



A.S.D.Government Degree College for Women

An Autonomous Institution

Jagannaickpur, Kakinada, Andhra Pradesh-533002

Affiliated to Adikavi Nannaya University, Rajamahendravaram



INTERNAL QUALITY ASSURANCE CELL

2.3.3 Preparation and adherence of Academic Calender and Teaching Plans by the Institution



2021-22

**Minutes of Meeting
Proceeding of the Principal
Academic Calender
Teaching Plans**

The Staff of the College met in the Seminar Hall with Principal Dr. V. Anantha Lakshmi in chair on 08-10-2021 at 3.00 pm to discuss and take resolutions on the following agenda.

Agenda:

1. Welcoming the Staff who joined recently in the college on transfers process.
2. Ground cleaning & Maintenance
3. Staff guiding the students for web options in First Year admission process.
4. Framing of Time Table for the coming Semester.
5. Biometric Attendance of Staff.
6. Upload of OTLP App for classes taken
7. Dasarah Holidays
8. Conduct of Academic Council Meeting on 22-10-21 through Online.
9. Submission of BOS-Resolutions & Dept. Action Plans.
10. Preparation of Academic Calendar and Institutional Plan for the academic year 2021-2022.

Resolutions:

1. Principal welcomed the newly joined staff members who have come on transfer basis.
2. In view of maintaining the campus clean Principal advised the staff to take the responsibility of keeping it clean after the ground is made clear with the grass grown all over.
3. Principal instructed the Admissions Committee members to guide the students in opting to this college in web options.
4. As the I, III & V semester classes are going to commence soon it is resolved to frame the Time Tables by all the Incharges of the Depts.
5. Principal informed the staff to follow Biometric Attendance promptly.
6. It is resolved to upload classes taken in the OTLP app regularly without fail.
7. It is announced that Dasarah Holidays are from 11-10-2021 to 16-10-2021. The College reopens on 18-10-2021.
8. It is informed that the Academic Council meeting is going to be held on 22-10-2021.
9. In view of AC Meeting it is informed to the incharges of the Departments to submit

their BOS-Resolutions and Dept. Action Plans of the Academic Year 2021-22 to Mr. P. Saijotte, Lecturer in English, to the mail id. given.

10. It is resolved to prepare Academic Calendar and Institutional Plan for the academic year 2021-2022 by the committee constituted for it.

V. Ananta Reddy
PRINCIPAL 8/10/21

Staff Present:

Subject:

1. Saijotte	English
2. H. Suvachale.	Home Science
3. G. Anitha	Home Science
4. K. Syamaladevi	Telugu
5. D. Jyotsna	Microbiology
6. K. Venkateswara Rao	Physics
7. Srinaga Sri Tadada	English
8. Anitha	Hindi
9. D. S. S. Devi	Telugu
10. S. S. S. Devi	Telugu
11. K. Yamini	Economics
12. Y. Smita	History
13. G. Parvati Devi	Economics
14. Dr. G. Sankaraya	Commerce
15. N. P. V. L. Devi	Commerce
16. A. Sandhya	Commerce
17. M. Pushpalatha	GIF in Commerce

- | | | |
|----|----------------------|---------------------------------|
| 18 | L. Bhanutiya | History |
| 19 | N. Chacup | Mathematics |
| 20 | Dr. R. Aruna Devi | Sanskrit. |
| 21 | P. V. B. Devi | Political Science |
| 22 | Ch. S. V. Prasad | Commerce |
| 23 | Dr. M. Subrahmanya | Botany |
| 24 | K. N. V. Sri. Eswari | Botany (Dept of Botany) |
| 25 | P. Leena | Chemistry |
| 29 | R. R. D. Srisika | L/C in Commerce |
| 30 | Dr. P. Shanthi | Lect in English |
| 31 | S. Madhavi | Lecturer in Zoology |
| 32 | M. Vasanthakumari | Lectures in Zoology |
| 33 | N. Veera Chaiti | Lect in Aquacultural Technology |
| 34 | N. N. S. Suresh | Lect in Computer Science |
| 35 | Suresh | Lect in Computer Applications |
| 36 | S. Priyadharini | Lect in Chemistry |
| 37 | K. N. B. Kumari | C/L in Commerce |
| 38 | N. Pujara | C/L in Botany |
| 39 | Dr. G. Sowjanya | Lect in Commerce |

**PROCEEDINGS OF THE PRINCIPAL, A.S.D.GOV'T DEGREE COLLEGE FOR
WOMEN [AUTONOMOUS], KAKINADA**

Present: Dr.V.Anantha Lakshmi, M.Sc.,M.Phil.,Ph.D.

Rc.No:Spl/B2/2021

Dated: 07-10-2021

The Principal of A.S.D. Govt. Degree College for Women (Autonomous), Kakinada is pleased to nominate the following members for the preparation of Academic Calendar and Institutional Plan for the academic year 2021-2022

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ORDER:

The following members are nominated for the preparation of Academic Calendar and Institutional Plan for the academic year 2021-2022

- | | | |
|---------------------------|----------------------------------|----------------------------|
| 1. Dr.V.Anantha Lakshmi | Principal | <i>V. Anantha Lakshmi</i> |
| 2. Ms.M.Suvarchala | Vice-Principal | <i>M. Suvarchala</i> |
| 3. Dr. M.Vasantha Lakshmi | IQAC Coordinator | <i>MV Vasantha Lakshmi</i> |
| 4. Dr. K.Lavanya | Academic Coordinator | <i>K. Lavanya</i> |
| 5. Ms.P.Sanjatha | Asst. Academic Coordinator | <i>P. Sanjatha</i> |
| 6. Dr.K.Yamuna | Controller of Examinations (COE) | <i>K. Yamuna</i> |

Copy to the Concerned Members

Copy to Principal's Table



V. Anantha Lakshmi
PRINCIPAL
A.S.D.GOV'T.DEGREE COLLEGE (W)
AUTONOMOUS
KAKINADA

**A.S.D.GOVERNMENT DEGREE COLLEGE FOR
WOMEN(AUTONOMOUS),KAKINADA**
(Affiliated to AdikaviNannaya University – Rajamahendravaram)
TENTATIVE ACADEMIC CALENDER 2021-22 (for UG I Year Classes)

Sl.No.	Particulars	Date
1	Commencement of Class Work for I Year Courses (Semesters I)	22.11.2021
2	1st Internal Examinations	24.02.2022 onwards
3	2nd Internal Examinations	17.03.2022 onwards
4	Last day of Instruction	31.03.2022
5	Last date for submission of attendance particulars	31.03.2022
6	Semester I End Practical Examinations	06.04.2022 onwards
7	I Semester Theory End Examinations	20.04.2022 onwards
8	Summer Break	15 th – 29 th May 2022
9	Commencement of Class Work for II Semester	30.05.2022
10	1st Internal Examinations	05.07.2022
11	2nd Internal Examinations	29.08.2022
12	Last Date for submission of attendance particulars	30.09.2022
13	Last day of Instruction	30.09.2022
14	Semester End Practical Examinations	10.10.2022
15	Semester – II Theory End Examinations	27.10.2022

Note: No Supplementary Examinations under CBCS pattern

V. Ananta Lakshmi
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TENTATIVE ACADEMIC CALENDER 2021-22 (for UG II Year Classes)

Sl.No.	Particulars	Date
1	Commencement of Class Work for II Year Courses (Semesters III & IV)	17.11.2021
2	1st Internal Examinations	20.12.2021 onwards
3	Pongal Vacation	09.01.2022 to 16.01.2022
4	2nd Internal Examinations	27.01.2022 onwards
5	Last day of Instruction	19.03.2022
6	Last date for submission of attendance particulars	21.03.2022
7	Semester III End Practical Examinations	22.03.2022 onwards
8	III Semester Theory End Examinations	30.03.2022 onwards
9	Commencement of Class Work for Semester – IV	18.04.2022
10	1st Internal Examinations	11.05.2022
11	Summer Break	15 th – 29 th May 2022
12	2nd Internal Examinations	23.06.2022
13	Last day of Instruction	22.08.2022
14	Last Date for submission of attendance particulars	22.08.2022
15	IV Semester End Practical Examinations	24.08.2022
16	IV Semester Theory End Examinations	02.09.2022
	Re-opening day for V Semester of Final Year Students /(Academic Year 2022-23)	15.09.2022

Note: No Supplementary Examinations under CBCS pattern

V. Ananta Lakshmi
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Academic Calendar for UG Courses (CBCS Pattern) – 2021-22
Details of Working Days/Holidays – 2021-22

Month	Holiday Description	Number of Holidays	Number of Working Day	Total
Oct-2021	Sundays-24,31 Milad Unn-abi-19	3	11	14
Nov -2021	Sundays-7,14,21,28 Second Saturday-13 Divali-4	6	24	30
Dec – 2021	Sundays-5,12,19,26 Second Saturday-11 Christmas – 24,25	6	24	31
Jan – 2022	Sundays-2,9,23,30 Pongal holidays-10,11,12,13,14,15,16,17 Republic Day – 26	13	18	31
Feb – 2022	Sundays-6,13,20,27 Second Saturday-12	5	23	28
Mar- 2022	Sundays-6,13,20,27 Second Saturday-12 Mahashivaratri -1 Holy-19	6	24	30
Apr – 2022	Sundays-3,10,17,24 Second Saturday-9 Ugadi-02 Babujagjivan Ram's B'day-05 Ambedkar Jayanti -14 Good Friday-15	9	21	30
May- 2022	Sundays-1,8,15,22,29 Second Saturday-14 Ramzan -3 Summer Vacation 18-May-2022 to 31-May-2022	19	12	31
Jun – 2022	Sundays-5,12,19,26 Second Saturday-11	5	25	30
Jul – 2022	Sundays-3,10,17,24,31 Second Saturday-9	6	25	31
Aug-2022	Sundays-7,14,21,28 Second Saturday-13 Muharram-8 Independence Day -15 Raksha bandhan-11 Janmashtami-18	9	21	30
Sep-2022	Sundays-4,11,18,25 Second Saturday-10	5	25	30
Oct-2022	Sundays-2,9,16,23,30 Second Saturday-8 Vijaya Dashami-3,4,5,6,7	11	20	31

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TENTATIVE ACADEMIC CALENDER FOR UG III YEAR CLASSES**

Sl.No.	Particulars	Date
1	Re Opening day for Semester – V	06-09-2021
2	1st Internal Examinations for Semester – V	07.10.2021 to 09.10.2021
3	Dusserah Holidays	12 th -17 th October
4	2nd Internal Examinations for Semester – V	10.11.2021 to 12.11.2021
5	Pre final exams for Semester –V	3.01.2022 to 8.01.2022
6	Pongal Vacations	09.01.2022 to 16.01.2022
7	Last day of Instructions	1 st January 2022
8	Semester End Practical Examinations	17.01.2022
9	Semester End Theory Examinations	24.01.2022 to 31.01.2022
10	Commencement of Class Work for Semester – VI	01.02.2022
11	1st Internal Examinations for Semester – VI	03.03.2022 to 05.03.2022
12	2nd Internal Examinations for Semester – VI	06.04.2022 to 08.04.2022
13	Summer Break	15 th – 29 th May 2022
14	Last day of Instruction for Semester – VI	13 th June
15	Semester End Practical Examinations	14.06.2022 to 20.06.2022
16	Semester End Theory Examinations	22.06.2022 to 28.06.2022

Note: No Supplementary Examinations under CBCS pattern

v. Ananta Lakshmi
PRINCIPAL
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AUTONOMOUS
KAKINADA

English - Annual Academic Plan
Semester –I
2021-2022

Month	Paper=I- A course in communication and soft skills
November 2021	I-Unit Listening Skills <ol style="list-style-type: none"> 1. Importance of Listening 2. Types of Listening 3. Barriers to Listening 4. Effective Listening
December 2021	II-Unit Speaking Skills <ol style="list-style-type: none"> 1. Sounds of English: Vowels and Cosants 2. Accent 3. Intonation III-Unit Grammar <ol style="list-style-type: none"> a. Concord b. Modals c. Tenses d. Articles
January 2022	<ol style="list-style-type: none"> e. Prepositions f. Question Tags g. Sentence Formation h. Error Correction IV-Unit Writing <ol style="list-style-type: none"> 1. Punctuation 2. Spelling 3. Paragraph Writing
February 2022	V-Unit: Soft Skills <ol style="list-style-type: none"> 1. SWOC 2. Attitude 3. Emotional Intelligence
March 2022	<ol style="list-style-type: none"> 4. Telephone Etiquette 5. Interpersonal Skills

**English- Annual Academic Plan
Semester –II
2021-2022**

Month	Paper-II Reading and Writing Skills	Business Communication
May 2022	Introduction to Syllabus and Model Question Papers	Introduction to course and Objectives
June 2022	I. UNIT Prose : 1. How to Avoid Foolish Opinions Bertrand Russell Skills : 2. Vocabulary: Conversion of Words 3. One Word Substitutes 4. Collocations	UNIT I: Introduction and Importance of communication an overview - meaning and process of communication - organizational communication and its barriers.
July 2022	II. UNIT Prose : 1. The Doll's House Katherine Mansfield Poetry : 2. Ode to the West Wind P B Shelley Non-Detailed Text : 3. Florence Nightingale Abrar Moshin Skills 4. Skimming and Scanning	UNIT II: Types of Business Communications – Categories, methods and formats – Business vocabulary - Business idioms and collocations
August 2022	III. UNIT Prose : 1. The Night Train at Deoli Ruskin Bond Poetry 2. Upagupta Rabindranath Tagore Skills : 3. Reading Comprehension 4. Note Making/Taking	UNIT II: Organisational Hierarchy - Various levels of communication in an organization – Top-down, Bottom-up and Horizontal-Business reports, presentations– Online communications.
September 2022	IV. UNIT Poetry : 1. Coromandel Fishers Sarojini Naidu Skills : 2. Expansion of Ideas 3. Notices, Agendas and Minutes V. UNIT Non-Detailed Text : 1. An Astrologer's Day- R K Narayan Skills : 2. Curriculum Vitae and Resume : 3. Letters : 4. E-Correspondence	. UNIT III: Receiving business communications - Filing and processing -Sending replies. Routine cycle of communications – Writing Communications - Characteristics of a good business communication Preparation of business meeting agenda – agenda notes - minutes –circulation of minutes – Presentations of communication using various methods

**English- Annual Academic Plan
Semester -III
2021-2022**

Month	General English Paper -III
November 2021	Unit -I Speech :1.Tryist with Destiny Jawaharlal Nehru Skills: 2.Greetings 3.Introductions
December 2021	Unit - III Speech : 1. Yes, We Can Barack Obama Interview : 2. A Leader Should Know How to Manage Failure Dr.A.P.J.Abdul Kalam/ India Knowledge at Wharton Skills : 3. Request
January 2022	Unit - III Interview : 1. Nelson Mandela's Interview With Larry King Skills : 2. Asking and Giving Information : 3. Agreeing and Disagreeing
February 2022	Unit - IV Interview : 1. JRD Tata's Interview With T.N.Ninan Skills : 2. Dialogue Building : 3. Giving Instructions/Directions
March 2022	Unit - V Speech : 1. You've Got to Find What You Love Steve Jobs Skills : 2. Debates : 3. Descriptions : 4. Role Play

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A.S.D.GOV.T.DEGREE COLLEGE (W)
AUTONOMOUS
KAKINADA**

ASD GOVERNMENT COLLEGE FOR WOMEN (A) KAKINADA
DEPARTMENT OF TELUGU
ACADEMIC PLAN 2021-22
I SEMESTER GENERAL & SPECIAL TELUGU

MONTH	GENERAL TELUGU PRACHEENA TELUGU KAVITVAM	SPECIAL TELUGU PRACHEENA KAVITHA PARICHAYAM
JANUARY	RAJANEETHI	BEJJA MAHADEVI KATHA
FEBRUARY	RAJANEETHI & DAKSHAYAJNAM VYAKARANAM	NADEEJANGHOPAKHYANAM
MARCH	DHOUMYA DHARMOPADESAM VYAKARANAM	PRAHLAADA CHARITRAM
APRIL	PALANATI BEBBULI VYAKARANAM	VAROODHINEEPRAVARULU
MAY	SEETHAARAVANA SAMVADAM VYAKARANAM	ASHOKAVANAMLOJANAKI

22-2
In Charge
Department of Telugu

V. N. K.
Principal
A.S.D. GOVT. DEGREE COLLEGE (W.)
AUTONOMOUS
KAKINADA

ASD GOVERNMENT COLLEGE FOR WOMEN (A)
DEPARTMENT OF TELUGU
ACADEMIC PLAN 2021-22
VI SEMESTER SPECIAL TELUGU CLUSTER PAPERS

MONTH	JANAPADA SAHITYAM	CLUSTER-I JOURNALISM	CLUSTER-II ADHUNIKA TELUGU NIRMANAM	CLUSTER-III ANUVADAM
APRIL	JANAPADA VIJNANA VARGEEKARANA- PRAYOJANALU	COMMUNICATION	ADHUNIKA TELUGU BHASHA	ANUVADAM
MAY	JANAPADA VIJNANA VARGEEKARANA- PRAYOJANALU	JOURNALISM	ADHUNIKA TELUGU BHASHA, KRIYA BHEDALU	ANUVADAM, ANUVADAM- RAKALU
JUNE	JANAPADA GEYALU- LAKSHANALU	EDITOR- SUB EDITOR	TELUGU VAKYA NIRMANAM	ANUVADA SAMASYALU
JULY	JANAPADA ROOPAKALU	NEWS FEATURES	TELUGU VAKYA NIRMANAM	ADHIKARA BHASHAGA TELUGU
AUGUST	JANAPADA SANGEETHAKARULU	TELUGU PATRIKALA CHARITRA	TELUGU BHASHA ADHUNIKARANA	ADHIKARA BHASHAGA TELUGU

ASD GOVERNMENT COLLEGE FOR WOMEN (A)
DEPARTMENT OF TELUGU
ACADEMIC PLAN 2021-22
II SEMESTER GENERAL & SPECIAL TELUGU

MONTH	GENERAL TELUGU AADHUNIKA KAVITVAM	SPECIAL TELUGU AADHUNIKA KAVITHA PARICHAYAM
JUNE	AADHUNIKA KAVITVAM PARICHAYAM- KONDAVEEDU- MATRUSANGEETHAM	JANMABHOOMI GEYAM
JULY	TATAKO NOOLUPOGU TELUGUKATHA PARICHAYAM-BHAYAM, SWEDAM KHAREEDUKATHALU	VEMANA NEETHI
AUGUST	TELUGU NAVALA PARICHAYAM RATHACHAKRALU NAVALA, SAMEEKSHA VYASAM	GABBILAM-PADYA KAVYAM
SEPTEMBER	TELUGU NATAKA PARICHAYAM YAKSHAGANAM NATAKA, SAMEEKSHAVYASAM	BHIKSHUVARSIYASEE- KAVITHA KHANDIKA
OCTOBER	TELUGU SAHITYA VIMARSA- PARICHAYAM, VIMARSA SWAROOPASWABHAVALU, UTTAMA VIMARSAKUDU- LAKSHANALU	AMRUTHAM KURISINARAATRI - KAVITHA KHANDIKA

ASD GOVERNMENT COLLEGE FOR WOMEN (A), KAKINADA
DEPARTMENT OF TELUGU
ACADEMIC PLAN 2021-22
V SEMESTER SPECIAL TELUGU

MONTH	SPECIAL TELUGU PAPER-V TELUGU BHASHA CHARITRA	SPECIAL TELUGU PAPER-VI BALAVYAKARANAM- CHANDASSU
JUNE	ANDHRAMU- TELUGU- TENUGU PUTTUPOORVOTTARALU	BALA VYAKARANAM – SANJNA PARICHCHEDAM
JULY	BHARATHA DESAMLONI BHASHA KUTUMBALU, DRAVIDA BHASHALU	BALA VYAKARANAM – SANDHI PARICHCHEDAM
AUGUST	MANDALIKALU	CHANDASSU
SEPTEMBER	DWANI, ARTHA PARINAMAM	YATHULU
OCTOBER	ANYA DESYALU, ADANA PRADANALU	PRAASALU

