depository System.

Unit III

8 Hrs.

Mutual funds: Meaning - Types - Functions - Advantages – Regulatory Aspects - Custodial Services: Meaning - Obligation and Responsibilities - Code of Conduct.

Unit IV

8 Hrs.

Venture Capital: Meaning - Features - Advantages - Methods – Stages – Issues of Indian Venture Capital Industry.

Unit V

9 Hrs.

Factoring: Concepts - Significance - Types - Factoring Mechanism – Factoring Vs Bills Discounting - Advantages and Disadvantages - Factoring in India.

Text Books

S. No.	Author	Title of the Book	Publisher	Year and Edition
1	S. Gurusamy	Financial Services	Tata McGraw Hill, New Delhi	2010 2 nd Reprint
2	D. Joseph Anbarasu, V.K.Boominathan, P.Manoharan and G.Gnanaraj	Financial Services	Sultan Chand and Sons, New Delhi	2004 Second Revised and Enlarged Edition

Reference Books

S.No.	Author	Title of the Book	Publisher	Year and Edition
1	B.Santhanam	Banking and Financial System	Margham Publications, Chennai	2004
2	M.Y.Khan	Financial Services	Tata McGraw Hill, New Delhi	2016 8 th Edition Reprint
3	B.Santhanam	Financial Service	Margham Publications, Chennai	2003 1 st Edition
4	Gorden and Natarajan	Financial Markets and Services	Himalaya Publishing House	2020 11 th Edition and Reprint

Web Resources

- <https://www.ilearnlot.com/financial-services-meaning-features-and-scope/55953/>
- <http://www.yourarticlelibrary.com/law/leasing-definitions-types-merits-and-demerits/23516>
- <https://study.com/academy/lesson/what-is-a-mutual-fund-definition-types-advantages-examples.html>
- <https://www.edupristine.com/blog/venture-capital>

Pedagogy

- Lecture, Chalk & Talk, Power Point Presentations, Assignment, Quiz.

Department of Business Administration with CA

Skill Based Subject

SEMESTER - III

CODE	COURSE TITLE
21BAUS301	SKILL BASED SUBJECT – I : EXECUTIVE LEADERSHIP

Category	CIA	ESE	L	T	P	Credit
SBS I	50	50	40	5	-	3

Preamble

To enable the students to acquire knowledge on leadership theories and practices and give insights from the lives of great leaders.

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level
CO1	Define leadership and different leadership styles	K2
CO2	Demonstrate traditional and modern leadership theories	K2
CO3	Acquire personal and interpersonal skills for leading	K4
CO4	Application of leadership in cross cultural environment	K4
CO5	Analyze the approach of outstanding leaders	K4

Mapping with Programme Outcomes

COs	PO1	PO2	PO3	PO4	PO5
CO1	S	M	L	S	S
CO2	S	M	S	S	S
CO3	S	S	M	S	S
CO4	S	S	M	S	M
CO5	S	S	M	S	S

S- Strong; M-Medium; L-Low

Syllabus

UNIT I (7 hrs.)

Introduction to Leadership : Definition – Nature and Characteristics of leadership - Leadership functions – Importance of leadership in management- Leadership styles – Managerial Grid - Leader Vs Manager.

UNIT II (8 hrs.)

Theories of leadership : Traditional theories- Trait approach- Behavioural approach – Situational theory of leadership and contingency model- path goal theory- Modern theory- charismatic and transformational leadership.

UNIT III (10 hrs.)

Executive Leadership Skills: Personal skills – Interpersonal skills –Developing leadership skills – Followership styles - Matching followership style with Leadership style.

UNIT-IV (10 hrs)

Global Leading: Leadership in various countries – Leadership in Cross Cultural Environment – Evaluating Leader – Women and Leadership.

UNIT-V (10 hrs)

Outstanding Leaders – Qualities- Profiles of a few Inspirational Leaders in Business : Jemshedji Tata - Aditya Birla – MukeshAmbani - L N Mittal - N R Narayana Murthy – Indira Nooyi – KiranMazumdar Shaw, etc.