ASD GOVERNMENT COLLEGE FOR WOMEN (A)
DEPARTMENT OF TELUGU
ACADEMIC PLAN 2021-22
III SEMESTER GENERAL & SPECIAL TELUGU

MONTH	GENERAL TELUG PRACHEENA TELUGU KAVITVAM	SPECIAL TELUGU PRACHEENA KAVITHA PARICHAYAM
JUNE	VYAKTHEEKARANA NAIPUNYALU	PRAGNANNAYA YUGAM
JULY	VYAKTHEEKARANANAIPUNYAALU & SRUJANATMAKA RACHANA	PRAGNANNAYA YUGAM & ANUVADA YUGAM
AUGUST	ANUVADA RACHANA	KAVYA-PURANA YUGAM
SEPTEMBER	MADHYAMALAKU RACHANA-I	PRABANDHA YUGAM
OCTOBER	MADHYAMALAKU RACHANA-II	DAKSHINANDHRA YUGAM

ASD GOVERNMENT COLLEGE FOR WOMEN (A)
DEPARTMENT OF TELUGU
ACADEMIC PLAN 2021-22
IV SEMESTER SPECIAL TELUGU-AADHUNIKA TELUGU SAHITYA CHARITRA

MONTH	NAME OF THE TOPIC
APRIL	AADHUNIKA KAVITVAM-AAVIRBHAVA VIKASALU
MAY	BHAVA KAVITVAM
JUNE	ABHYUDAYA, VIPLAVA KAVITVALU
JULY	VACHANA KAVITVAM
AUGUST	SAMAKALEENA AADHUNIKA KAVITHAA DHORANULU

Jy - 21
In-Charge
Department of Telugu

V. S. S. S.
Principal
GOVT. DEGREE COLLEGE (W)
AUTONOMOUS
KAKINADA

ASD GOVERNMENT COLLEGE FOR WOMEN (A), KAKINADA

DEPARTMENT OF SANSKRIT

ACADEMIC PLAN 2021-22

I SEMESTER ACADEMIC PLAN

MONTH	PAPER-I	UG – Life Skill Course (2021-22) Human Values and Professional ethics
NOVEMBER	BRIDGE COURSE	Introduction, Definition, Importance, Process & Classifications of Value Education
DECEMBER	1. आर्यपादुकाभिषेकः I 2. पु.लिन्द शब्दाःI 3. स्त्रि लिन्द शब्दाः I 4. धातु :रूपाणि I	Classification Of Value Education: Understanding Personal Values, Social Values, Moral Values & Spiritual Values
JANUARY	1. यक्षपत्रः I 2. श्लोक भगम् I 3. शब्ध परिचयम् I	Harmony In the Family – Understanding Values in Human Relationships.
FEBRUARY	1.विवेकानन्दा सूक्तिःI 2. मेण्वाड् राज्यस्थापनम्I 3. हितोओपदेशःI	Professional Ethics in Education: Understanding about Professional Integrity, Respect & Equality, Privacy, Building Trusting Relationships.
MARCH	1.शूद्रक वीरवर कथा 2. सन्दत्त :I 3.विग्रहक वाक्याणिI	Need for Value Education in the Present Day Professional Oriented Education.

ASD GOVERNMENT COLLEGE FOR WOMEN (A).KAKINADA

DEPARTMENT OF SANSKRIT

ACADEMIC PLAN 2021-22

II SEMESTER ACADEMIC PLAN

MONTH	PAPER-II:	LIFE SKILL COURSE - INDIAN CULTURE AND SCIENCE
1. JUNE	1. इन्दुमती स्वयम्बरम् I 2. पु.लिन्द शब्दाः I 3. बुद्धचरितम् I 3. स्त्रि लिन्द शब्दाः I	Unity in Diversity in India - Coexistence of Various Religions since ancient times Hinduism, Buddhism, Jainism, Islam, and Christianity.
JULY	1. गंडावतरणम् I 2. श्लोक भगम् I 3. व्याकरण परिचयम् I	The Bhakti and Sufi Movements, Achievements in Literature, Cultural diversity, Importance of Seasonal Festivals.
AUGUST	1. मोहपनोदा 2. बुद्धचरितम् I 3. अवन्तिसुन्दरि कथ I	Social Reforms and Modern Society- Raja Rama Mohan Roy, Dayananda Saraswathi, Swamy Vivekananda etc.
SEPTEMBER	1. दरिद्रछारुदत्त चरितम् I 2. शब्ध परिचयम् I 3. धात :रूपाणि I	Science and Technology – Online Education, Developments in Industry, Agriculture, Medicine etc.

ASD GOVERNMENT COLLEGE FOR WOMEN (A), KAKINADA

DEPARTMENT OF SANSKRIT

ACADEMIC PLAN 2021-22

III SEMESTER ACADEMIC PLAN

NOVEMBER	1.रूपकविभागम्। 2. मद्यम व्ययोगम्	
DECEMBER	1. आधुनिक रूपक विभागम् संकल्पभलम्। 2. उपनिषद् विभागम् "दा"कार कथ	
JANUARY	1.सिष्यानुशसनम्। 2. अलङ्कार विभागम्	
FEBRUARY	1.व्याकरण विभागम्। 2. शस्त्रकार विभागम्	
MARCH	1.श्रद्धात्रय विभागयोगम्- उपनिषद् विभागम् 2.त्रिषुलिङ्गेषु सर्व नामशब्दाणि	

Am c.
10/02/2022

V. Ananta Lakshmi

PRINCIPAL
A.S.D.GOVT.DEGREE COLLEGE,
AUTONOMOUS
KAKINADA

ASD GOVERNMENT COLLEGE FOR WOMEN (A)

DEPARTMENT OF HINDI

ACADEMIC PLAN 2021-22

I SEMESTER ACADEMIC PLAN

MONTH	PAPER-I	UG – Life Skill Course (2021-22) Human Values and Professional ethics
NOVEMBER	BRIDGE COURSE	Introduction, Definition, Importance, Process & Classifications of Value Education
DECEMBER	1.भारतीय सहित्य की एकता 2.आत्म निर्भरता 3. लिंग 4. कार्यालयीन शब्दावली	Classification Of Value Education: Understanding Personal Values, Social Values, Moral Values & Spiritual Values
JANUARY	1.अंदर की पवित्रता 2. ठकुर का कुँ आ 3. वचन	Harmony In the Family – Understanding Values in Human Relationships.
FEBUARY	1.वापसी 2. सदाचार की ताबीज 3.विलोम शब्द 4. छुट्टी पत्र	Professional Ethics in Education: Understanding about Professional Integrity, Respect & Equality, Privacy, Building Trusting Relationships.
MARCH	1.पत्र लेखन -पिताजी के पत्र 2.काल -वर्तमान काल ,भूथ काल ,भविशष्ट् 3.पुस्तक विक्रेता के नाम पत्र 4.कारक चिह्न	Need for Value Education in the Present Day Professional Oriented Education.

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DEPARTMENT OF HINDI

ACADEMIC PLAN 2021-22

II SEMESTER ACADEMIC PLAN

MONTH	PAPER-II:	LIFE SKILL COURSE - INDIAN CULTURE AND SCIENCE
1. JUNE	1.भारत मे सन्स्कृति संगम – राम्धारि सिम्ह दिन्कर. 2.समय पर मिल्नेवाला - हरिशन्कर पर्साई. 3. कारक चिह्न	Unity in Diversity in India - Coexistence of Various Religions since ancient times Hinduism, Buddhism, Jainism, Islam, and Christianity.
JULY	1. हार की जीत – सुदर्शन 2. पुरष्कार - जयशन्कर प्रसाद 3. हिन्दी-अंग्रेजी कार्यालयीन शब्दावली	The Bhakti and Sufi Movements, Achievements in Literature, Cultural diversity, Importance of Seasonal Festivals.
AUGUST	1. HIV AIDS 2. सेवा - ममता कालिया 3. हिन्दी अंग्रेजी पदनाम	Social Reforms and Modern Society- Raja Rama Mohan Roy, Dayananda Saraswathi, Swamy Vivekananda etc.
SEPTEMBER	1. पत्र लेखन - आवेदन पत्र 2. शिकायती पत्र 3. काल	Science and Technology – Online Education, Developments in Industry, Agriculture, Medicine etc.

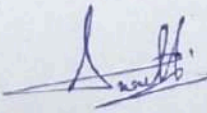
ASD GOVERNMENT COLLEGE FOR WOMEN (A)


DEPARTMENT OF HINDI

ACADEMIC PLAN 2021-22

III SEMESTER ACADEMIC PLAN

NOVEMBER	1.व्याकरण कारक चिह्न काल 2.समाज में नारी की भूमिका	
DECEMBER	1.साखी-दोहे-कबीरदास 2.बालवर्णन,विनय-सूरदास 3.परिपत्र 4.विश्व भाषा के रूप में हिंदी	
JANUARY	1.आगे बढो ऊँचे-चढो मैथिली शरण गुप्त 2. चरण चले ईमान चले ईमान चले-माखन लाल चतुर्वेदी। 3. कार्यालयीन झापन 4. मेरा प्रिय कवि	
FEBRUARY	1.हिंदी साहित्य का इतिहास -काल विभाजन 2. भक्ति काल की शाखायँ और विशेषतएँ। 3.अधिसूचना 4.अनुवाद	
MARCH	1. भक्ति काल में जानाश्रयी शाखा-कबीर 2. भक्ति काल में जानाश्रयी शाखा जायसो 3. अनुवाद अंगेजी से हिंदी 4. भारत की वर्तमान परिस्तितियाँ	


Lecturer in charge
Department of Hindi


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A.S.D.GOV.T. DEGREE COLLEGE FOR WOMEN (AUTONOMOUS)
DEPARTMENT OF MATHEMATICS
B.Sc.(M.P.C&M.P.Cs) ACADEMIC PLAN 2021-2022
SEMESTER - V
PAPER –V – RING THEORY AND VECTOR CALCULUS

MONTH	NAME OF THE TOPIC
SEPTEMBER 2021	Definition of ring , Field and basic properties
OCTOBER 2021	Fundamental theorem ,maximal ideals, and prime ideals
NOVEMBER 2021	Vector definition ,Gradient, Divergence ,Curl operators
	Problems solving on this operators
DECEMBER 2021	Line and surface integrals problems
	Volume integral problems
JANUARY 2022	Gauss,stokes and Green's theorems abd problems

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DEPARTMENT OF MATHEMATICS
B.Sc.(M.P.Cs)ACADEMIC PLAN 2021-2022
SEMESTER - V
PAPER-VI- LINEAR ALGEBRA

MONTH	NAME OF THE TOPIC
SEPTEMBER 2021	Vector space definitions Linear span,linear independent, dependent of vectors
SEPTEMBER 2021	Basis of vectors ,basis of extension theorems
OCTOBER 2021	Linear transformations ,Properties
NOVEMBER 2021	Rank and Nullity of linear transformations
	Characteristic values and vectors Cayley Hamilton theorem
DECEMBER 2021	Inner product space orthonormal set , Gram-schmidt orthogonalisation process
	Vector space definitions Linear span,linear independent, dependent of vectors
JANUARY 2022	Basis of vectors ,basis of extension theorems

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B.Sc.(M.P.C&M.P.Cs) ACADEMIC PLAN 2021-2022
SEMESTER - I
PAPER – I- Differential Equations

MONTH	NAME OF THE TOPIC
NOVEMBER 2021	Differential Equations of first order and first degree
DECEMBER 2021	Differential Equations of first order but not first degree Equations solvable for p,y,x.Clairaut,s Equation
JANUARY 2022	Higher order linear differential equation-I Solution of homogeneous & non homogeneous Equations
FEBRUARY 2022	Higher order linear differential equation-II Solution of non homogeneous equations with constant coefficients
MARCH 2022	Higher order linear differential equation-III Method of variation of parameters

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DEPARTMENT OF MATHEMATICS
B.Sc.(MPC&MPCS)ACADEMIC PLAN 2021-2022
SEMESTER – III
PAPER- III- ABSTRACT ALGEBRA

MONTH	NAME OF THE TOPIC
NOVEMBER 2021	Introduction to Binary Operation and Group definition
DECEMBER 2021	Sub groups –Complex definition ,theorems Product, union, Intersection of two subgroups , co-sets Lagrange’s theorem
JANUARY 2022	Definition of Normal subgroups , intersection of two normal subgroups Index 2 is a normal sub group –quotient group criteria for the existence of a quotient group
FEBRUARY 2022	Definition of homomorphism –properties of homomorphism-isomorphism Kernel of a homomorphism-fundamental theorem on homomorphism and permutations
MARCH 2022	<u>Rings definition Boolean rings division ring and fields characteristic of a field sub ring</u>

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DEPARTMENT OF MATHEMATICS**

B.Sc ACADEMIC PLAN 2021-2022

SEMESTER - II

THREE DIMENTIONAL ANALYTICAL SOLID GEOMETRY

MONTH	NAME OF THE TOPIC
JUNE 2022	Equation of plane through the given points, bisectors of angles between two planes, orthogonal projection on plane
JULY 2022	Equation of a line angle between a line and a plane The shortest distance between two lines ,length of the perpendicular from a given points to a given line
AUGUST 2022	Definition and equation of the sphere equation of the sphere through four given points Equation of circle sphere through a given circle tangent plane ,plane of contact, polar plane, conjugate points & planes
SEPTEMBER 2022	Definition of sphere and cone ,enveloping cone Reciprocal of a cone

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DEPARTMENT OF MATHEMATICS**

B.Sc ACADEMIC PLAN 2021-2022

SEMESTER - IV

REAL ANALYSIS

MONTH	NAME OF THE TOPIC
JUNE 2022	Introduction of real numbers Monotone sequence Cauchy,s general principal of convergence theorem
JULY 2022	Cauchy,s general principal of convergence for series tests P-test, Cauchy,s root test,D-Alemberts test
AUGUST 2022	Boundedness of a function, Limits of a functions Infinite limits problems
SEPTEMBER 2022	Differentiation and mean value theorems Riemann integration

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DEPARTMENT OF MATHEMATICS
B.Sc ACADEMIC PLAN 2021-2022
SEMESTER - IV
LINEAR ALGEBRA

MONTH	NAME OF THE TOPIC
JUNE 2022	Vector space definitions Linear span, linear independent, dependent of vectors
JULY 2022	Basis of vectors ,basis of extension theorems Linear transformations ,Properties
AUGUST 2022	Rank and Nullity of linear transformations Characteristic values and vectors Cayley Hamilton theorem
SEPTEMBER 2022	Inner product space orthonormal set , Gram-schmidt orthogonalisation process

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DEPARTMENT OF MATHEMATICS
B.Sc.(M.P.C,M.P.Cs)ACADEMIC PLAN 2021-2022
SEMESTER – VI
PAPER- VII-NUMERICAL ANALYSIS

MONTH	NAME OF THE TOPIC
FEBRUARY 2022	Errors and their analysis, General error formula
MARCH 2022	Bisection , iteration, Newton-Raphson methods Generalized Newton Raphson method, Muller's method
APRIL 2022	Forward , Backward , central tables problems Symbolic relations problems
MAY 2022	Gauss's , Stirling's formulas
JUNE 2022	Error in Lagrange's interpolation formula


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 B.Sc(M.P.C,M.P.Cs) ACADEMIC PLAN 2021-2022
 SEMESTER - VI
 ADVANCED NUMERICAL ANALYSIS

MONTH	NAME OF THE TOPIC
FEBRUARY 2022	Fitting of a straight line problems
MARCH 2022	Derivatives using Newtons Forward ,Backward
APRIL 2022	General quadrature formula ,Trapizoidal rule
	Simpson's 1/3 and 3/8 rules
MAY 2022	Gauss Jordan , elimination ,siedel method
JUNE 2022	Taylor,s series , Picards method ,Runge – Kutta methods

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 SEMESTER - VI
 SPECIAL FUNCTINS

MONTH	NAME OF THE TOPIC
FEBRUARY 2022	Hermite polynomial
MARCH 2022	Laguerre polynomials
APRIL 2022	Legender's Equation
	Recurrence formula for Legender's Equation
MAY 2022	Bessel's equation
JUNE 2022	Beta & Gamma functions

*K. Venkatesh
lect in charge*

V. Aravind

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A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A)KAKINADA

DEPARTMENT OF PHYSICS

ANNUAL ACADEMIC PLAN 2021-22

IB.Sc.,-Physics-I/ISemesterEnd(W.E.F.2020-

Mechanics, Waves and Oscillations

MONTH	TOPIC
November 2021	UNIT-I: 1. Mechanics of Particles Review of Newton's Laws of Motion, Motion of variable mass system, Motion of a rocket, Multistage rocket, Concept of impact parameter, scattering cross-section, Rutherford scattering-Derivation. 2. Mechanics of Rigid bodies Rigid body, rotational kinematic relations, Equation of motion for a rotating body, Angular momentum and Moment of inertia tensor, Euler equations, Precession of a spinning top, Gyroscope, Precession of the equinoxes
December 2021	Unit-II: 3. Motion in a Central Force Field Central forces, definition and examples, characteristics of central forces, conservative nature of central forces, Equation of motion under a central force, Kepler's laws of planetary motion-Proofs, Motion of satellites, Basic idea of Global Positioning System (GPS), weightlessness, Physiological effects of astronauts
January 2022	4. Relativistic Mechanics Introduction to relativity, Frames of reference, Galilean transformations, absolute frames, Michelson-Morley experiment, negative result,

	<p>Postulates of Special theory of relativity, Lorentz transformation, time dilation, length contraction, variation of mass with velocity, Einstein's mass-energy relation</p>
	<p>Unit-IV:</p> <p>Undamped, Damped and Forced oscillations: (07 hrs) Simple harmonic oscillator and solution of the differential equation, Damped harmonic oscillator, Forced harmonic oscillator – Their differential equations and solutions, Resonance, Logarithmic decrement, Relaxation time and Quality factor</p>
<p>February 2022</p>	<p>5. Coupled oscillations:</p> <p>Coupled oscillators-Introduction, Two coupled oscillators, Normal coordinates and Normal modes</p>
<p>March 2022</p>	<p>Unit-V:</p> <p>6. Vibrating Strings:</p> <p>Transverse wave propagation along a stretched string, General solution of wave equation and its significance, Modes of vibration of stretched string clamped at ends, Overtones and Harmonics..</p> <p>7. Ultrasonics:</p> <p>Ultrasonics, General Properties of ultrasonic waves, Production of ultrasonics by piezoelectric and magnetostriction methods, detection of ultrasonics, Applications of ultrasonic waves, SONAR</p>

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Course II: Wave Optics

MONTH	TOPIC
June 2022	<p>UNIT-I Interference of light: (12hrs)Introduction, Conditions for interference of light, Interference of light by division of wave front and amplitude,Phase change on reflection- Stokes' treatment, Lloyd's single mirror,Interference in thin films: Plane parallel and Determination of wavelength of monochromatic light, Michelson interferometer and determination of wavelength. Determination of wavelength of monochromatic light, Michelson interferometer and determination of wavelength</p>
July 2022	<p>UNIT-II Diffraction of light:(12hrs)</p> <p>Introduction, Types of diffraction: Fresnel and Fraunhofer diffractions, Distinction between Fresnel and Fraunhofer diffraction,Fraunhofer diffraction at a single slit, Plane diffraction grating,Determination of wavelength of light using diffraction grating, Resolving power of grating, Fresnel's half period zones, Explanation of rectilinear propagation of light, Zone plate, comparison of zone plate with convex lens.</p> <p>UNIT-III Polarisation of light:(12hrs)</p> <p>Polarized light: Methods of production of plane polarized light, Double refraction, Brewster's law, Malus law, Nicol prism, Nicol prism as polarizer and analyzer, Quarter wave plate, Half wave plate, Plane, Circularly and Elliptically polarized light-Production and</p>