Text Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1	P.SubbaRao P.Vikkaraman	Organisational Behavior	Himalaya Publishing House	Second Edition 2014
2	Shashi K Gupta Rosy Joshi	Organisational Behaviour	Kalyani Publishers	Reprint 2011

Reference Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1	Northouse, Peter G.,	Leadership: Theory and Practice	Sage Publications	First Edition 2017
2	S Balasubramanian	The Art of Business Leadership – Indian Experiences	Sage Publications	Edition 2015
3	Dr.C.B.Gupta	A text book of Organisational Behavior	S.Chand	New Edition 2014

Web Resources

- https://www.ripublication.com/gjmbs_spl/gjmbsv3n3spl_14.pdf
- https://www.sdsmt.edu/uploadedFiles/Content/Campus_Life/Student_Activities/Organizations/Leadership.pdf
- <https://www.centenary.edu/files/resources/leadership-styles-pp.pdf>

Pedagogy

- Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar, Brain Storming, Case study and Role play

Question Paper Pattern

Section	Choice	Marks	Total
A	Open Choice (5 out of 8)	5 * 20 = 100	100

Department of Computer Science with Data Analytics

Skill Based Subject

SEMESTER III

CODE	COURSE TITLE
21DAUSP01	DATA ANALYSIS FOR BIOLOGICAL APPLICATIONS - LAB

Category	CIA	ESE	L	T	P	Credit
Skill Based Subject I	50	50	-	-	45	3

Objective: To solve Biological problems using Data management Tool

1. Create a PIE chart to show the Blood Group of 95 Pharmacy students

Category of Blood Group	A	B	AB	O
Number of Students	49	27	15	04

2. For the data given below, calculate relative frequency and draw a bar chart with category in X axis and Relative frequency in Y axis

Blood Pressure Category	Frequency
Normal	1206
Pre-Hypertension	1452
Stage I Hypertension	653
Stage II Hypertension	222

3. Human Phenotype of 10 people is given in the table. Calculate summary statistics for Height, Weight and Age fields and create a Pivot table for the columns Sex and Hair Color.

Id	Height	Weight	Age	Sex	Hair Color
1	163.20	55.71	23	Female	Black
2	164.80	54.26	24	Male	Brown
3	153.72	52.54	21	Male	Brown
4	168.60	51.12	23	Male	Red
5	158.24	54.61	22	Female	Brown
6	151.25	53.72	24	Male	Black
7	156.25	51.22	22	Female	Red
8	168.72	57.21	24	Female	Red
9	159.67	53.75	21	Male	Brown
10	166.39	58.56	22	Male	Black

4. The size of breeding pairs of penguins is tabulated here. Check if there is correlation between the sizes of the two sexes using scatter graph and both correlation coefficients. (Use both Pearson and Spearman Correlation)

Pair	Female	Male
1	17.1	16.5
2	18.5	17.4
3	19.7	17.3
4	16.2	16.8
5	21.3	19.5
6	19.6	18.3

5. The effect of enzyme concentration on rate of a reaction was investigated with the following results.

Enzyme concentration (mM)	0	0.1	0.2	0.5	0.8	1.0
Rate (arbitrary units)	0	0.8	1.1	3.2	6.6	7.2

Plot a graph of these results, fit a straight line to the data, and find the slope of this line.

Use the slope to predict the rate at an enzyme concentration of 0.7mM.

6. In a test of two drugs 8 patients were given one drug and 8 patients another drug. The number of hours of relief from symptoms was measured with the following results:

Drug A	3.2	1.6	5.7	2.8	5.5	1.2	6.1	2.9
Drug B	3.8	1.0	8.4	3.6	5.0	3.5	7.3	4.8

Find out which drug is better by calculating the mean and 95% confidence limit for each drug, then use an appropriate statistical test to find if it is significantly better than the other drug.

7. The pulse rate of 8 individuals was measured before and after eating a large meal. Find out if there is any significant change in pulse rate after eating.

Pulse rate		
Person	Before Eating	After Eating
1	105	109
2	79	87
3	79	86
4	103	109
5	87	90
6	74	78
7	73	78
8	82	89

8. The drug was administered to 500 people out of a total of 800 included in the sample to test its efficacy against typhoid. The results are shown below. Find the effectiveness of the drug against the disease using chi-square test. Chi-square (χ^2) table value at 5% level is 3.84

Test the Efficiency of Drug	Typhoid	No Typhoid	Total
Administering the drug	200	300	500
Without Administering the drug	280	20	300
Total	480	320	800

DEPARTMENT OF GEOGRAPHY
SKILL BASED SUBJECT -I SYLLABUS

Semester III

CODE	COURSE TITLE
21GEUS301	Basics of Remote Sensing

Category	CIA	ESE	L	T	P	Credit
III	50	50	41	4	-	5

Preamble

This course enable the students to understand about the History and Types of Remote Sensing. To obtain about Arial, Satellite Remote Sensing and Recent Development.