	<p>detection, Optical activity, Laurent's half shade polarimeter: determination of specific rotation,</p>
August 2022	<p>UNIT-IV Aberrations and Fibre Optics: two lenses (i) in contact and (ii) separated by a distance. Fibre optics: Introduction to Fibers, different types of fibers, rays and modes in an optical fiber, Principles of fiber communication (qualitative treatment only), Advantages of fiber optic communication.</p>
September 2022	<p>UNIT-V Lasers and Holography:(12hrs) Lasers: Introduction, Spontaneous emission, stimulated emission, Population Inversion, Laser principle, Einstein coefficients, Types of lasers-He-Ne laser, Ruby laser, Applications of lasers; Holography: Basic principle of holography, Applications of holography.</p>

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ANNUAL ACADEMIC PLAN 2021-2022

III Semester–Paper–III

II Year B.Sc.-Physics: III Semester

Course-III: HEAT AND

THERMODYNAMICS

MONTH	TOPIC
NOVEMBER 2021	<p>UNIT-I: Kinetic Theory of gases:</p> <p>Kinetic Theory of gases-Introduction, Maxwell's law of distribution of molecular velocities (qualitative treatment only) and its experimental verification, Mean free path, Degrees of freedom, Principle of equipartition of energy (Qualitative ideas only), Transport phenomenon in ideal gases: viscosity, Thermal conductivity and diffusion of gases.</p> <p>UNIT-II: Thermodynamics:</p> <p>Introduction- Isothermal and Adiabatic processes, Reversible and irreversible processes, Carnot's engine and its efficiency, Carnot's theorem, Thermodynamic scale of temperature</p>
DECEMBER 2021	<p>and its identity with perfect gas scale, Second law of thermodynamics: Kelvin's and Clausius statements, Principle of refrigeration, Entropy, Physical significance, Change in entropy in reversible and irreversible processes; Entropy and disorder-Entropy of Universe; Temperature-Entropy (T-S) diagram and its uses ; change of entropy when ice changes into steam.</p>

<p>JANUAR Y2022</p>	<p>UNIT-III: Thermodynamic Potentials and Maxwell's equations: Applications to (i) Clausius-Clayperon's equation (ii) Value of CP-CV (iii) Value of CP/CV (iv) Joule-Kelvin coefficient for ideal gases.</p> <p>UNIT-IV: Low temperature Physics: Liquefaction of air by Linde's method, Production of low temperatures by adiabatic demagnetization (qualitative), Practical applications of substancesat low temperatures.</p>
<p>FEBRUA RY2022</p>	<p>UNIT-V: Quantum theory of radiation: radiation-Derivation, Deduction of Wein's law and Rayleigh-Jean's law from Planck's law, Solar constant and its determination using Angstrompyroheliometer, Estimation of surface temperature of Sun.</p>

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DEPARTMENT OF PHYSICS

ANNUAL ACADEMIC PLAN 2021-2022

IIB.Sc.PHYSICS IV Semester

PAPER-IV: Course-IV: ELECTRICITY, MAGNETISM AND ELECTRONICS

MONTH	TOPIC
APRIL 2022	<p>UNIT-I</p> <p>1. Electrostatics: (6hrs) Gauss's law-Statement and its proof, Electric field intensity due to (i) uniformly charged solid sphere and (ii) an infinite conducting sheet of charge, Deduction of Coulomb's law from Gauss law, Electrical potential-Equipotential surfaces, Potential due to a (i) dipole (ii) uniformly charged sphere</p> <p>2. Dielectrics: Dielectrics-Polar and Non-polar dielectrics- Effect of electric field on dielectrics, Dielectric strength, Capacitance of a parallel plate condenser with dielectric slab between the plates, Electric displacement D, electric polarization P, Relation between D, E and P, Dielectric constant and electric susceptibility.</p>

<p>MAY2022</p>	<p>UNIT-II</p> <p>1.Magnetostatics: Biot-Savart’s law and its applications: (i) circular loop and (ii) solenoid, Divergence and curl of magnetic field, Ampere’s Circuital Law and its application to Solenoid,Hall effect, determination of Hall coefficient and applications.</p> <p>2.Electromagnetic Induction: Faraday’s laws of electromagnetic induction, Lenz’s law,Self induction and Mutual induction, Self inductance of a long solenoid, Mutual inductance of two coils, Energy stored in magnetic field, Eddy currents and Electromagnetic damping</p>
<p>JUNE2022</p>	<p>UNIT-III</p> <p>1.Alternating currents: 3.Alternating current - Relation between current and voltage in LR and CR circuits,Phasor and Vector diagrams, LCR series and parallel resonant circui</p> <p>4.Electromagnetic waves-Maxwell’s equations: (6 hrs) Idea of displacement current,Maxwell’s equations-Derivation, Maxwell’s wave equation (withderivation), Transverse nature of electromagnetic waves, Poynting theorem (Statement andproof)</p> <p>.</p>

<p>JULY2022</p>	<p>UNIT-IV</p> <p>1. Basic Electronic devices: (12 hrs)</p> <p>PN junction diode, Zener diode and Light Emitting Diode (LED) and their I-V characteristics, Zener diode as a regulator- Transistors and its operation, CB, CE and CC configurations, Input and output characteristics of a transistor in CE mode, Relation between alpha, beta and gamma; Hybrid parameters, Determination of hybrid parameters from transistor characteristics; Transistor as an amplifier.</p>
<p>AUGUST2022</p>	<p>UNIT-V:</p> <p>1. Digital Electronics: (12 hrs)</p> <p>Number systems, Conversion of binary to decimal system and vice versa, Binary addition & Binary subtraction (1's and 2's complement methods), Laws of Boolean algebra, DeMorgan's laws-Statements and Proofs, Basic logic gates, NAND and NOR as universal gates, Exclusive-OR gate, Half adder and Full adder circuits.</p>

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ANNUALACADEMICPLAN2021-2022

IIB.Sc.PHYSICS IV Semester

PAPER–IV: Course-V: Modern Physics

MONTH	TOPIC
APRIL2022	<p>UNIT-I :</p> <p>1. Atomic and Molecular Physics:(12 hrs)</p> <p>Vector atom model and Stern-Gerlach experiment, Quantum numbers associated with it, Angular momentum of the atom, Coupling schemes, Spectral terms and spectral notations, Selection rules, Intensity rules, Fine structure of Sodium D-lines, Zeeman effect, Experimental arrangement to study Zeeman effect; Raman effect, Characteristics of Raman effect,</p>

<p>MAY2022</p>	<p>Experimental arrangement to study Raman effect, Quantum theory of Raman effect, Applications of Raman effect.</p> <p>UNIT-II:</p> <p>1. Matter waves&Uncertainty Principle:(12 hrs) Matter waves, de Broglie’s hypothesis, Wave length of matter waves, Properties of matter waves, Davisson and Germer’s experiment, Phase and group velocities, Heisenberg’s uncertainty principle for position and momentum& energy and time, Illustration of uncertainty principle using diffraction of beam of electrons (Diffraction by a single slit)and photons(Gamma ray microscope),Bohr’s principle of complementarity</p>
<p>JUNE2022</p>	<p>2. Quantum (Wave) Mechanics:(12 hrs)</p> <p>Basic postulates of quantum mechanics, Schrodinger time independent and time dependent wave equations-Derivations, Physical interpretation of wave function, Eigen functions, Eigen values, Application of Schrodinger wave equation to (i) one dimensional potential box of infinite height(Infinite Potential Well) and (ii) one dimensional harmonic oscillator</p> <p>UNIT-IV:</p> <p>3. Nuclear Physics:(12 hrs)</p> <p><i>Nuclear Structure:</i>General Properties of Nuclei, Mass defect, Binding energy; <i>Nuclear forces:</i> Characteristics of nuclear forces- Yukawa’s meson theory; <i>Nuclear Models:</i> Liquid drop model, The Shell model, Magic numbers; <i>Nuclear Radiation detectors:</i> G.M. Counter, Cloud chamber, Solid State detector; <i>Elementary Particles:</i> Elementary Particles and their classification</p>
<p>JULY2022</p>	<p>4. Nano materials:(7hrs)</p> <p>Nanomaterials – Introduction, Electron confinement, Size effect, Surface to volume ratio, Classification of nano materials– (0D, 1D, 2D); Quantum dots, Nano wires, Fullerene, CNT, Graphene(Mention of structures and properties),Distinct properties of nano materials (Mention-<i>mechanical, optical,</i></p>

	<p><i>electrical, and magnetic properties</i>); Mention of applications of</p>
<p>AUGUST2022</p>	<p>nano materials: (<i>Fuel cells, Phosphors for HD TV, Next Generation Computer chips, elimination of pollutants, sensors</i>)</p> <p>5. Superconductivity:</p> <p>Introduction to Superconductivity, Experimental results-critical temperature, critical magnetic field, Meissner effect , Isotope effect, Type I and Type II superconductors, BCS theory (elementary ideas only), Applications of superconductors</p>

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DEPARTMENT OF PHYSICS

ANNUAL ACADEMIC PLAN 2021-2022

**III B.Sc. PHYSICS V Semester Paper – V
Paper V: Electricity, Magnetism & Electronics**

MONTH	TOPIC
September 2022	UNIT-I (9 hrs) 1. Electric field intensity and potential: Gauss's law statement and its proof- Electric field intensity due to (1) Uniformly charged sphere and (2) an infinite conducting sheet of charge. Electrical potential – equipotential surfaces- potential due to i) a point charge, ii) charged spherical shell . 2. Dielectrics: Electric dipole moment and molecular polarizability- Electric displacement D, electric polarization P –relation between D, E and P- Dielectric constant and susceptibility. Boundary conditions at the dielectric surface.
October 2022	3. Electric and magnetic fields Biot-Savart's law, explanation and calculation of B due to long straight wire, a circular current loop and solenoid – Hall effect – determination of Hall coefficient and applications. 4. Electromagnetic induction Faraday's law-Lenz's law- Self and mutual inductance, coefficient of coupling, calculation of self inductance of a long solenoid, energy stored in magnetic field. Transformer - energy losses - efficiency.
November 2022	5. Alternating currents and electromagnetic waves Alternating current - Relation between current and voltage in LR and CR circuits, vector diagrams, LCR series and parallel resonant circuit, Q –factor, power in ac circuits. 6. Maxwell's equations Idea of displacement current - Maxwell's equations (integral and differential forms) (no derivation), Maxwell's wave equation (with derivation). Pointing theorem (statement), production of electromagnetic waves (Hertz experiment)

December 2022	<p>7. Basic electronics: PN junction diode, Zener diode, I-V characteristics, PNP and NPN transistors, CB, CE and CC configurations – Relation between α, β & γ. Transistor (CE) characteristics, Transistor as an amplifier</p> <p>.</p> <p>UNIT-V: (9 hrs)</p> <p>8. Digital electronics Number systems - Conversion of binary to decimal system and vice versa. Binary subtraction (2's complement methods).Laws of Boolean algebra - De Morgan's laws-statement and proof, Basic logic gates, NAND and NOR as universal gates, exclusive-OR gate, Half adder and Full adder.</p>
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DEPARTMENT OF PHYSICS

ANNUAL ACADEMIC PLAN 2021-2022

**III B.Sc., V-SEMESTER, PHYSICS PAPER- VI: Modern Physics
(For Maths Combinations)**

MONTH	TOPIC
SEPTEMBER 2021	<p>1. Atomic and molecular physics Introduction – Vector atom model and Stern-Gerlach experiment - quantum numbers associated with it. L-S and j- j coupling schemes. Zeeman effect(Definition only) -Raman effect, hypothesis, Stokes and Anti Stokes lines. Quantum theory of Raman effect. Experimental arrangement – Applications of Raman effect. UNIT-II (9 hrs)</p> <p>2. Matter waves & Uncertainty Principle Matter waves, de Broglie’s hypothesis - wavelength of matter waves, Properties of matter waves - Davisson and Germer experiment – Heisenberg’s uncertainty principle for position and momentum (x and p) & Energy and time (E and t).</p>
OCTOBER 2021	<p>3. Quantum (wave) mechanics Basic postulates of quantum mechanics-Schrodinger time independent and time dependent wave equations-derivations. Physical interpretation of wave function. Eigen functions, Eigen values. Application of Schrodinger wave equation to particle in one dimensional infinite box.</p>
NOVEMBER 2021	<p>4. General Properties of Nuclei Basic ideas of nucleus -size, mass, charge density (matter energy), binding energy, magnetic moment, electric moments. Liquid drop model and Shell model (qualitative aspects only) - Magic numbers.</p> <p>5. Radioactivity decay Alpha decay: basics of α-decay processes. Theory of α-decay, Gamow’s theory, Geiger Nuttal law.β-decay, Energy kinematics for β-decay, positron emission, electron capture, neutrino hypothesis.</p>
DECEMBER 2021	<p>6. Crystal Structure Amorphous and crystalline materials, unit cell, Miller indices, reciprocal lattice, types of lattices, diffraction of X-rays by crystals, Bragg’s law, experimental techniques, Laue’s method.</p> <p>7. Superconductivity Introduction - experimental facts, critical temperature - critical field - Meissner effect – Isotope effect - Type I and type II superconductors - applications of superconductors.</p>

A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A)KAKINADA

DEPARTMENT OF PHYSICS

ANNUAL ACADEMIC PLAN 2021-2022

III B.Sc., VI- SEMESTER

PHYSICS PAPER-VII

Elective Paper-VII (C) - Renewable Energy

MONTH	TOPIC
February 2022	UNIT-I (9 hrs) 1. Introduction to Energy: Definition and units of energy, power, Forms of energy, Energy flow diagram to the earth. Role of energy in economic and social development. 2. Environmental Effects: Environmental degradation due to energy production and utilization, air and water pollution, depletion of ozone layer, global warming, biological damage due to environmental degradation.
	3. Global Energy Scenario: Energy consumption in various sectors, energy resources, coal, oil, natural gas, nuclear and hydroelectric power.
March 2022	4. Indian Energy Scene: Energy resources available in India, urban and rural energy consumption, nuclear energy - promise and future, energy as a factor limiting growth, need for use of new and renewable energy sources. UNIT-III (9hrs) 5. Solar energy: Solar energy, Spectral distribution of radiation, solar water heating system, Applications, Solar cooker. Solar cell, Types of solar cells.
April 2022	6. Wind Energy: Introduction, Principle of wind energy conversion, Components of wind turbines, Operation and characteristics of a wind turbine, Applications of wind energy. UNIT-IV (9hrs) 7. Ocean Energy: Introduction, Principle of ocean thermal energy conversion, Tidal power generation, Tidal energy technologies, Energy from waves.
April 2022	8. Hydrogen Energy: History of hydrogen energy - Hydrogen production methods - Electrolysis of water, Uses of hydrogen as fuel.
May 2022	9. Bio-Energy Energy from biomass – Sources of biomass – Conversion of biomass into fuels – Energy through fermentation – Pyrolysis, gasification and combustion – Aerobic and anaerobic bio-conversion – Properties of biomass – Properties and characteristics of biogas.

A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A)KAKINADA

DEPARTMENT OF PHYSICS

ANNUAL ACADEMIC PLAN 2021-2022

III B.Sc., VI- SEMESTER

PHYSICS-CLUSTER ELECTIVE

PAPER-VIII C-1 Solar Thermal and Photovoltaic Aspects

MONTH	TOPIC
<p>February 2022</p>	<p>1. Basics of Solar Radiation: Structure of Sun, Solar constant, Concept of Zenith angle and air mass, Definition of declination, hour angle, solar and surface azimuth angles; Direct, diffuse and total solar radiation, Solar intensity measurement – pyrheliometer.</p> <p>2. Radiative Properties and Characteristics of Materials: Kirchoff's law – Relation between absorptance, emittance and reflectance; Selective Surfaces - preparation and characterization, Types and applications; Anti-reflective coating.</p>
<p>March 2022</p>	<p>3. Flat Plate Collectors (FPC) : Description of flat plate collector, Liquid heating type FPC, Energy balance equation, Efficiency, Temperature distribution in FPC, Definitions of fin efficiency and collector efficiency, Evacuated tubular collectors.</p> <p>Unit-III (9 hrs)</p> <p>4. Solar photovoltaic (PV) cell: Physics of solar cell –Type of interfaces, homo, hetero and schottky interfaces, Photovoltaic Effect, Equivalent circuit of solar cell, Solar cell output parameters, Series and shunt resistances and its effect on cell efficiency; Variation of efficiency with band-gap and temperature.</p>
<p>April 2022</p>	<p>Solar PV systems: Solar cell module assembly – Steps involved in the fabrication of solar module, Module performance, I-V characteristics, Modules in series and parallel, Module protection –Solar PV system and its components, PV array, inverter, battery and load.</p>
<p>May 2022</p>	<p>Solar thermal applications: Solar hot water system (SHWS), Types of SHWS, Standard method of testing the efficiency of SHWS; Passive space heating and cooling concepts, Solar desalinators and driers, Solar thermal power generation.</p>

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DEPARTMENT OF PHYSICS

ANNUAL ACADEMIC PLAN 2021-2022

III B.Sc., VI- SEMESTER

PHYSICS–CLUSTER ELECTIVE-

PAPER –VIII C2 Wind, Hydro and Ocean Energies

MONTH	TOPIC
February 2022	1. Introduction: Wind generation, meteorology of wind, world distribution of wind, wind speed variation with height, wind speed statistics, Wind energy conversion principles; General introduction; Types and classification of WECS; Power, torque and speed characteristics. UNIT-II(9hrs) 2. Wind Energy Conversion System: Aerodynamic design principles; Aerodynamic theories; Axial momentum, blade element; Rotor characteristics; Maximum power coefficient.
March 2022	UNIT-III(9hrs) 3. Wind Energy Application: Wind pumps: Performance analysis, design concept and testing; Principle of wind energy generation; Wind energy in India; Environmental Impacts of Wind farms. UNIT-IV(9hrs) 4. Small Hydropower Systems: Overview of micro, mini and small hydro systems; Hydrology; Elements of pumps and turbine; Selection and design criteria of pumps and turbines; Site selection; Speed and voltage regulation
April 2022	UNIT-V(9hrs) 5. Ocean Thermal, Tidal and Wave Energy Systems: Ocean Thermal - Introduction, Technology process, Working principle, Electricity generation methods from OCET, Advantages and disadvantages, Applications of OTEC.
May 2022	6. Tidal Energy - Introduction, Origin and nature of tidal energy, Wave Energy – Introduction, Basics of wave motion, Power in waves, Wave energy conversion devices, Advantages and disadvantages, Applications of wave energy.

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DEPARTMENT OF PHYSICS

ANNUAL ACADEMIC PLAN 2021-2022

III BSC PHYSICS-SEMESTER VI
PAPER VIII—CLUSTER ELECTIVE
PAPER –VIII C-3 Energy storage devices

MONTH	TOPIC
February 2022	1. Energy Storage: Need of energy storage; Different modes of energy storage, Flywheel storage, Electrical and magnetic energy storage: Capacitors, electromagnets; Chemical Energy storage: Thermo-chemical, photo-chemical, electro-chemical, Hydrogen for energy storage. UNIT-II (9 hrs) 2. Electrochemical Energy Storage Systems: Batteries: Primary, Secondary, Lithium, Solid-state and molten solvent batteries; Leadacid batteries; Nickel Cadmium Batteries; Advanced Batteries. Role of carbon nano-tubes in electrodes.
March 2022	3. Magnetic and Electric Energy Storage Systems: Superconducting Magnet Energy Storage(SMES) systems; Capacitor and battery: Comparison and application; Super capacitor.
April 2022	4. Fuel Cell: Fuel cell definition, difference between batteries and fuel cells, fuel cell components, principle and working of fuel cell, performance characteristics, efficiency, Advantages and disadvantages of fuel cell.
May 2022	5. Types of Fuel Cells: Classification, Alkaline fuel cell, phosphoric acid fuel cell, molten carbonate fuel cell; solid oxide fuel cell, proton exchange membrane fuel cell, applications of fuel cells.

K. Venkatesh

HOD Department

Physics

LECTURER IN CHARGE

Department of Physics

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V. Ananta Lakshmi

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DEPARTMENT OF CHEMISTRY

ACADEMIC PLAN 2021 – 2022

I B.Sc., PAPER – I SEMESTER - I (INORGANIC & PHYSICAL CHEMISTRY)

Month	Inorganic Chemistry	Physical Chemistry
NOVEMBER, 2021	CHEMISTRY OF P-BLOCK ELEMENTS	SOLID STATE
DECEMBER, 2021	CHEMISTRY OF D -BLOCK ELEMENTS	GASEOUS STATE AND LIQUID STATE
JANUARY, 2022	CHEMISTRY OF F – BLOCK ELEMENTS	SOLUTIONS AND IONIC EQUILIBRIUM
FEBRUARY, 2022	THEORIES OF BONDING IN METALS	DILUTE SOLUTIONS

I B.Sc., PAPER – II SEMESTER - II (ORGANIC & GENERAL CHEMISTRY)

Month	Organic Chemistry	General Chemistry
JUNE, 2022	ALKANES AND CYCLOALKANES	HSAB
JULY, 2022	ALKENES & ALKYNES	SURFACE CHEMISTRY
AUGUST, 2022	REACTIONS OF ALKYNES & CONCEPT OF AROMATICITY	CHEMICAL FOUNDING
SEPTEMBER, 2022	REACTIONS OF BENZENE	STEREOCHEMISTRY

II B.Sc., PAPER-III SEMESTER - III (ORGANIC & SPECTROSCOPY)

MONTH	ORGANIC CHEMISTRY	SPECTROSCOPY
NOVEMBER, 2021	Chemistry of Halogenated Compounds	Molecular Spectroscopy Rotation Spectroscopy
DECEMBER, 2021	Alcohols and Phenols	Electronic Spectroscopy
JANUARY, 2022	Carbonyl Compounds	NMR Spectroscopy
FEBRUARY, 2022	Carboxyl Acids and their Derivates	Application of Spectroscopy to Simple Organic Molecules

**II B.Sc., PAPER-IV - SEMESTER - IV
(INORGANIC & PHYSICAL CHEMISTRY)**

MONTH	INORGANIC CHEMISTRY	PHYSICAL CHEMISTRY
APRIL, 2022	Coordination Chemistry	Phase Rule
MAY, 2022	Inorganic Reaction Mechanism	Electrochemistry
JUNE, 2022	Stability of Metal Complexes	Electrochemistry
JULY, 2022	Bioinorganic Chemistrty	Chemical Kinetics

**II B.Sc., PAPER – V SEMESTER –IV
(INORGANIC, ORGANIC & PHYSICAL CHEMISTRY)**


MONTH	INORGANIC CHEMISTRY	ORGANIC & PHYSICAL CHEMISTRY
SEPTEMBER, 2022	COORDINATION CHEMISTRY	NITRO HYDROCARBONS
OCTOBER, 2022	COORDINATION CHEMISTRY	NITROGEN COMPOUNDS
NOVEMBER, 2022	HARD SOFT ACIDS AND BASES	THERMODYNAMICS
DECEMBER, 2022	STABILITY OF METAL COMPLEXES	THERMODYNAMICS

**III B.Sc., PAPER – VI SEMESTER –V
(INORGANIC, ORGANIC & PHYSICAL CHEMISTRY)**

MONTH	INORGANIC CHEMISTRY	ORGANIC & PHYSICAL CHEMISTRY
SEPTEMBER, 2021	REACTIVITY OF METALCOMPLEXES	HETEROCYCLIC COMPOUNDS
OCTOBER, 2021	BIOINORGANIC CHEMISTRY	CARBOHYDRATES
NOVEMBER, 2021	CHEMICAL KINETICS CARBOHYDRATES	CARBOHYDRATES
DECEMBER, 2021	PHOTO CHEMISTRY	AMINOACIDS & PROTEINS

**III B.Sc., SEMESTER -VI
(ELECTIVE & CLUSTER)**

MONTH	ELECTIVE VIB	CLUSTER VIII C-1	CLUSTER VIII C-2	CLUSTER VIII C-3
FEBRUARY 2022	ENVIRONMENTAL CHEMISTRY INTRODUCTION AND AIR POLLUTION	ORGANIC SPECTROSCOPIC TECHNIQUES	ADVANCED ORGANIC REACTIONS	PHARMACEUTICAL AND MEDICINAL CHEMISTRY
MARCH 2022	WATER POLLUTION	TECHNIQUES OF POLYMERIZATION	MOLECULAR SPECTROSCOPY	ANALYSIS OF ANTI - EPILEPTIC & ANTI CONVULSANT DRUGS
APRIL 2022	CHEMICAL TOXICOLOGY	KINETICS OF FREE RADICAL POLYMERIZATION	UV - VISIBLE , IR SPECTROSCOPY	ANALYSIS OF MILK & MILK PRODUCTS
MAY 2022	ECO SYSTEM AND BIODIVERSITY	POLYMER ADDITIVES POLYMERS AND THEIR APPLICATIONS	SEPARATION TECHNIQUES ELEMENTAL ANALYSIS	CLINICAL ANALYSIS OF BLOOD


(V. M. SARMA)


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A.S.D.GOV.T. DEGREE COLLEGE FOR WOMEN (AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE
B.Sc(M.P.Cs) ACADEMIC PLAN 2021-2022
SEMESTER - V
PAPER –V - DATABASE MANAGEMENT SYSTEM)

MONTH	NAME OF THE TOPIC
SEPTEMBER 2021	Overview of Database Management System
OCTOBER 2021	Entity-Relationship Model
NOVEMBER 2021	Relational Model
	Structured Query Language
DECEMBER 2021	Structured Query Language
	PL/SQL
JANUARY 2022	PL/SQL

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SEMESTER - V
PAPER-VI- SOFTWARE ENGINEERING

MONTH	NAME OF THE TOPIC
SEPTEMBER 2021	Introduction
SEPTEMBER 2021	Software Requirements Analysis and Specification
OCTOBER 2021	Function-Oriented Design
NOVEMBER 2021	Function-Oriented Design
	Planning a Software Project
DECEMBER 2021	Planning a Software Project
	Testing
JANUARY 2022	Testing

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SEMESTER - I
PAPER – I- PROBLEM SOLVING IN C

MONTH	NAME OF THE TOPIC
NOVEMBER 2021	General Fundamentals
DECEMBER 2021	General Fundamentals
	Introduction to C
JANUARY 2022	Introduction to C
	Introduction to Arrays
FEBRUARY 2022	Introduction to Arrays
	Introduction of Functions
	Introductions to structures,
MARCH 2022	Pointers
	Introduction to Files

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B.Sc.(MPCS)ACADEMIC PLAN 2021-2022
SEMESTER – III
PAPER- III- DATABASE MANAGEMENT SYSTEMS

MONTH	NAME OF THE TOPIC
NOVEMBER 2021	Overview of Database Management System
DECEMBER 2021	Overview of Database Management System
	Entity-Relationship Model
JANUARY 2022	Entity-Relationship Model
	Relational Model.
FEBRUARY 2022	Relational Model.
	Structured Query Language.
MARCH 2022	PL/SQL

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DEPARTMENT OF COMPUTER SCIENCE
B.Sc(M.P.Cs) ACADEMIC PLAN 2021-2022
SEMESTER - II
DATA STRUCTURES USING C

MONTH	NAME OF THE TOPIC
JUNE 2022	Introduction to Data Structures
JULY 2022	Principles of Programming and Analysis of Algorithms:and Arrays:
	Linked Lists
AUGUST 2022	Stacks and Queues
	Binary Trees
SEPTEMBER 2022	Searching, Sorting and Graphs

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B.Sc(M.P.Cs) ACADEMIC PLAN 2021-2022
SEMESTER - IV
OBJECT ORINETED PROGRAMMING THROUGH JAVA

MONTH	NAME OF THE TOPIC
JUNE 2022	Introduction to Java, Operators and Arrays
JULY 2022	Strings, Introduction to OOPs, Classes Objects
	Methods in Java and Inheritance
AUGUST 2022	Polymorphism and Exception handling
	Streams and Threads
SEPTEMBER 2022	Applets
	Java Data base Connectivity

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SEMESTER - IV
OPERATING SYSTEM

MONTH	NAME OF THE TOPIC
JUNE 2022	History and Evaluation of OS
JULY 2022	Processor and User Modes tasks
	Process Management
AUGUST 2022	Concurrent and Dependent Processes
	Memory Management
SEPTEMBER 2022	File and I/O Management, OS Security.

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B.Sc.(M.P.Cs) ACADEMIC PLAN 2021-2022
SEMESTER – VI
PAPER- VII-WEB TECHNOLOGY

MONTH	NAME OF THE TOPIC
FEBRUARY 2022	HTML
MARCH 2022	Cascading Style Sheets
	JavaScript,
APRIL 2022	JavaScript.
	DHTML
MAY 2022	XML
JUNE 2022	XML

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SEMESTER - VI
DISTRIBUTED SYSTEMS

MONTH	NAME OF THE TOPIC
FEBRUARY 2022	Introduction to Distributed Computing Systems.
MARCH 2022	Features of Message Passing System,
APRIL 2022	Introduction, Design and implementation of DSM system.
	Task Assignment Approach, Load Balancing Approach.
MAY 2022	Task Assignment Approach, Load Balancing Approach.
JUNE 2022	File Models

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DEPARTMENT OF COMPUTER SCIENCE
B.Sc(M.P.Cs)ACADEMIC PLAN 2021-2022
SEMESTER - VI
CLOUD COMPUTING

MONTH	NAME OF THE TOPIC
FEBRUARY 2022	Cloud Computing Overview
MARCH 2022	Cloud scenarios.
APRIL 2022	Cloud architecture
	Infrastructure as a Service.
MAY 2022	Virtualization
JUNE 2022	Virtualization

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SEMESTER - I
INFORMATION TECHNOLOGY**

MONTH	NAME OF THE TOPIC
NOVEMBER 2021	Introduction
DECEMBER 2021	Introduction
	MS-WORD
JANUARY 2021	MS-WORD
	MS - EXCEL
FEBRUARY 2021	MS - EXCEL
	MS- POWER POINT
MARCH 2021	MS -ACCESS

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SEMESTER – III
PROGRAMMING WITH C & C++**

MONTH	NAME OF THE TOPIC
NOVEMBER 2021	Introduction and Control Structures
DECEMBER 2021	Introduction and Control Structures
	Loops And Arrays
	Strings and Functions
JANUARY 2022	Strings and Functions
	Principles of Object Oriented Programming
FEBRUARY 2022	Principles of Object Oriented Programming
	Classes and Objects
MARCH 2022	Classes and Objects

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DEPARTMENT OF COMPUTER SCIENCE
B.COM. (CA) ACADEMIC PLAN 2021-2022
SEMESTER - V
DATABASE MANAGEMENT SYSTEM**

MONTH	NAME OF THE TOPIC
SEPTEMBER 2021	Overview of Database Management System
OCTOBER 2021	Entity-Relationship Model
NOVEMBER 2021	Relational Model
	Structured Query Language
DECEMBER 2021	Structured Query Language
	PL/SQL
JANUARY 2022	PL/SQL

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B.COM(CA) ACADEMIC PLAN 2021-2022
SEMESTER – V
WEB TECHNOLOGY**

MONTH	NAME OF THE TOPIC
SEPTEMBER 2021	HTML
	Cascading Style Sheets
OCTOBER 2021	Cascading Style Sheets
	JavaScript,
NOVEMBER 2021	JavaScript,
	DHTML
DECEMBER 2021	DHTML
	XML
JANUARY 2022	XML

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B.Sc(M.P.Cs) ACADEMIC PLAN 2021-2022
SEMESTER - II
E COMMERCE AND WEB DESIGNING

MONTH	NAME OF THE TOPIC
JUNE 2022	Introduction to E - Commerce
JULY 2022	Technology used in E- Commerce
	E- Payment System
AUGUST 2022	Online Business Transactions
	Website Designing
SEPTEMBER 2022	Security and Encryption

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B.Sc(M.P.Cs) ACADEMIC PLAN 2021-2022
SEMESTER - IV
DATABASE MANAGEMENT SYSTEM

MONTH	NAME OF THE TOPIC
JUNE 2022	Overview of Database Management System
JULY 2022	File Based System
	Entity Relationship Model
AUGUST 2022	Entity Relationship Model
	Structured Query Language
SEPTEMBER 2022	Structured Query Language
	PL /SQL

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SEMESTER - IV
OBJECT ORIENTED PROGRAMMING WITH JAVA

MONTH	NAME OF THE TOPIC
JUNE 2022	Introduction to Java, Operators and Arrays
JULY 2022	Strings, Introduction to OOPs, Classes Objects
	Methods in Java and Inheritance
AUGUST 2022	Polymorphism and Exception handling
	Streams and Threads
SEPTEMBER 2022	Applets and
	Java Data base Connectivity

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DEPARTMENT OF COMPUTER SCIENCE
B.COM.(CA) ACADEMIC PLAN 2021-2022
SEMESTER - VI
E-COMMERCE

MONTH	NAME OF THE TOPIC
FEBRUARY 2022	Introduction to E-Commerce
MARCH 2022	Introduction to E-Commerce
	Business-to-Business Electronic Commerce
APRIL 2022	Business-to-Business Electronic Commerce
	Internet and Extranet
MAY 2022	Public Policy
	Infrastructure For EC
JUNE 2022	Infrastructure For EC

N.N.S. Enani
16/2/23

Lectures Incharge
of Computer Science.

V. Anand

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A.S.D GOVT DEGREE COLLEGE FOR WOMEN (A)

(Re-Accredited by NAAC with 'B')

KAKINADA 533002 EASTGODAVARI, ANDHRA PRADESH

DEPARTMENT OF BOTANY 2021-2022

Semester -I - VI

Paper-1 FUNDAMENTALS OF MICROBES AND NONVASCULAR PLANTS
(VIRUSES ,BACTERIA FUNGI , LICHENS, ALGAE & BRYOPHYTES)

S.No	Month	Title of the Course (Paper) Semester -I
1	November	Unit- 1: Origin of life and Viruses <ol style="list-style-type: none">1. Origin of life, concept of primary Abiogenesis; Miller and Urey experiment. Five kingdom classification of R.H. Whittaker2. Discovery of microorganisms, Pasteur experiments, germ theory of diseases.3. Shape and symmetry of viruses; structure of TMV and Gemini virus; multiplication of TMV; A brief account of Prions and Viroids.4. A general account on symptoms of plant diseases caused by Viruses. Transmission of plant viruses and their control.5. Significance of viruses in vaccine production, bio-pesticides and as cloning vectors.
	December	UNIT – II: SPECIAL GROUPS OF BACTERIA AND EUBACTERIA <ol style="list-style-type: none">1. Brief account of Archaeobacteria, Actinomycetes and Cyanobacteria.2. Cell structure and nutrition of Eubacteria.3. Reproduction- Asexual (Binary fission and endospores) and bacterial recombination (Conjugation, Transformation, Transduction).4. Economic importance of Bacteria with reference to their role in Agriculture and industry (fermentation and medicine).5. A general account on symptoms of plant diseases caused by Bacteria; Citruscanker.
	January	UNIT – 3: FUNGI&LICHENS <ol style="list-style-type: none">1. General characteristics of fungi and Ainsworth classification (uptoclasses).2. Structure, reproduction and life history of (a) Rhizopus (Zygomycota) and (b) Puccinia (Basidiomycota).3. Economic uses of fungi in food industry, pharmacy and

		<p>agriculture.</p> <p>4. A general account on symptoms of plant diseases caused by Fungi; Blast of Rice.</p> <p>5. Lichens- structure and reproduction; ecological and economic importance.</p> <p>UNIT -4: ALGAE</p> <p>1. General characteristics of Algae (pigments, flagella and reserve food material); Fritsch classification (upto classes).</p> <p>2. Thallus organization and life cycles in Algae.</p> <p>3. Occurrence, structure, reproduction and life cycle of (a) Spirogyra (Chlorophyceae) and (b) Polysiphonia (Rhodophyceae).</p> <p>4. Economic importance of Algae.</p> <p>UNIT -5: BRYOPHYTES</p> <p>1. General characteristics of Bryophytes ; classification upto classes.</p> <p>2. Occurrence, morphology, anatomy, reproduction (developmental details are not needed) and life cycle of (a) Marchantia (Hepaticopsida) and (b) Funaria (Bryopsida).</p> <p>3. General account on evolution of sporophytes in Bryophyta.</p>
SI.no	Month	<p align="center">Title of the Course Paper Semester -II Basics of Vascular plants and phytogeography</p>
	May	<p>UNIT -I: PTERIDOPHYTES</p> <p>1. General characteristics of Pteridophyta; classification of Smith (1955) upto divisions.</p> <p>2. Occurrence, morphology, anatomy, reproduction (developmental details are not needed) and life history of (a) Lycopodium (Lycopsida) and (b) Marsilea (Filicopsida).</p> <p>3. Stelar evolution in Pteridophytes;</p> <p>4. Heterospory and seed habit.</p> <p>UNIT -II: GYMNOSPERMS</p> <p>1. General characteristics of Gymnosperms; Sporne classification up to classes.</p> <p>2. Occurrence, morphology, anatomy, reproduction (developmental details are not needed) and life history of (a) Cycas (Cycadopsida) and (b) Gnetum (Gnetopsida).</p> <p>3. Outlines of geological timescale.</p> <p>4. A brief account on Cycadeoidea.</p> <p>UNIT- III: BASIC ASPECTS OF TAXONOMY</p>
	June	

July	<ol style="list-style-type: none"> 1. Aim and scope of taxonomy; Species concept: Taxonomic hierarchy, species, genus and family. 2. Plant nomenclature: Binomial system, ICBN- rules for nomenclature. 3. Herbarium and its techniques, BSI herbarium and Kew herbarium; concept of digital herbaria. 4. Bentham and Hooker system of classification; 5. Systematic description and economic importance of the following families: (a) Annonaceae (b)Curcubitaceae <p>UNIT – IV:SYSTEMATIC TAXONOMY</p>
August	<ol style="list-style-type: none"> 1. Systematic description and economic importance of the following families: (a) Asteraceae (b) Asclepiadaceae (c) Amaranthaceae (d)Euphorbiaceae (e) Arecaceae and (f) Poaceae 2. Outlines of Angiosperm Phylogeny Group (APGIV). <p>UNIT –V:PHYTOGEOGRAPHY</p>
September	<ol style="list-style-type: none"> 1. Principles of Phyto geography, Distribution (wides, endemic, discontinuous species) 2. Endemism – types andcauses. 3. Phyto geographic regions ofWorld. 4. Phyto geographic regions of India. 5. Vegetation types in AndhraPradesh.
S.No Month	<p>Title of the Course (Paper) Semester -III Anatomy and Embryology of Angiosperms, Plant Ecology and Biodiversity</p>
November	<p>UNIT – I: ANATOMY OF ANGIOSPERMS</p> <ol style="list-style-type: none"> 1. Organization of apical meristems: Tunica-carpus theory and Histogen theory. 2. Tissue systems–Epidermal, ground and vascular. 3. Anomalous secondary growth in <i>Boerhaavia</i> and <i>Dracaena</i>. 4. Study of timbers of economic importance - Teak, Red sanders and Rosewood <p>UNIT – II: EMBRYOLOGY OF ANGIOSPERMS</p> <ol style="list-style-type: none"> 1. Structure of anther, anther wall, types