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge
CO1	Explain the basic concepts of remote sensing	K1 &K2
CO2	Illustrate the interaction of EMR with atmosphere	K1&K2
CO3	Categorize the types of aerial remote sensing	K4
CO4	Choose the suitable type of remote sensing based on application	K5
CO5	Outline the application of remote sensing within India	K6

Mapping with Programme Outcomes

CO Number	PO1	PO2	PO3	PO4	PO5
CO1	S	S	S	M	S
CO2	M	M	L	L	S
CO3	S	S	S	M	S
CO4	S	S	S	S	S
CO5	S	S	S	S	S

S - Strong; M - Medium; L - Low

Syllabus

UNIT I (9 Hrs.)

Remote Sensing: –Definition - Types – Historical development – remote sensing development in India - Roleof Department of Space - ISRO

UNIT II (9 Hrs.)

Electromagnetic radiation: Electromagnetic spectrum - EMR interaction with earth and atmosphere –Spectral reflectance curve - Platforms.

UNIT III**(9****Hrs.)**Aerial Remote Sensing: Camera types – analog and digital products - Stereoscopic vision – Elements of interpretation.**UNIT IV****(9 Hrs.)**

Satellite Remote Sensing: Types of satellite – Orbits – Resolution – Sensors – Resolutions and characteristics – LANDSAT – SPOT – IRS.

UNIT V**(9 Hrs.)**

Remote sensing Applications: Natural resource management: land and water – disaster studies

Text Books

Sl. No.	Author Name	Title of the Book	Publisher	Year and Edition
1	Thomas M.Lilles and Ralph E.Kiefer	Remote Sensing and image interpretation	John Wiley & Sons, Inc.	2004

Reference Books

Sl. No.	Author Name	Title of the Book	Publisher	Year and Edition
1	Tien Bui, D., Ngoc Do, A., Bui, H.-B., Hoang, N.-D	Advances and Applications in Geospatial Technology and Earth Resources	World Press, Kolkata	2017

Pedagogy

- Lectures, PPT, SPSS, assignments and project

Department of Computer Science with Artificial Intelligence

Skill Based Subject

SEMESTER III

CODE	COURSE TITLE
22AIUSP01	INTERNET BASICS

Category	CIA	ESE	L	T	P	Credit
SBS I	50	50	-	45	-	3

Objective: Introduce the fundamentals of Internet and use Google Apps for education effectively.

Programs

1. Create an email account in Gmail. Using the account created compose a mail to invite other college students for your college function
2. Open your inbox in the Gmail account created, check the mail received from your peer from other college inviting you for his college fest, and download the invitation. Reply to the mail with a thank you note for the invite and forward the mail to other friends.
3. Create a meeting using Google calendar and share meeting id to the attendees. Transfer the ownership to the Manager once the meeting id is generated.
4. Create your own Google classroom and invite all your friends through email id. Post study material in Google classroom using Google drive.
5. Create and share a folder in Google Drive using 'share a link' option and set the permission to access that folder by your friends only.
6. Create a registration form for your Department Seminar or Conference using Google Forms.
7. Create a meet using Google Calendar and conduct meet with Presentation.
8. Create a Google slides for a topic and share the same with your friends.
9. Create a sheet to illustrate simple mathematical calculations using Google Sheets.
10. Create student's internal mark statement and share the Google sheets via link. Create different types of charts for a range in CIA mark statement using Google Sheets. Create a mark statement in Google Sheets and download it as PDF, .xls and .csv files

Department of Computer Science with Cyber Security

Skill Based Subject

SEMESTER III

CODE	COURSE TITLE
22CYUSP01	CYBER LAW LAB

Category	CIA	ESE	L	T	P	Credit
SBS	50	50	-	45	-	3

Preamble

The main objective is to implement various tools and technologies used in the field of cyber security. This includes on network security, malware analysis, privacy, data protection etc.

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level
CO1	Demonstrate an understanding of cyber law principals and concepts in system	K1
CO2	Develop a malware removal plan using windows defender Anti-virus	K2
CO3	Identify the different types of Wi-Fi encryption and the importance of securing network	K4
CO4	Configure advanced security settings in chrome and Mozilla for safe browsing	K4
CO5	Analyze the phishing emails and websites to identify common characteristics and warning signs	K3

Mapping with Programme Outcomes

COs	PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	S	S
CO2	M	S	S	S	S
CO3	S	M	S	M	S
CO4	S	S	M	S	S
CO5	S	S	M	S	M

S- Strong; M-Medium; L-Low

Practical List

1. Preventing Unauthorized Changes to a System.
2. Remove Malware with Windows Defender Anti-Virus
3. Recovering Deleted Data using Recuva Software
4. Enabling Router Encryption to Protect Wi-Fi
5. Strengthening Default Security Settings of Google Chrome
6. Strengthening Default Security Settings of Mozilla Firefox
7. Identifying Phishing Attacks and Protecting Ourselves
8. Scanning E-Mail Attachments for Malware