December	<p>of tapetum. Microsporogenesis and development of male gametophyte.</p> <ol style="list-style-type: none"> Structure of ovule, megasporogenesis; monosporic (<i>Polygonum</i>), bisporic (<i>Allium</i>) and tetrasporic (<i>Peperomia</i>) types of embryo sacs. Outlines of pollination, pollen – pistil interaction and fertilization. Endosperm - Types and biological importance - Free nuclear, cellular, helobial and druminate. Development of Dicot (<i>Capsella bursa-pastoris</i>) embryo
January	<p>UNIT – III: BASICS OF ECOLOGY</p> <ol style="list-style-type: none"> Ecology: definition, branches and significance of ecology. Ecosystem: Concept and components, energy flow, food chain, food web, ecological pyramids. Plants and environment: Climatic (light and temperature), edaphic and biotic factors. Ecological succession: Hydrosere and Xerosere.
February	<p>UNIT – IV: POPULATION, COMMUNITY AND PRODUCTION ECOLOGY</p> <ol style="list-style-type: none"> Population ecology: Natality, mortality, growth curves, ecotypes, ecads Community ecology: Frequency, density, cover, life forms, biological spectrum Concepts of productivity: GPP, NPP and Community Respiration Secondary production, P/R ratio and Ecosystems.
March	<p>UNIT – V: BASICS OF BIODIVERSITY</p> <ol style="list-style-type: none"> Biodiversity: Basic concepts, Convention on Biodiversity - Earth Summit. Value of Biodiversity; types and levels of biodiversity and Threats to biodiversity Biodiversity Hot spots in India. Biodiversity in North Eastern Himalayas and Western Ghats. Principles of conservation: IUCN threat-categories, RED data book

		5. Role of NBPGR and NBA in the conservation of Biodiversity.
S.No	Month	Title of the Course (Paper) Semester -IV PAPER -IV : PLANT PHYSIOLOGY AND METABOLISM
	April	<p>Unit – 1: Plant-Water relations</p> <ol style="list-style-type: none"> 1. Importance of water to plant life, physical properties of water, diffusion, imbibition, osmosis, water potential, osmotic potential, pressure potential. 2. Absorption and lateral transport of water; Ascent of sap 3. Transpiration: stomata structure and mechanism of stomatal movements (K^+ ion flux). 4. Mechanism of phloem transport; source-sink relationships.
	May	<p>Unit – 2: Mineral nutrition, Enzymes and Respiration</p> <ol style="list-style-type: none"> 1. Essential macro and micro mineral nutrients and their role in plants; symptoms of mineral deficiency 2. Absorption of mineral ions; passive and active processes. 3. Characteristics, nomenclature and classification of Enzymes. Mechanism of enzyme action, enzyme kinetics. 4. Respiration: Aerobic and Anaerobic; Glycolysis, Krebs cycle; electron transport system, mechanism of oxidative phosphorylation, Pentose Phosphate Pathway (HMP shunt)
	June	<p>unit – 3: Photosynthesis and Photorespiration</p> <ol style="list-style-type: none"> 1. Photosynthesis: Photosynthetic pigments, absorption and action spectra; Red drop and Emerson enhancement effect 2. Concept of two photosystems; mechanism of photosynthetic electron transport and evolution of oxygen; photophosphorylation 3. Carbon assimilation pathways (C_3, C_4 and CAM); 4. Photorespiration - C_2 pathway

July	<p>Unit – 4: Nitrogen and lipid metabolism</p> <ol style="list-style-type: none"> 1. Nitrogen metabolism: Biological nitrogen fixation – asymbiotic and symbiotic nitrogen fixing organisms. Nitrogenase enzyme system. 2. Lipid metabolism: Classification of Plant lipids, saturated and unsaturated fatty acids. 3. Anabolism of triglycerides, β-oxidation of fatty acids, Glyoxylate cycle <p>Unit – 5: Plant growth - development and stress physiology</p> <ol style="list-style-type: none"> 1. Growth and Development: Definition, phases and kinetics of growth. 2. Physiological effects of Plant Growth Regulators (PGRs) - auxins, gibberellins, cytokinins, ABA, ethylene and brassinosteroids. 3. Physiology of flowering: Photoperiodism, role of phytochrome in flowering. 4. Seed germination and senescence; physiological changes. 5. Physiological changes in plants during Water stress
S.No Month	<p style="text-align: center;">Title of the Course (Paper) Semester -IV CELL BIOLOGY, GENETICS AND PLANT BREEDING Paper -V</p>
September	<p>Unit - I: Cell Biology</p> <ol style="list-style-type: none"> 1. Cell, the unit of life – Cell theory, Prokaryotic and eukaryotic cells, Eukaryotic cell components 2. Ultra structure and functions of cell wall and cell membranes. 3. Chromosomes : Morphology, Organization of DNA in a chromosome (nucleosome model), Euchromatin and heterochromatin. <p>Unit - II: Genetic material</p> <ol style="list-style-type: none"> 1. DNA as the genetic material: Griffith's and Avery's transformation experiment
October	<ol style="list-style-type: none"> 2. DNA structure (Crick model) and replication of DNA (semi-conservative)

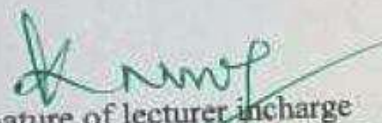
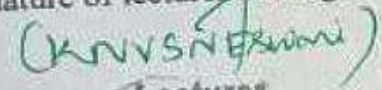
		<p>3. Types of RNA (mRNA, tRNA, rRNA) and their structure and functions</p> <p>Unit - III: Mendelian inheritance</p> <ol style="list-style-type: none"> 1. Mendel's Laws of inheritance (Mono- and Dihybrid crosses); backcross and test cross. 2. Chromosome theory of inheritance. 3. Linkage : Concept & history, complete & incomplete linkage, Bridges' Experiment. 4. Coupling & repulsion, linkage maps based on two and three factor crosses. 5. Crossing Over : Concept & Significance, cytological proof of crossing over. <p>Unit - IV: Plant Breeding</p> <ol style="list-style-type: none"> 1. Introduction and Objectives of Plant breeding. 2. Methods of crop improvement : Procedure, advantages and limitations of introduction, Selection, and Hybridization (outlines only) <p>Unit - V: Breeding, Crop Improvement and Biotechnology</p> <ol style="list-style-type: none"> 1. Role of mutations in crop improvement. 2. Role of somaclonal variations in crop improvement. 3. Molecular breeding – use of DNA markers in plant breeding and crop improvement (RAPD, RFLP)
	November	
	December	
	December	
S.No	Month	<p>Title of the Course (Paper) Semester - V</p> <p>Paper - VI</p> <p>PLANT ECOLOGY & PHYTOGEOGRAPHY</p>
	September	<p>UNIT – I. Elements of Ecology</p> <ol style="list-style-type: none"> 1. Ecology: definition, branches and significance of ecology. 2. Climatic Factors: Light, Temperature, precipitation. 3. Edaphic Factor: Origin, formation, composition and soil profile. 4. Biotic Factor: Interactions between plants and animals. <p>UNIT– II. Ecosystem Ecology</p> <ol style="list-style-type: none"> 1. Ecosystem: Concept and components, energy flow, Food chain, Food web, Ecological pyramids.

October	<p>2. Productivity of ecosystem-Primary, Secondary and Net productivity.</p> <p>3. Biogeochemical cycles- Carbon, Nitrogen an Phosphorous.</p>
November	<p>UNIT – II Population & Community Ecology</p> <p>1. Population -definition, characteristics and importance, outlines–ecotypes.</p> <p>2. Plant communities- characters of a community, outlines – Frequency, density, cover, life forms ,competition.</p> <p>3. Interaction between plants growing in a community.</p>
December	<p>UNIT –IV Phytogeography</p> <p>1. Principles of Phytogeography, Distribution (wides, endemic, discontinuousspecies)</p> <p>2. Phyto geographic regions of India.</p> <p>3. Phyto geographic regions of World.</p> <p>4. Endemism – types and causes</p>
December	<p>UNIT- V: Plant Biodiversity and its importance</p> <p>1. Definition, levels of biodiversity-genetic, species and ecosystem.</p> <p>2. Biodiversity hotspots- Criteria, Biodiversity hotspots of India.</p> <p>3. Loss of biodiversity – causes and conservation (<i>In-situ</i> and <i>ex-situ</i> methods).</p> <p>4. Seed banks - conservation of genetic resources and their importance</p>

S.No	Month	Title of the Course (Paper) Semester -VI Paper -VII
	February	<p data-bbox="555 241 1086 315">Nursery, Gardening and Floriculture.</p> <p data-bbox="517 360 746 412">UnitI: Nursery:</p> <ol data-bbox="475 434 1289 734" style="list-style-type: none"> <li data-bbox="475 434 1289 517">1. Definition, objectives, scope and building up of infrastructure for nursery. <li data-bbox="475 568 1410 642">2. Planning and seasonal activities - Planting - direct seeding and transplants. <li data-bbox="635 687 1362 739">3. Nursery Management and Routine Garden Operations. <p data-bbox="523 757 788 808">UnitII: Gardening</p> <ol data-bbox="501 860 1417 1301" style="list-style-type: none"> <li data-bbox="635 860 1331 934">1. Definition, objectives and scope - different types of gardening. <li data-bbox="501 978 1390 1128">2. Landscape and home gardening - parks and its components, plant materials and design. 2. Computer applications in landscaping. <li data-bbox="501 1135 1246 1187">3. Gardening operations: soil laying, manuring, watering. <li data-bbox="523 1173 1417 1256">4. Landscaping Places of Public Importance: Landscaping highways and Educational Institutions) <li data-bbox="523 1256 975 1308">5. Some Famous gardens of India. <p data-bbox="523 1346 963 1397">Unit III: Propagation methods</p> <ol data-bbox="560 1435 1433 1944" style="list-style-type: none"> <li data-bbox="560 1435 1086 1487">1. seedlings, transplanting of seedlings. <li data-bbox="485 1525 1433 1697">2. Air layering, cutting, selection of cutting ,propagule collecting season, cutting rooting medium and planting of cuttings – Hardening of plant <li data-bbox="485 1675 1433 1823">3. Propagation of ornamental plants by rhizomes, corms tubers, bulbs and bulbils. <li data-bbox="485 1794 1442 1944">4. Green house - mist chamber, shed root, shade house and glasshouse for propagation. <p data-bbox="533 1921 842 1973">UnitIV: Floriculture:</p> <ol data-bbox="533 1989 1091 2101" style="list-style-type: none"> <li data-bbox="533 1989 1091 2101">1. Ornamental Plants: Flowering annuals;
	March	
	April	

		<p>herbaceous, perennials; Divinevines; Shade and ornamental trees.</p> <p>2. Ornamental bulbous and foliage plants; Cacti and succulents.</p> <p>3. Ornamentals-palms.</p> <p>4. Cultivation of plants in pots; Indoor gardening; Bonsai.</p> <p>Unit V: Commercial Floriculture</p> <p>1. Factors affecting flower production; Production and packaging of cut flowers; Flower arrangements; Methods to prolong vase life of flowers</p> <p>June</p> <p>2. Cultivation of Important (Carnation, cutflowers Aster, Dahlia, Gerbera, Anthuriums, Gladiolous, Marigold, Rose, Liliun)</p> <p>3. Management of pests, diseases and harvesting.</p>
S.no.	Month	PAPER-VIII A-1 PLANT DIVERSITY AND HUMAN WELFARE BOTANY-CLUSTER ELECTIVE--A
	February	Plant Diversity and Scope—Values and uses of Biodiversity
	March	Loss of Biodiversity—Management of Plant Bio diversity IUCN, UNEP, ENESCO, WWF, NBPGR Environmental impact assessment, Geographical information system
	April	Contemporary practices in Recourse Management, Solid and liquid waste management
	May	Conservation of Bio diversity Role of plants in relation to human welfare
		PAPER -VIII A2 ETHNO BOTANY AND MEDICINAL BOTANY BOTANY-CLUSTER ELECTIVE--A2
	February	Ethno Botany introduction, Plants used by Tribal populations
	March	Role of Ethno Botany in Modern Medicine
	April	Ethno Botany as a tool to protect interest of Ethnic group

May	Scope and Importance of medicinal plants , indigenous medicinal sciences Conservation of Endangered and endemic medicinal plants
PAPER –VIII A3 PHARMACOGNOSY AND PHYTOCHEMISTRY PAPER VIII—CLUSTER ELECTIVE – CLUSTER –A3	
February	Classification of Drugs – Drug evaluation methods
March	Orgenoleptic and microscopic studies Secondary Metabolites
April	Phytochemistry – Phenols Steroids, Alkaloids and volatile oils
May	Enzymes, Proteins, and amino acids as Drugs


 Signature of lecturer in charge

 Lecturer
 Department of Botany
 Incharge in Botany
 A.D. Govt. Degree College for Women
 KAKINADA


 Signature of Principal
PRINCIPAL
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A.S.D GOVT DEGREE COLLEGE FOR WOMEN (A)
 (Re-Accredited by NAAC with 'B')
 KAKINADA 533002 EASTGODAVARI, ANDHRA PRADESH
DEPARTMENT OF HORTICULTURE
ANNUAL ACADEMIC PLAN 2021-2022
I B.Sc., I SEMESTER PAPER-I

HORTICULTURE PAPER -1 FUNDAMENTALS OF HORTICULTURE AND SOIL SCIENCE

MONTH	TOPIC
November 2021	Unit I : Introduction to Horticulture 1. Horticulture: Definition, importance of horticulture in terms of economy, production, employment generation, environmental protection and human resource development. 2. Divisions of horticulture with suitable examples and their importance.
December 2021	Unit I : Introduction to Horticulture 3. Area, production of Horticultural crops in A.P. and India. 4. Fruit and vegetable zones of India and Andhra Pradesh. 5. Export scenario and scope for Horticulture in India. Unit II : Classification Horticulture Crops 1. Classification of horticultural crops based on soil and climatic requirements. 2. Vegetable crop gardens – Nutrition and kitchen garden – tracer garden – vegetable forcing – market garden – roof garden. 3. Gardens in floriculture – flower gardens – soil and mixed gardens; land scape Horticulture.
January 2022	Unit III : Characteristics of Orchards 1. Orchard: Definition, different systems of planting orchards – square, rectangular Quincunx, hexagonal and contour. 2. Calculation of planting densities in different systems of planting.

	<ol style="list-style-type: none"> 3. Different types and methods of pruning. 4. Training: Definition, principles and objectives; merits and demerits of open and closecentered, and modified leader systems.
February - 2022	<p>Unit IV : Physico-chemical characteristics of Soil</p> <ol style="list-style-type: none"> 1. Soil: Definition, minerals and weathering to form soils; factors of soil formation. 2. Soil taxonomy; soil color, texture and structure; other physical properties and stability. 3. Soil colloids and charges; ion adsorption and exchange; soil temperature and soil air. 4. Soil pH and acidity; soil alkalinity and salinity.
March -2022	<p>Unit V :Soil as a living matter</p> <ol style="list-style-type: none"> 1. Soil organic matter – composition and decomposability. 2. Humus – fractionation of organic matter. 3. Soil biology: Soil microorganisms and fauna –beneficial and harmful roles. 4. Integrated nutrient management and soil tests.

I B.Sc., II SEMESTER , PAPER-II

SEMESTER - II, COURSE – II

PLANT PROPAGATION AND NURSERY MANAGEMENT

MONTH	TOPIC
June 2022	<p>Unit -1: Sexual Propagation</p> <ol style="list-style-type: none"> 1. Sexual propagation – advantages and disadvantages. 2. Seed germination, process of seed germination; factors affecting seed germination; 3. Pre-germination treatments and viability tests; sowing methods of seeds. 4. Polyembryony in propagation of <i>Opuntia</i>, trifoliate orange, mango and <i>Citrus</i>. <p>Unit -2: Asexual Propagation</p> <ol style="list-style-type: none"> 1. Asexual propagation – advantages and disadvantages. 2. Using bulbs, corms, tubers and rhizomes to raise nursery 3. Stolons, runners and offsets in raising nursery.
July 2022	<ol style="list-style-type: none"> 4. Apomixis : Definition; role of apomictics in propagation of apple, mangosteen and citrus <p>Unit- 3 : Vegetative Propagation Techniques</p> <ol style="list-style-type: none"> 1. Cuttings: Definition, propagation by root, leaf and stem cuttings. 2. Layering : Definition, techniques of simple, serpentine, mound, trench and air layering. 3. Grafting : Definition; approach and detached scion (Veneer, whip, cleft, side and bark) grafting techniques. 5. Budding : Definition; techniques of T- , patch and chip budding.
August 2022	<p>Unit – 4 : Basic requirements of a Nursery</p> <ol style="list-style-type: none"> 1. Plant nursery: Definition, importance; Basic facilities for a nursery; layout and components of a good nursery. 2. Nursery beds – types, their merits and demerits; precautions to be taken during preparation. 3. Brief account of growing media; nursery tools and implements. 4. Containers for plant nursery. 5. Brief account of plant propagation structures.

September 2022	Unit -5: Nursery Management 1. Bureau of Indian Standards (BIS-2008) related to nursery; guidelines for nursery raising. 2. Nursery accreditation and Certification. 3. Seasonal activities and routine operations in a nursery; watering, weeding and control of pests and diseases. 4. Common possible errors in nursery activities. 5. Economics of nursery development and record maintenance; online nursery information and sales systems.
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**II B.Sc., III SEMESTER, PAPER-III
SEMESTER - III, COURSE - III**

BASICS OF VEGETABLE SCIENCE (OLERICULTURE)

MONTH	TOPIC
November 2021	Unit - 1 : Introduction to Vegetable Crops 1. Importance of vegetable cultivation in India and Andhra Pradesh. 2. Classification and Nutritive value of vegetables.
December 2021	3. Area and production of vegetables in India and Andhra Pradesh. 4. Export and import potential of vegetables in India. Constraints in vegetable production and remedies to overcome them. Unit - 2 : Solanaceous and Leafy Vegetables Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, manuring, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops: Cultivation of (a) Brinjal (b) Tomato (c) <i>Capsicum</i> (d) Spinach (e) Coriander (d) <i>Mentha</i>
January 2022	Unit - 3 : Root and Tuber Crops Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, manuring, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops: Cultivation of (a) Carrot (b) Beet root (c) Tapioca and (d) <i>Colocasia</i>
	Unit - 4 : Cole Crops

September 2022	<p>Unit -5: Nursery Management</p> <ol style="list-style-type: none"> 1. Bureau of Indian Standards (BIS-2008) related to nursery; guidelines for nursery raising. 2. Nursery accreditation and Certification. 3. Seasonal activities and routine operations in a nursery; watering, weeding and control of pests and diseases. 4. Common possible errors in nursery activities. 5. Economics of nursery development and record maintenance; online nursery information and sales systems.
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**II B.Sc., III SEMESTER , PAPER-III
SEMESTER - III, COURSE – III**

BASICS OF VEGETABLE SCIENCE (OLERICULTURE)

MONTH	TOPIC
November 2021	<p>Unit – 1 : Introduction to Vegetable Crops</p> <ol style="list-style-type: none"> 1. Importance of vegetable cultivation in India and Andhra Pradesh. 2. Classification and Nutritive value of vegetables.
December 2021	<ol style="list-style-type: none"> 3. Area and production of vegetables in India and Andhra Pradesh. 4. Export and import potential of vegetables in India. Constraints in vegetable production and remedies to overcome them. <p>Unit – 2 : Solanaceous and Leafy Vegetables</p> <p>Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, manuring, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops: Cultivation of (a) Brinjal (b) Tomato (c) <i>Capsicum</i> (d) Spinach (e) Coriander (d) <i>Mentha</i></p>
January 2022	<p>Unit – 3 : Root and Tuber Crops</p> <p>Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, manuring, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops: Cultivation of (a) Carrot (b) Beet root (c) Tapioca and (d) <i>Colocasia</i></p>
	<p>Unit – 4 : Cole Crops</p>

February 2022	Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, manuring, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops: Cultivation of (a) Cabbage and (b) Cauliflower
March 2022	Unit – 5 : Leguminous Vegetables Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, manuring, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops: Cultivation of (a) Cluster bean (b) Cow pea and (d) <i>Dolichos</i>

II B.Sc., IV SEMESTER, PAPER-IV

SEMESTER - IV, COURSE - IV

BASICS OF FRUIT SCIENCE (POMOLOGY)

MONTH	TOPIC
April 2022	Unit – 1 : Introduction to Fruit crops 1. Importance of fruit growing in India and Andhra Pradesh. 2. Nutritive value of fruits.
May 2022	3. Area and production of India and Andhra Pradesh. 4. Export and import potential of fruits in India. Constraints in fruit production and remedies to overcome them.
June 2022	Unit – 2 : Tropical Fruit Crops Origin, history, distribution, area and production, uses and composition, varieties, soil and climatic requirements, propagation, planting, training and pruning, manuring and fertilizer application, irrigation, intercropping, harvesting and yield, diseases and pests of the following tropical fruit crops: (a)Mango (b) Guava and (c) Papaya Unit – 3 : Sub-tropical and Temperate Fruit Crops Origin, history, distribution, area and production, uses and composition.

	<p>varieties, soil and climatic requirements, propagation, planting, training and pruning, manuring and fertilizer application, irrigation, intercropping, harvesting and yield, diseases and pests of the following sub-tropical and temperate fruit crops:</p> <p>(a) Grapes (b) Pomegranate (c) Citrus and (d) Apple</p>
July 2022	<p>Unit – 4 : Arid and Minor Fruit crops</p> <p>Origin, history, distribution, area and production, uses and composition, varieties, soil and climatic requirements, propagation, planting, training and pruning, manuring and fertilizer application, irrigation, inter cropping, harvesting and yield, diseases and pests of the following arid fruit crops: (a) Amla (b) Dates and (c) Wood apple</p>
August 2022	<p>Unit – 5 : Management Practices for Fruit Crops</p> <ol style="list-style-type: none"> 1. Sustainable Production Practices for Local Fruit Production. 2. Integrated Orchard Management/Principles of IPM. 3. Harvesting and Labor Concerns 4. Grading, packing, storage and marketing of fruits.

II B.Sc., IV SEMESTER , PAPER-V

SEMESTER - IV, COURSE – V


PESTS AND DISEASES OF HORTICULTURE PLANTS AND THEIR MANAGEMENT

MONTH	TOPIC
April 2022	<p>Unit – 1 : Basics of Entomology and Plant Pathology</p> <ol style="list-style-type: none"> 1. Classification of Insects up to orders and families of economic importance; Study of insect pests (Distribution, host range, biology, nature of damage and management) in horticultural crops. 2. Disease triangle and disease pyramid; Plant Pathology : Definition
May 2022	<ol style="list-style-type: none"> 3. A general account on symptoms of plant diseases caused by Viruses and Bacteria. <p>A general account on symptoms of plant diseases caused by Fungi.</p>
June 2022	<p>Unit – 2 : Pests and diseases of Vegetables Crops.</p> <ol style="list-style-type: none"> 1. Bhendi : Spotted boll worms, Red cotton bug, Yellow vein mosaic, 2. Cucurbits : Fruit flies, Pumpkin beetles; Downy and powdery mildews, 3. Potato : Potato tuber moth, Golden cyst nematode; Late blight. 4. Sweet Potato : Sweet potato weevil, Vine borer; Mottled necrosis. <p>Unit – 3 : Pests and diseases of Fruit crops</p> <ol style="list-style-type: none"> 1. Coconut : Rhinoceros beetle, Burrowing nematode; Ganoderma root rot, Grey blight 2. Banana : Banana weevil, banana aphids; Panama wilt. Bunchy top 3. Cashew : Tea mosquito bug, Cashew stem borer; Anthracnose, 2.Pink disease 4. Custard apple : Mealy bug, Fruit boring caterpillar; Anthracnose, Glomerella fruit rots
July 2022	<p>Unit – 4 : Pests and diseases of Commercial Flower Crops</p> <ol style="list-style-type: none"> 1. Rose : Rose aphid, Dieback, and black spot 2. Marigold : Aphids, leaf spot, and bud rot 3. Gerbera : Thrips, white flies and Blossom blight 4. Gladiolus : Cut worms, leaf eating caterpillar and corm rot.

August 2022

Unit – 5 : Management of Pests and Diseases.

1. Principles and methods of plant disease management.
2. Integrated Plant disease management.
3. Fungicides classification based on chemical nature; commonly used insecticides, fungicides, bactericides and nematocides.
4. Preparation of fungicidal solutions, slurries, pastes and their application.


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DEPARTMENT OF ZOOLOGY & AQUACULTURE TECHNOLOGY

ZOOLOGY AND AQUACULTURE TECHNOLOGY

Academic Plan



2021-2022

ASD GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS)

DEPARTMENT OF ZOOLOGY & AQUACULTURE TECHNOLOGY

AQUACULTURE TECHNOLOGY ACADEMIC PLAN 2021-22

I SEMESTER

MONTH	TOPIC COVERED
November'21	UNIT I : Introduction of aquaculture , blue revolution & History
December'21	UNIT II : Pond Ecosystem
January'22	UNIT III: Types of Fish Ponds
February'22	UNIT IV :Pond Preparation
March'22	UNIT V: Pond Management Factors

II SEMESTER

MONTH	TOPIC COVERED
June'22	UNIT I : general characters & Classification of Cultivable Fin & Shell Fish.
July'22	UNIT II : Food, Feeding and Growth fin & shell fish.
August'22	UNIT III : Reproductive biology of fish and shell fish.
September'22	UNIT IV : Development of fin & shell fish.
October'22	UNIT II : Hormones & Growth of fin & shell Fish.

III SEMESTER

MONTH	TOPIC COVERED
November'21	UNIT I : Nutritional Requirements of cultivable fish
December'21	UNIT II : Forms of feeds & Feeding methods
January'22	UNIT III : Feed manufacture and Storage
February'22	UNIT IV : Feed additives and Non Nutrient Ingredients
March'22	UNIT V : Nutritional Deficiency in cultivable fish

IV SEMESTER

MONTH	TOPIC COVERED
April'22	Paper-IV : UNIT I: introduction of fresh water aquaculture Paper-V : UNIT I: Diseases of fin fishes
May'22	Paper-IV: UNIT II: Carp Culture Paper-V : UNIT II: Diseases of Shell Fish
June'22	Paper-IV: UNIT III: Culture of Air Breathing and Cold Water Fish Paper-V : UNIT III: Fish Health Management
July'22	Paper-IV: UNIT IV: Culture of Prawn Paper-V : UNIT IV: Fisheries Economics -I
August'22	Paper-IV :UNIT V: Culture of Brackish Water Species Paper-V : UNIT V: Fisheries Economics -II

V SEMESTER

MONTH	TOPIC COVERED
September'21	Paper V : Pathology and parasitology Paper VI : Introduction to fisheries economics
October'21	Paper V : Diseases of fin fish Paper VI: Fisheries marketing
November'21	Paper V: Diseases of shell fish Paper VI : Fisheries economics
December'21	Paper V: Nutritional Diseases Paper VI: Fisheries Extension
January'22	Paper V: Fish health management Paper VI: Transfer of Technology

VI SEMESTER

MONTH	TOPIC COVERED
February'22	Paper : VII (A) UNIT I - introduction to ornamental fish & aquarium Paper : VIII – B -1 : Introduction to fish preservation Paper : VIII- B -2 : Introduction to microbiology in aquatic environment Paper : VIII- B -3: Quality management & Quality Standards of fish
March'22	Paper : VII (A) UNIT II : Fresh Water Ornamental Fishes Paper : VIII – B -1 : Freezing and Canning Paper : VIII- B -2 : Aquatic microbiology Paper : VIII- B -3: sensory evolution of fishes & Statistical Analysis of fishery products
April'22	Paper : VII (A) UNIT III : Marine ornamental Fishes Paper: VIII – B -1: Drying, smoking and Freeze –Drying. Paper : VIII- B -2 : Fish Microbiology Paper : VIII- B -3: IDP & SAT formations, Factory sanitation and hygiene
May'22	Paper : VII (A) UNIT IV : Aquarium Management Paper : VIII – B -1 : Paking and cold storage Paper : VIII- B -2 :Fishery by products Paper : VIII- B -3: Hazards in sea foods
June'22	Paper : VII (A) UNIT V :Commercial Production of Aquarium fish and prawn Paper : VIII – B -1 : Export of fishery Products Paper : VIII- B -2 : Fishery Value Added products Paper : VIII- B -3: hazards in sea foods


 DEPARTMENT OF ZOOLOGY
**A.S.D. GOVT. COLLEGE FOR WOMEN
 KAKINADA-2**


**PRINCIPAL
 A.S.D. GOVT. DEGREE COLLEGE (W)
 AUTONOMOUS
 KAKINADA**

ASD GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS)
DEPARTMENT OF ZOOLOGY & AQUACULTURE TECHNOLOGY

ACADEMIC PLAN 2021-2022 - *Zoology*

I SEMESTER

MONTH	TOPIC COVERED
November'21	
December'21	UNIT I : Introduction & protozoa
January'22	UNIT II : Porifera , Coelenterata & Ctenophora
February'22	UNIT III: Platyhelminthes & Nematelminthes
March'22	UNIT IV :Annelida& Arthropoda UNIT V: Mollusca , Echinodermata & hemichordata

II SEMESTER

MONTH	TOPIC COVERED
June'22	
July'22	UNIT I : Protochordata & urochordata
August'22	UNIT II : Cyclostomata & pisces
September'22	UNIT III : Amphibians & reptiles
October'22	UNIT IV : Aves UNIT II : Mammals

III SEMESTER

MONTH	TOPIC COVERED
November'21	UNIT I : Cell biology I
December'21	UNIT II : Cell biology II
January'22	UNIT III : Genetics I
February'22	UNIT IV : Genetics II
March'22	UNIT V : Evolution

IV SEMESTER


MONTH	TOPIC COVERED
April'22	Paper IV : Animal Physiology -I Paper V : Immunology -I
May'22	Paper IV: Animal Physiology -II Paper V : Immunology -II
June'22	Paper IV : Cellular metabolism-I Paper V : Techniques of Bio Technology
July'22	Paper IV : Cellular metabolism-I Paper V : Applications of Animal Biotechnology
August'22	Paper IV : Embryology , Paper V: Basics of PCR


V SEMESTER

MONTH	TOPIC COVERED
September'21	Paper V : Tools of recombinant technology Paper VI : Introduction to poultry farming
October'21	Paper V :Techniques of r DNA technology Paper VI: Poultry feed management
November'21	Paper V: Animal cell technology Paper VI : Selection , care & handling of hatching eggs
December'21	Paper V: Reproductive technologies & transgenic animals Paper VI: Breeds of dairy cattle & buffaloes
January'22	Paper V: Applied biotechnology Paper VI: Care & management of animals

VI SEMESTER

MONTH	TOPIC COVERED
February'22	Paper : VII (A) UNIT I - immune system , cells & organs of immune system Paper : VIII – B -1 : Basics of aquaculture Paper : VIII- B -2 : breeding & hatchery management Paper : VIII- B -3: handling & principles of fish preservation
March'22	Paper : VII (A) UNIT II : Antigens Paper : VIII – B -1 : types of aquaculture Paper : VIII- B -2 : water quality management Paper : VIII- B -3: methods of fish preservation
April'22	Paper : VII (A) UNIT III : Antibodies Paper : VIII – B -1 : design & construction of aqua farms Paper : VIII- B -2 : feed management Paper : VIII- B -3: fish products & by-products
May'22	Paper : VII (A) UNIT IV : Working of immune system Paper : VIII – B -1 : management of carp culture ponds Paper : VIII- B -2 :disease management Paper : VIII- B -3: sanitation & quality control
June'22	Paper : VII (A) UNIT V :Health & disease , vaccines Paper : VIII – B -1 : culture shrimp Paper : VIII- B -2 : economics ,marketing , fisheries extension & fish genetics Paper : VIII- B -3: quality assurance , management &certification


 LECTURER IN ZOOLOGY
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A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A) KAKINADA

DEPARTMENT OF Microbiology

ANNUAL ACADEMIC PLAN 2021-2022

IB.Sc.,-Botany-I/ Semester End (W.E.F.2020-21)

INTRODUCTION TO MICROBIOLOGY AND MICROBIAL DIVERSITY

MONTH	TOPIC
November 2021	<p>History and mile stones in microbiology. Contributions of Anton von Leeuwenhoek, Edward Jenner, Louis Pasteur, Robert Koch, Ivanowsky and Winogradsky. Importance and applications of microbiology. Classification of microorganisms - Haeckel's three Kingdom concept, Whittaker's five kingdom concept, three domain concept of Carl Woese. Outline classification of bacteria as per the second edition of Bergey's Manual of Systematic Bacteriology.</p>
December 2021	<p>General characteristics of Bacteria, Archaea, Mycoplasmas and Cyanobacteria. Ultra structure of Prokaryotic cell- Variant components and invariant components. - General characteristics of viruses. Morphology, Structure and replication of TMV and HIV</p>
January 2022	<p>General characteristics and outline classification of Fungi, Algae and Protozoa. Principles of microscopy - Bright field and Electron microscopy (SEM and TEM).</p>
	<p>Chemical methods - alcohols, aldehydes, fumigants, phenols, halogens, heavy metals, quaternary ammonium compounds and hypochlorites.</p>
February 2022	<p>- Staining Techniques - Simple and Differential (Gram Staining and Spore Staining). - Sterilization and disinfection techniques - Physical methods - autoclave, hot- air oven, pressure cooker, laminar air flow, filter sterilization, Radiation methods - UV rays, Gamma rays and ultrasonic methods.</p>

March 2022

Isolation of Microorganisms from natural habitats.
Pure culture techniques – dilution-plating, Streak-plate, Spread-plate, Pour-Plate and micromanipulator. Enrichment culturing.
Preservation of microbial cultures – subculturing, overlaying cultures with mineral oils, lyophilization, sand cultures, storage at low temperature.

A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A) KAKINADA

DEPARTMENT OF BOTANY

ANNUAL ACADEMIC PLAN 2021-2022

IB.Sc., - Microbiology - II Semester End (W.E.F. 2020-21)

MICROBIAL BIOCHEMISTRY & METABOLISM

MONTH	TOPIC
June 2022	Outline classification and general characteristics of carbohydrates (monosaccharides, disaccharides and polysaccharides). General characteristics of amino acids and proteins. Structure of nitrogenous bases, nucleotides Fatty acids (saturated and unsaturated) lipids (spingolipds, sterols and phospholipids).
July 2022	Principle and applications of -Colorimetry Chromatography (paper and thin-layer) Spectrophotometry (UV & visible),
August 2022	Properties and classification of Enzymes. Biocatalysis- induced fit and lock and key models. Coenzymes and Cofactors. Factors affecting catalytic activity. Inhibition of enzyme activity- competitive, noncompetitive, uncompetitive and allosteric Factors influencing microbial growth. Methods for measuring microbial growth - Direct microscopy, viable count estimates, turbidometry and biomass.

A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A) KAKINADA

DEPARTMENT OF BOTANY

ANNUAL ACADEMIC PLAN 2021-2022

IB.Sc., -Microbiology-II Semester End (W.E.F. 2020-21)

MICROBIAL BIOCHEMISTRY & METABOLISM

MONTH	TOPIC
June 2022	Outline classification and general characteristics of carbohydrates (monosaccharides, disaccharides and polysaccharides). General characteristics of amino acids and proteins. Structure of nitrogenous bases, nucleotides Fatty acids (saturated and unsaturated) lipids (spingolipds, sterols and phospholipids).
July 2022	Principle and applications of -Colorimetry Chromatography (paper and thin-layer) Spectrophotometry (UV & visible),
August 2022	Properties and classification of Enzymes. Biocatalysis- induced fit and lock and key models. Coenzymes and Cofactors. Factors affecting catalytic activity. Inhibition of enzyme activity- competitive, noncompetitive, uncompetitive and allosteric Factors influencing microbial growth. Methods for measuring microbial growth -- Direct microscopy, viable count estimates, turbidometry and biomass.

September
2022

Microbial Nutrition –Nutritional requirements and uptake of nutrients by cells.
Nutritional groups of microorganisms- autotrophs, heterotrophs, mixotrophs.
Growth media- synthetic, complex, selective, enrichment and differential media.
Microbial Growth- different phases of growth in batch cultures, Synchronous,
continuous, biphasic growth
Aerobic respiration -Glycolysis, HMP path way, ED path way, TCA cycle, Electron
transport, oxidative and substrate level phosphorylation.
Anaerobic respiration (Nitrate).
Fermentation - Alcohol and lactic acid fermentations.
Outlines of oxygenic and anoxygenic photosynthesis in bacteria.

A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A)KAKINADA

DEPARTMENT OF MICROBIOLOGY

ANNUAL ACADEMIC PLAN 2021-2022

III Semester - Paper - III

MICROBIAL GENETICS AND MOLECULAR BIOLOGY

MONTH	TOPIC
NOVEMBER 2021	DNA and RNA as genetic material. Structure and organization of prokaryotic DNA. Extrachromosomal genetic elements - Plasmids and transposons. Replication of DNA - Semi conservative mechanism, Enzymes involved in replication:
DECEMBER 2021	Mutations - spontaneous and induced, base pair changes, frame shifts, deletions, inversions, tandem duplications, insertions. Mutagens - Physical and Chemical mutagens. Outlines of DNA damage and repair mechanisms. Concept of gene - Muton, Recon and Cistron. Types of RNA and their functions. 1. Genetic code. Structure of ribosomes

**JANUARY
2022**

Types of genes – structural, constitutive, regulatory
Protein synthesis – Transcription and translation.

Regulation of gene expression in bacteria – *lac* operon.

General account on application of genetic engineering in industry, agriculture and medicine.

Disadvantages of GM crops

**FEBRUAR
Y2022**

Concepts of productivity: GPP, NPP and Community
Respiration Secondary production, P/R ratio and Ecosystems

Basic principles of genetic engineering.

Restriction endonucleases, DNA polymerases and ligases. Vectors.

Outlines of gene cloning methods.

Polymerase chain reaction. Genomic and cDNA libraries.

A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A) KAKINADA

DEPARTMENT OF MICROBIOLOGY

ANNUAL ACADEMIC PLAN 2021-2022

HB.Sc. MICROBIOLOGY IV Semester

PAPER-IV: IMMUNOLOGY AND MEDICAL MICROBIOLOGY

MONTH	TOPIC
APRIL 2022	<p>Types of immunity – innate and acquired; active and passive; humoral and cell-mediated immunity.</p> <p>Primary and secondary organs of immune system – thymus, bursa fabricus, bone marrow, spleen and lymph nodes.</p> <p>Cells of immune system.</p> <p>Identification and function of B and T lymphocytes, null cells, monocytes, macrophages, neutrophils, basophils and eosinophils and Mast cells.</p>
MAY 2022	<p>Antigens – types, chemical nature, antigenic determinants, haptens.</p> <p>Factors affecting antigenicity.</p> <p>Antibodies – basic structure, types, properties and functions of immunoglobulins.</p> <p>Types of antigen-antibody reactions - Agglutinations, Precipitation, Neutralization, complement fixation, blood groups.</p> <p>Labeled antibody based techniques – ELISA, RIA and Immunofluorescence. Polyclonal and monoclonal antibodies – production and applications.</p> <p>Concept of hypersensitivity and Autoimmunity.</p>

JUNE 2022

Normal flora of human body.
Host pathogen interactions: infection, invasion, pathogen, pathogenicity, virulence and opportunistic infection.
General account on nosocomial infection.
General principles of diagnostic microbiology- collection, transport and processing of clinical samples.
General methods of laboratory diagnosis - cultural, biochemical, serological and molecular methods

JULY 2022

Antibacterial Agents- Penicillin, Streptomycin .
Antifungal agents – Amphotericin B, Griseofulvin
Antiviral substances - Amantadine and Acyclovir
Tests for antimicrobial susceptibility.
Brief account on antibiotic resistance in bacteria - Methicillin-resistant Staphylococcus aureus (MRSA).
Vaccines – Natural and recombinant

AUGUST 2022

General account on microbial diseases – causal organism, pathogenesis, epidemiology, diagnosis, prevention and control
Bacterial diseases – Tuberculosis and Typhoid
Fungal diseases – Candidiasis.
Protozoal diseases – Malaria.
Viral Diseases - Hepatitis- A and AIDS

A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A) KAKINADA

DEPARTMENT OF MICROBIOLOGY

ANNUAL ACADEMIC PLAN 2021-2022

II B.Sc. MICROBIOLOGY IV Semester Paper-V
ENVIRONMENTAL & AGRICULTURAL MICROBIOLOGY

MONTH	TOPIC
September 2022	Terrestrial Environment: Soil profile and soil microflora Aquatic Environment: Microflora of fresh water and marine habitats Atmosphere: Aeromicroflora and dispersal of microbes
October 2022	Role of microorganisms in nutrient cycling (Carbon, nitrogen, phosphorus). Treatment and safety of drinking (potable) water, methods to detect potability of water samples: (a) standard qualitative procedure: presumptive test/MPN test, confirmed and completed tests for faecal coliforms (b) Membrane filter technique. Microbial interactions – mutualism, commensalism, antagonism, competition, parasitism, predation
November 2022	Outlines of Solid Waste management: Sources and types of solid waste, Methods of solid waste disposal (composting and sanitary landfill). Liquid waste management: Composition and strength of sewage (BOD and COD), Primary, secondary (oxidation ponds, trickling filter, activated sludge process and septic tank) and tertiary sewage treatment.

December 2022

Plant Growth Promoting Microorganisms - Mycorrhizae, Rhizobia, *Azospirillum*, *Azotobacter*, *Frankia*, phosphate-solubilizers and Cyanobacteria.
Outlines of biological nitrogen fixation (symbiotic, non-symbiotic).
Biofertilizers - *Rhizobium*

Concept of disease in plants. Symptoms of plant diseases caused by fungi, bacteria, and viruses. Plant diseases - groundnut rust, Citrus canker and tomato leaf curl.
Principles of plant disease control

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A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A)KAKINADA

DEPARTMENT OF MICROBIOLOGY

ANNUAL ACADEMIC PLAN 2021-2022

III B.Sc., V-SEMESTER, MICROBIOLOGY PAPER-V
FOOD AND INDUSTRIAL MICROBIOLOGY

MONTH	TOPIC
SEPTEMBER 2021	Intrinsic and extrinsic parameters that affect microbial growth in food Microbial spoilage of food - fruits, vegetables, milk, meat, egg, bread and canned foods Food intoxication (botulism). Food-borne diseases (salmonellosis) and their detection,
OCTOBER 2021	Principles of food preservation - Physical and chemical methods. Fermented Dairy foods – cheese and yogurt. Microorganisms as food – SCP, edible mushrooms (white button, oyster and paddy straw). Probiotics and their benefits
NOVEMBER 2021	Microorganisms of industrial importance – yeasts, (<i>Saccharomyces cerevisiae</i>) moulds, (<i>Aspergillus niger</i>) Bacteria (<i>E.coli</i>), actinomycetes (<i>Streptomyces griseus</i>). Outlines of Isolation and Screening and strain improvement of industrially-important microorganisms
DECEMBER 2021	Types of fermentation processes – solid state, liquid state, batch, fed-batch, continuous. Basic concepts of Design of fermenter. Ingredients of Fermentation media Downstream processing - filtration, centrifugation, cell disruption, solvent extraction Microbial production of Industrial products - Citric acid, Ethanol, amylases, penicillin, glutamic acid and vitamin B12.

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DEPARTMENT OF MICROBIOLOGY

ANNUAL ACADEMIC PLAN 2021-2022

III B.Sc., V-SEMESTER

PAPER-VI : MICROBIAL BIOTECHNOLOGY

MONTH	TOPIC
SEPTEMBER 2021	Microbial biotechnology: Scope and its applications in human therapeutics, agriculture (Biofertilizers, PGPR, Mycorrhizae), environmental, and food technology. Genetically engineered microbes for industrial application: Bacteria and yeast
OCTOBER 2021	Recombinant microbial production processes in pharmaceutical industries Streptokinase, recombinant vaccines (Hepatitis B vaccine). Over view of production and applications of Microbial polysaccharides, Bioplastics and Microbial biosensors
NOVEMBER 2021	Microbial based transformation of steroids and sterols. Bio-catalytic processes and their industrial applications: Production of high fructose syrup and production of cocoa butter substitute. Immobilization methods and their application: Whole cell immobilization
DECEMBER 2021	Bio-ethanol and bio-diesel production: commercial production from lignocellulosic waste and algal biomass. Biogas production: Methane and hydrogen production using microbial culture. Microorganisms in bioremediation: Degradation of xenobiotics. Mineral recovery, removal of heavy metals from aqueous effluents
	Outlines of Intellectual Property Rights: Patents, Copyrights, Trademarks

A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A) KAKINADA

DEPARTMENT OF MICROBIOLOGY

ANNUAL ACADEMIC PLAN 2021-2022

III B.Sc., VI- SEMESTER

MICROBIOLOGY-CLUSTER ELECTIVE

PAPER-VIII A-1 : MICROBIAL DIAGNOSIS IN HEALTH CLINICS

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MONTH	TOPIC
February 2022	Study of Bacterial,(Tuberculosis and Typhoid) Viral,(Influenza and HIV) Fungal (Aspergillosis and Candidiasis)and Protozoan Malaria and Amebiasis) Diseases affecting humans
March 2022	Collection of clinical samples (oral cavity, throat, skin, blood, CSF, urine and faeces) and precautions required. Method of transport of clinical samples to laboratory and storage
April 2022	Examination of sample by staining - Gram stain, Ziehl-Neelson staining for tuberculosis, Giemsa-stained thin blood film for malaria Preparation and use of culture media - Blood agar, Chocolate agar, Lowenstein-Jensen medium, MacConkey agar, Distinct colony properties of various bacterial pathogens
May 2022	Serological Methods - Agglutination, ELISA, immunofluorescence, Nucleic acid based methods - PCR, Nucleic acid probes. Typhoid, Dengue and HIV, Swine flu.
May 2022	Importance, Determination of resistance/sensitivity of bacteria using disc diffusion method, Determination of minimal inhibitory concentration (MIC) of an antibiotic by serial double dilution method

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A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A)KAKINADA

DEPARTMENT OF MICROBIOLOGY

ANNUAL ACADEMIC PLAN 2021-2022

III B.Sc., VI- SEMESTER
MICROBIOLOGY-CLUSTER ELECTIVE-
PAPER -VIII A2 : MICROBIAL QUALITY CONTROL IN FOOD AND PHARMACEUTICAL
INDUSTRIES

MONTH	TOPIC
February 2022	Good laboratory practices - Good microbiological practices. Biosafety cabinets - Working of biosafety cabinets, using protective clothing, specification for BSL-1, BSL-2, BSL-3. Discarding biohazardous waste - Methodology of Disinfection, Autoclaving & Incineration
March 2022	Culture and microscopic methods - Standard plate count, Most probable numbers, Direct microscopic counts, Biochemical and immunological methods: Limulus lysate test for endotoxin, gel diffusion, sterility testing for pharmaceutical products
April 2022	Molecular methods - Nucleic acid probes, PCR based detection, biosensors.
April 2022	Enrichment culture technique, Detection of specific microorganisms - on XLD agar, <i>Salmonella Shigella</i> Agar, Manitol salt agar, EMB agar, McConkey Agar, Sabouraud Agar Ascertaining microbial quality of milk by MBRT, Rapid detection methods of microbiological quality of milk at milk collection centres (COB, 10 min Resazurin assay).
May 2022	Hazard analysis of critical control point (HACCP) - Principles, flow diagrams, limitations Microbial Standards for Different Foods and Water - BIS standards for common foods and drinking water.

A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A)KAKINADA

DEPARTMENT OF Microbiology

ANNUAL ACADEMIC PLAN 2021-2022

III BSC Microbiology-SEMESTER VI
PAPER VIII—CLUSTER ELECTIVE
PAPER—VIII A3 Biofertilizers & Biopesticides

MONTH	TOPIC
February 2022	Unit I: General account of the microbes used as biofertilizers for various crop plants and their advantages over chemical fertilizers. Symbiotic N ₂ fixers: <i>Rhizobium</i> - Isolation, characteristics, types, inoculum production and field application, legume/pulses plants <i>Frankia</i> from non-legumes and characterization. Cyanobacteria from <i>Azolla</i> , characterization, mass multiplication, Role in rice cultivation, Crop response, field application.
March 2022	<u>UNIT – II</u> Free living <i>Azospirillum</i> , <i>Azotobacter</i> - isolation, characteristics, mass inoculum production and field application.
April 2022	<u>UNIT – III</u> Phosphate solubilizing microbes - Isolation, characterization, mass inoculum production, field application
April 2022	<u>UNIT – IV</u> Importance of mycorrhizal inoculum, types of mycorrhizae and associated plants, Mass inoculum production of VAM, field applications of Ectomycorrhizae and VAM.
May 2022	<u>UNIT – V</u> General account of microbes used as bioinsecticides and their advantages over synthetic pesticides. <i>Bacillus thuringiensis</i> - production, Field applications. Viruses – NPV cultivation and field applications.

D. Jayaram

V. Ananta Lakshmi

Annual Academic Plan 2021-2022

Department of History

I B.A Semester-I

Month	Paper-I	Ancient Indian History & Culture (from Indus Valley Civil.to 13th Century A.D)
Nov-2021	Unit-I	Ancient Indian Civilization-Indus Valley Civilization- Salient Features- Vedic Age- Society, Polity, Economy, Culture during early and later Vedic period
Dec-2021	Unit-II	Ancient Indian History & Culture- Jainism and Buddhism-Mauryan Administration- society, Economy & Culture – Asoka’s Dhamma- Kanishka’s contribution to Indian culture.
Jan-2022	Unit-III	History & Culture of South India – Sangam Literature- Administration, society, economy and culture under Satavahanas- Cultural contribution of Pallavas
Feb-2022	Unit-IV	India from 3 rd Cen A.D to 8 th Cen. A.D Administration, economy, religion, art, literature and science & Technology under Guptas- Samudra Gupta- Cultural contribution of Harsha- Arab conquest of Sind and its Impact.
March-2022	Unit- V	History and culture of South India – Local Self Government of Cholas – Administration, Society, Economy and Culture under Kakatiyas – Rudrama Devi

Annual Academic Plan 2021-2022

Department of History

II B.A Semester-III

Month	Paper-III	Modern Indian History & Culture (1764-1947 A.D)
Nov-2021	Unit-I	Policies of Expansion- Warren Hastings, Cornwallis – Subsidiary Alliance & Doctrine of Lapse – Causes & Results of 1857 Revolt – Lytton, Rippon, Curzon
Dec-2021	Unit-II	Social, Religious & Self- Respect Movements- Raja Rama Mohan Roy, Dayananda Saraswathi, Swami Vivekananda, Jyothiba Phule, Narayana Guru, Periyar, Dr.B.R. Ambedkar
Jan-2022	Unit-III	Causes for the growth of Nationalism – Freedom Struggle from 1885- 1920, Moderate Phase – Militant Phase, Vandemataram Movement – Home Rule Movement
Feb-2022	Unit-IV	Freedom Struggle from 1920 – 1947 – Gandhiji’s Role in the National Movement – Revolutionary Movement – Subhas Chandra Bose
March-2022	Unit- V	Muslim league & Growth of Communalism – Partition of India- Advent of Freedom – Integration of Princely States into Indian Union – Sardar Valla Bhai Patel

Annual Academic Plan 2021-2022

Department of History

III B.A Semester-V Paper- V

Month	Paper- V	Age of Rationalism and Humanism (History of Modern World 1453-1821 A.D)
Sept- 2021	Unit-I	Feudalism- Geographical Discoveries- Causes- Compass & Maps – Portugal Leads and Western World Follows- Consequences
Oct- 2021	Unit-II	The Renaissance Movement- Factors for the growth of Renaissance- Characteristic Features – Transformation from Medieval to Modern World- Reformation & Counter Reformation movements The back ground- Protestantism – spread of the movement – Counter Reformation – effects
Nov - 2021	Unit-III	Emergence of Nation States – Contributory factors – England and other Nation States – Impact due to the Emergence of Nation States Age of Revolutions – The Glorious Revolution (1688)- Origin of Parliament – Constitutional Settlement – Bill of Rights – Results
Dec - 2021	Unit-IV	Age of Revolutions- The American Revolution (1776), - causes- course- Declaration of Independence ,1776 -Bill of Rights
Jan - 2022	Unit- V	Age of Revolutions- The French Revolution (1789)- causes- Teachings of Philosophers – Results-

Annual Academic Plan 2021-2022

Department of History

III B.A Semester-V Paper- VI

Month	Paper- VI	History & Culture of Andhra Desa (from 12th to 19th Cen. A.D)
Sept- 2021	Unit-I	Andhra during 12 th & 13 th Cen. A.D Kakatiyas – Origin- Administration- Socio, Economic life – Literature- Architecture & Sculpture – Decline- The Reddy Kingdoms- patronage to literature- trade & Commerce
Oct- 2021	Unit-II	Vijayanagara empire- polity, Administration, society & Economy- Sri Krishna Deva Raya contribution to Andhra Culture- Development of Literature & Architecture – Decline and downfall
Nov - 2021	Unit-III	The Qutub Shahis of Golkonda -Origin- Decline- Administration, Society & Economy-Literature & Architecture.
Dec - 2021	Unit-IV	East India Company's authority over Andhra- Three Carnatic Wars – Occupation of Northern Circars and Ceded Districts – Peasants and Tribal Revolts
Jan - 2022	Unit- V	Impact of Company's rule on Andhra – Administration – Land Revenue Settlements -Society – Education – Religion – Impact of Industrial Revolution on Economy- Peasantry & Famines – contribution of Sir Thomas Munroe, C.P. Brown & Sir Arthur Cotton – Impact of 1857 Revolt in Andhra

Annual Academic Plan 2021-2022

Department of History

I B.A Semester-II

Month	Paper-II Medieval Indian History & Culture (1206-1764 A.D)	
May-2022	Unit-I	Impact of Turkish Invasions -Balban, Allauddhin, Md. Bin Tughlaq – Administration, society, economy, Religion and cultural developments under Delhi Sultanate.
June -2022	Unit-II	Impact of Islam on Indian Society and Culture – Bhakti Movement- Vijayanagara Empire – Administration, Society, Economy and Cultural developments.
July -2022	Unit-III	Mughal Empire – Babur- Sur Interregnum – Expansion & consolidation of Mughal Empire – Akbar , Jahangir, Shahjahan, Aurangzeb
Aug -2022	Unit-IV	Administration, Economy, Society and Cultural Developments under the Mughals – Downfall of the empire – Rise of Marathas under Shivaji.
Sept - 2022	Unit- V	India under Colonial Hegemony- Beginning of European Settlements – Anglo-French Struggle – Conquest of Bengal by EIC.

Annual Academic Plan 2021-2022

Department of History

III B.A Semester- VI Paper – VII (Elective)

Month	Paper-VII (Elective) History of Modern Europe (from 19th Cen. – 1945 A.D)	
Feb- 2022	Unit-I	Industrial Revolution -Origin, Nature and Impact
March -2022	Unit-II	Unification of Italy & Germany and their impact
April- 2022	Unit-III	Communist Revolution in Russia – Causes, Course and Results – Impact on World Order
May – 2022	Unit-IV	World War I -Results – Paris Peace Conference – League of Nations
June- 2022	Unit- V	World War II, Causes, Fascism, Nazism – Results- The U.N.O – Structure, Functions and Challenges.

Annual Academic Plan 2021-2022

Department of History

II B.A Semester-IV Paper - IV

Month	Paper-IV	History & Culture of Andhra (1512 – 1956)
April / May 2022	Unit-I	The Qutub Shahis of Golkonda-Administration, Society & Economy – Literature & Architecture – Advent of European settlements in Andhra – Occupation of Northern Circars and Ceded Districts – Early Revolts against the British
June -2022	Unit-II	Andhra Under British Rule – Administration- Land Revenue- Society education Religion – Impact of industrial Revolution on economy – peasantry & Famines contribution of Sir Thomas Munroe & C.P. Brown- impact of 1857 revolution in Andhra.
July -2022	Unit-III	Social Reform & New literary Movements – Kandukuri- Raghupati V. Naidu, Gurazada, Komarraju V. Lakshmana Rao, Rayaprolu Subba Rao, Gurrām Jashuva, Boyi Bhimanna, Sri Sri.
Aug - 2022	Unit-IV	Freedom Movement in Andhra (1885-1947) – Vandematharam movement – Home Rule movement in Andhra – No Co-Operation movement – Alluri - Rampa Revolt (1922-24) Civil disobedience movement -Quit India movement.
Sept -2022	Unit- V	Movement for separate Andhra State -A. P (1956)- causes- Andhra Maha Sabha – Sri Bagh Pact – Martyrdom of Potti Sriramulu- Formation of separate Andhra State (1953)- Movement for formation of A.P(1956)-Visalalandhra Maha Sabha – Role of Communists – State Reorganization Committee – Gentlemen’s Agreement – Formation of Andhra Pradesh.

Annual Academic Plan 2021-2022

Department of History

II B.A Semester-IV Paper - V

Month	Paper-V	History of Modern World (from 15 th Cen.to 1945 A.D)
April / May 2022	Unit-I	Transformation from Medieval to Modern Era – Chief Characteristics – Glorious Revolution (1688) – Origin of Parliament – Bill of Rights – Results
June -2022	Unit-II	American Revolution (1776)- French Revolution (1789) – Causes, Course and Results
July -2022	Unit-III	Unification of Italy - Unification of Germany
Aug - 2022	Unit-IV	Communist Revolution in Russia – World War I- Causes – Results – Paris Peace Conference – League of Nations
Sept -2022	Unit- V	World War – II, Causes, Fascism & Nazism – Results – The U N O -Structure, Functions and Challenges.

V. Arant
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Annual Academic Plan 2021-2022

Department of Economics

I B.A Semester-I

Month	Paper-I MICRO ECONOMIC ANALYSIS	
Nov-2021	Unit-I	<p>Definitions of Economics-Scarcity and Choice as fundamental problems of economics –Opportunity Cost - Micro and Macro Analysis - Micro economic analysis – Scope and Importance -Principles of Microeconomics</p> <p><u>Production Possibilities Curve: Allocation of Resources - Optimization, Equilibrium and Marginal analysis -Rationality Principle the concept of Welfare</u></p>
Dec-2021	Unit-II	<p>Concept of Demand -Factors determining demand - Law of Demand - reasons and exceptions - Elasticity of Demand -Cardinal and Ordinal utility - Indifference Curve analysis: Properties of Indifference curves, Indifference Curve Map -Marginal Rate of Substitution - Budget Line - Changes -Consumer Equilibrium under Indifference Curve Analysis – Consumers’ Surplus and Indifference Curve Analysis.</p>
Jan-2022	Unit-III	<p>Concept and Objectives of Firm - Production Function: Cobb- Douglas Production Function-Law of Variable Proportions -Laws of Returns to Scale - Economies of large scale - Concepts of Cost - Total, Average and Marginal Costs - Law of Supply - Concept of Revenue : Total, Average and Marginal Revenues - Relation between Average and Marginal Revenues and elasticity of Supply.</p>
Feb-2022	Unit-IV	<p>Concepts of Market: Criteria for Classification of Markets - Perfect Competition– Conditions, Price and Output determination ; Monopoly : Conditions, Price and Output Determination - Price Discrimination; Monopolistic Competition - Assumptions - Price and output determination - Selling Costs ; Oligopoly -Types- Kinky demand curve and Price rigidity.</p>
March-2022	Unit- V	<p>The concepts of Functional and Personal Distribution of Income - Marginal Productivity Theory of Distribution - Modern Theory of Distribution -Concept of Rent - Ricardian Theory of Rent – Marshall’s concepts of Economic Rent and Quasi Rent; Theories of Wage Determination: Subsistence Theory and Standard of Living Theory - Modern Theory of Wages; Classical Theory of Interest -Loanable Funds Theory of Interest -Liquidity Preference Theory of Interest; Theories of Profit: Risk and Uncertainty, Dynamic and Innovations Theories</p>

Annual Academic Plan 2021-2022

Department of Economics

II B.A Semester-III

Month	Paper-III	DEVELOPMENT ECONOMICS
Nov-2021	Unit-I	Economic Development as a Branch of Study of Economics – Scope and Importance - Distinction between Economic Growth and Economic Development -Measures of Economic Development and their limitations - Relevance of Herd (Group) Immunity in the context of COVID 19 - three core values of economic development : Sustainability, Self-esteem and Freedom – Economy and Environment : Concepts of sustainable development and inclusive growth.
Dec-2021	Unit-II	Characteristics of Underdeveloped Countries - World Bank and IMF Classification of countries - Modern economic growth – Kuznets’ Six Characteristics - Obstacles to economic development - Vicious Circle of Poverty and cumulative causation - Factors of economic growth: Economic and Non-economic - Capital Formation – Foreign and Domestic capital, Debt and Disinvestment.
Jan-2022	Unit-III	Classical Theory: Adam Smith, Ricardo and Malthus -Marxian Theory - Schumpeter Theory -Rostow’s Stages of Economic Growth - Harrod-Domar two sector model -Solow’s Model and Robinson’s Golden Age
Feb-2022	Unit-IV	Strategies of Economic Development – Big Push - Balanced Growth - Unbalanced Growth - Mahalanobis Model - Agriculture vs Industry - Capital Intensive Technology vs Labour Intensive Technology -Role of Infrastructure in Economic Development,
March-2022	Unit- V	Role of State in Economic Development -Role of Markets - Market Failure and Regulation by State -Public sector vs Private sector - Economic Planning – concept, objectives and types -NITI Ayog - Economic Federalism -Financial Institutions and Economic Development -Role of International Institutions-IDBI, ADB, IMF - Foreign Trade - FIIs and FDIs.

Annual Academic Plan 2021-2022

Department of Economics

III B.A Semester-V Paper- V

Month	Paper- V ECONOMIC DEVELOPMENT AND INDIAN ECONOMY	
Sept- 2021	Unit-I	Concept of Economic Growth – Distinction between economic growth and development – Measurement of economic development – Theories of Economic Growth: Adam Smith, Rostow, Karl Marx and Harrod&Domar Models.
Oct- 2021	Unit-II	Sustainable development _ Balanced and unbalanced growth – Choice of techniques Labour intensive and capital intensive methods
Nov - 2021	Unit-III	Basic features of the Indian Economy – Natural Resources – Important Demographic features – Concept of Population Dividend – Population Policy.
Dec - 2021	Unit-IV	National Income in India – trends and composition – poverty, inequalities and Unemployment – Measures taken by the Government – MGNREGS. <u>Performance of MGNREGS in East Godavari</u>
Jan - 2022	Unit- V	Economic reforms – liberalization, privatization and globalization – concept of inclusive growth

Annual Academic Plan 2021-2022

Department of Economics

III B.A Semester-V Paper- VI

Month	Paper- VI INDIAN AND ANDHRA PRADESH ECONOMY	
Sept- 2021	Unit-I	Indian Agriculture – Importance of Agriculture in India – Agrarian structure and relations- Factors determining productivity – Agricultural Infrastructure – Rural credit – Micro Finance – Self Help Groups (SHGs) – Agricultural Price policy- concept of Crop Insurance- Food Security
Oct- 2021	Unit-II	Structure and growth of Indian Industry – Industrial policies of 1956 & 1991 Meaning of Micro small and Medium Enterprises (MSMEs) – Problems and Prospects of small scale Industries in India
Nov - 2021	Unit-III	. Disinvestment in India – FEMA – Foreign direct investment – Services Sector in India – Reforms in Banking and Insurance – IT, Education and Health.
Dec - 2021	Unit-IV	Planning in India Economy – Objectives of Five YEAR,s plans – Review of Five YEAR,s plans – Current five YEAR,s plan – NITI Aayog.
Jan - 2022	Unit- V	Andhra Pradesh Economy – Population – GSDP – Sector Contribution and trends – IT Small Scale Industry – SEZs. <u>Activities ofKakinada SEZ</u>

Annual Academic Plan 2021-2022

Department of Economics

I B.A Semester-II

Month	Paper-II MACRO ECONOMIC ANALYSIS	
May-2022	Unit-I	Macroeconomics - Definition, Scope and Importance - Difference between Micro economic and Macro economic Analyses – Circular Flow of Income -National Income: Definitions, Concepts, Measurement of National Income - Difficulties - Importance - Concept of Green Accounting
June -2022	Unit-II	Classical Theory of Employment - Say's Law of Markets - Criticism - Keynesian Theory of Employment - Consumption Function - Keynes' Psychological Law of Consumption - Average and Marginal Propensity to Consume - Factors determining Consumption Function–Brief Review of Relative, Life Cycle and Permanent Income Hypotheses - Investment Function: Marginal Efficiency of Capital -Multiplier and Accelerator - Keynesian Theory of Employment - Applicability to Developing countries
July -2022	Unit-III	Definitions of Money - Concepts of Money, Liquidity and Finance - Money Illusion - Gresham's Law - RBI classification of Money - Theories of Money: Fisher and Cambridge (Marshall, Pigou, Robertson and Keynes equations) - Banking - Definition and types of Banking - Commercial Banks - Functions -Recent Trends in Banking - Mergers and Acquisitions - Central Bank - Functions - Control of Credit by Central Bank - NBFCs- Factors contributing to their Growth and their Role
Aug -2022	Unit-IV	Inflation: Concepts of Inflation, deflation, reflation and stagflation - Phillip's Curve - Measurement of Inflation - CPI and WPI -Types of Inflation - Causes and Consequences of Inflation -Measures to Control Inflation. Trade Cycles: Phases of a Trade Cycle -Causes and Measures to control Trade Cycles
Sept - 2022	Unit- V	Financial Assets and Financial Instruments - Financial Markets - Functions of Money Market - Functions of Capital Market - Stock Market - Exchanges – Indices:Sensex and Nifty - Concept of Insurance - Types and Importance of Insurance

Annual Academic Plan 2021-2022

Department of Economics

III B.A Semester-VI Paper – VII (Elective)

Month	Paper-VII(Elective) AGRICUTURAL ECONOMICS	
Feb- 2022	Unit-I	Nature and Scope of Agricultural Economics. Factors affecting agricultural development: technological, institutional and general. Interdependence between agriculture and industry
March -2022	Unit-II	Concept of production function: input-output and product relationship in farm production.
April- 2022	Unit-III	Growth and productivity trends in Indian agriculture with special reference to Andhra Pradesh. Agrarian reforms and their role in economic development. <u>Agricultural Productivity with special reference to East Godavari District</u>
May – 2022	Unit-IV	Systems of farming, farm size and productivity relationship in Indian agriculture with special reference to Andhra Pradesh- New agriculture strategy and Green revolution: and its Impact.
June- 2022	Unit- V	Emerging trends in production, processing, marketing and exports; policy controls and regulations relating to industrial sector with specific reference to agro- industries in agribusiness enterprises.

Annual Academic Plan 2021-2022

Department of Economics

III B.A Semester-VI Paper – VIII (Cluster Elective)

Month	PAPER VIII A-1 AGRIBUSINESS ENVIRONMENT IN ANDHRA PRADESH	
Feb- 2022	Unit-I	Role of agriculture in development process in Andhra Pradesh vis-à-vis other developed states. Economy wide effects of agriculture in Andhra Pradesh through trickle down effects. Backward and forward linkages of agriculture with rest of economy.
March - 2022	Unit-II	Agricultural finance-importance in modern agriculture – performance of agricultural finance in Andhra Pradesh – Problems of agricultural finance – Inter linkages of agricultural credit and other input markets and product markets.

April-2022	Unit-III	Dynamics of agriculture-crop (horticulture, field crops), sector-livestock (poultry dairy and fisheries) sector and inter linkages among the sectors. Agribusiness sector in Andhra Pradesh – Salient features, constraints, sub sectors of agribusiness – input sector, production sector, processing sector. Major Agricultural Exports of Kakinada sea port.
May – 2022	Unit-IV	Growth performance of major agricultural commodities in Andhra Pradesh – Production and processing trends in exports and imports of major agricultural commodities.
June-2022	Unit- V	Marketing policy – structure of agri markets – regulated markets – need – activities – structure – APMC Act – market legislations – Role of Farmer Groups in the marketing of Agricultural Produce. <u>Performance of APMCs in East Godavari District</u>

Annual Academic Plan 2021-2022

Department of Economics

III B.A Semester-VI Paper – VIII (Cluster Elective)

Month	PAPER VIII A-2 AGRICULTURAL OUTPUT MARKETING	
Feb- 2022	Unit-I	Structure and Model of Agri-Marketing Organizations with functions. Functions of intermediaries, Marketing Practices in Primary and Secondary and Terminal Market, Regulated Markets, Co-operative Marketing.
March -2022	Unit-II	Marketing costs and margins, Marketing Finance. Marketing Structure of Major agricultural commodities, food grains: Rice, and Maize. Cash Crops; Cotton, Oil Seeds, Vegetables and Fruits, Milk, Meat and Poultry Products.
April- 2022	Unit-III	Problems and Challenges in Agriculture Marketing – Market Yards – Support Prices – Rural Warehousing. <u>Role of Andhra Pradesh State Warehousing Corporation in marketing of Agricultural output.</u>

May – 2022	Unit-IV	State Intervention in Agricultural Marketing, Role of Various agencies (Andhra Pradesh Agro, MARKFED, State Department, and FCI, Tobacco Board, Cotton Corporation) and its impact on market efficiency. Agriculture Price Commission. <u>NAFED</u>
June- 2022	Unit- V	Inter-regional and international trade in agriculture; emerging scenario of international trade in agricultural commodities; concept of terms of trade and balance of payments, WTO and Indian agriculture with special reference to Andhra Pradesh.

Annual Academic Plan 2021-2022

Department of Economics

II B.A Semester-IV Paper - IV

Month	Paper-IV ECONOMIC DEVELOPMENT-INDIA AND ANDHRA PRADESH	
April / May 2022	Unit-I	Basic characteristics of Indian Economy as a developing economy – Economic development since independence - Objectives and achievements of planning – Planning Commission/NITI Ayog and their approaches to economic development - India’s Rank in Global Human Development Index .
June -2022	Unit-II	Trends in National income - Demographic trends - Poverty and Inequalities – Occupational Structure and Unemployment - Various Schemes of employment generation and eradication of poverty – Issues in Rural Development and Urban Development –Intra-state and Inter- state Labour Migration and unorganized sector Problems of Migrant Labour
July -2022	Unit-III	Indian Agriculture – Agricultural Strategy and Agricultural Policy – Agrarian Crisis and land reforms – Agricultural credit – Minimum Support Prices -Malnutrition and Food Security - Indian Industry - Recent Industrial Policy – Make-in India – Start-up and Stand-up programmes – SEZs and Industrial Corridors - Economic Reforms and their impact - Economic initiatives by government of India during COVID - Atmanirbhar Bharat package.
Aug - 2022	Unit-IV	. Fiscal policy- Indian Tax System and Recent changes – GST and its impact on Commerce and Industry – Centre, States financial relations- Recommendations of Recent Finance Commission – Public Expenditure and Public Debt –Concepts of Budget.

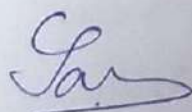
Sept -2022	Unit- V	The basic characteristics of Andhra Pradesh economy after bifurcation in 2014 – Impact of bifurcation on the endowment of natural resources and state revenue – new challenges to industry and commerce - the new initiatives to develop infrastructure – Power and Transport –Health and Education- Information Technology and e-governance – Urbanization and smart cities – Skill development and employment –Recent Social welfare programmes
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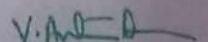
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II B.A Semester-IV Paper - V

Month	Paper-V	STATISTICALMETHODSFORECONOMICS
April / May 2022	Unit-I	Introduction to Statistics – Definition, scope, importance and limitations of Statistics – Primary and Secondary data- Census and Sampling techniques and their merits and demerits.
June-2022	Unit-II	Collection of data - Schedule and questionnaire – Frequency distribution –Tabulation – diagram and graphic presentation of data – Histogram, Frequency Polygon, Cumulative Frequency Curves-Bar Diagrams and Pie Diagram.
July-2022	Unit-III	Measures of Central Tendency and Dispersion -Typesofaverages-ArithmeticMean,GeometricMean,HarmonicMean–Median–Mode–Dispersion - Range, Quartile Deviation, Mean Deviation, Standard Deviation- Coefficient of Variation.
Aug- 2022	Unit-IV	Correlation and Regression–Meaning, Definition and uses of Correlation-TypesofCorrelation-KarlPearson’sCorrelationcoefficient-Spearman’s Rank Correlation -Regression Equations-utility of regression analysis–Demand forecasting.
Sept -2022	Unit- V	Time Series and Index Numbers: Definition and components of Time Series – Measurement of Time Series – Moving Average and the Least Squares Method – Index Numbers - Concepts of Price and Quantity Relatives – Laspeyer’s, Paasche’s and Fisher’s Ideal Index Numbers– Uses and Limitations of Index Numbers.



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Department of Economics.



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ANNUAL ACADAMIC PLAN 2021 – 2022

DEPARTMENT OF POLITICAL SCIENCE

I B.A Semester – I

Month	Paper-I	Introduction to Political Science
Nov 2021	Unit-I	Definition,Nature,Scope and Importance of Political Science
	Unit-II	Definition, Elements, theories and Concepts of modern state
Jan 2021-22	Unit-III	Concepts of political science,Law,Liberty and Equality Power, Authority and Legitimacy.
Feb 2021-22	Unit-IV	Meaning, Nature and Classification of Rights Theories of Rights
Mar 2021-22	Unit-V	Political Ideologies – Liberalism,Individualism,Socialism,and Marxism

ANNUAL ACADAMIC PLAN 2021-22

DEPARTMENT OF POLITICAL SCIENCE

II B.A SEMESTER – III

Month	Paper-III	Indian Government and Politics
Nov 2021-22	Unit-I	Social and Ideological base of the Indian Constitution
Dec 2021-22	Unit-II	Individual and state Fundamental Rights, Directive principles
Jan 2021-22	Unit-III	Union Executive President of India,P.M, Parliament and Council of ministers
Feb 2021-22	Unit-IV	State executive Governor,C.M,Legislature and Council of ministers
Mar 2021-22	Unit-V	The Indian Judiciary Supreme Court, High Court and Appointment of Judges

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DEPARTMENT OF POLITICAL SCIENCE

III B.A SEMESTER – V PAPER – V

Month	Paper V	Indian political thought
Sep 2021-22	Unit I	Traditions of ancient Indian political thought
Oct 2021-22	Unit II	Renaissance thought
Nov 2021-22	Unit III	Early nationalism Dadabainouroji, Renadey
Dec 2021-22	Unit IV	Religious nationalism
Jan 2021-22	Unit V	Democratic egalitarianism

III B.A SEMESTER – V PAPER - VI

Month	Paper	Western political thought
Sep 2021-22	Unit I	Classical western political thought
Oct 2021-22	Unit II	Early medieval to the beginning of modern thought
Nov 2021-22	Unit III	Liberal thought
Dec 2021-22	Unit IV	Liberal democratic thought
Jan 2021-22	Unit V	Philosophical Idealism and its critique

ANNUAL ACADAMIC PLAN 2021-22

DEPARTMENT OF POLITICAL SCIENCE

I B.A SEMESTER – II - PAPER – II

Month	Paper	Basic Organs of the government
May 2021-22	Unit I	Constitution
Jun 2021-22	Unit II	Organs of the governments
Jul 2021-22	Unit III	Forms of the governments
Aug 2021-22	Unit IV	Democracy
Sep 2021-22	Unit V	Political parties, pressure groups and public opinion

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DEPARTMENT OF POLITICAL SCIENCE

II B.A SEMESTER – IV - PAPER – IV

Month	Paper IV	Indian Political Process
Apr/May 2021-22	Unit-I	Federal Processes
Jun 2021-22	Unit-II	Electoral Processes
Jul 2021-22	Unit-III	Gross root Democracy decentralization
Aug 2021-22	Unit-IV	Social dynamics and emerging challenges to Indian Political System
Sep 2021-22	Unit-V	Regulatory and Governance Institutions

II B.A SEMESTER – IV - PAPER – IV

Month	Paper-V	Western Political Thought
Apr/May 2021-22	Unit-I	Ancient Greek Political Thought
Jun 2021-22	Unit-II	Medieval and Modern Political Thought
Jul 2021-22	Unit-III	Contractual Political Thought
Aug 2021-22	Unit-IV	Utilitarian Political Thought
Sep 2021-22	Unit-V	Marxist Political Thought

ANNUAL ACADAMIC PLAN 2021-22

DEPARTMENT OF POLITICAL SCIENCE

III B.A SEMESTER – VI- PAPER – VII (Elective)

Month	Paper- vii	Local self-government in A.P
Feb 2021-22	Unit-I	Evolution of Local self-government in India
Mar 2021-22	Unit-II	Importance of Constitutional Amendments
Apr 2021-22	Unit-III	Structure and Functions of Panchayatiraj in Andhra Pradesh
May 2021-22	Unit-IV	Structure and Functions of Urban Local bodies in A.P
Jun 2021- 22	Unit-V	Role of Leadership and Emerging challenges

III B.A SEMESTER – VI- PAPER – VIII (Cluster)

Month	Paper-viii	International Relations
Feb 2021-22	Unit-I	Basic concepts of International Relations
Mar 2021-22	Unit-II	Phases of International Relations(1914-1945)
Apr 2021-22	Unit-III	Approaches of the study of International Relations
May 2021-22	Unit-IV	Phases of International Relations(1945 onward)
Jun 2021-22	Unit-V	International Organizations

Politics

III B.A SEMESTER – VI- PAPER – IX (Cluster)

Month	Paper-IX	Indian Foreign Policy
Feb 2021-22	Unit-I	Evolution of Indian Foreign Policy
Mar 2021-22	Unit-II	Non – Alignment and UNO
Apr 2021-22	Unit-III	India's Relation with USA and China
May 2021-22	Unit-IV	India and her Neighbors
Jun 2021-22	Unit-V	Trends in India's Foreign Policy

III B.A SEMESTER – VI- PAPER – X (Cluster)

Month	Paper-IX	Contemporary Global Issues
Feb 2021-22	Unit-I	Concepts of Globalization
Mar 2021-22	Unit-II	Anchors of Global Political Economy
Apr 2021-22	Unit-III	National state and Globalization
May 2021-22	Unit-IV	Contemporary Global Issues
Jun 2021-22	Unit-V	W.T.O and B R I C S

Prof.
Lee: in charge,
dept. of History

V. Anant Lakshmi

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Department of Tourism

II B.A (HETT) Semester-III

Year	Unit	Paper-III Travel & Tourism Management
2021	Unit-I	Basics of Management
2021	Unit-II	Understanding of Travel Agency & Tour Operator Business
2022	Unit-III	Entrepreneurship, Procedure, Formal Approvals
2022	Unit-IV	Travel Documentation & Role of internet and modern information technique for promoting Tourism
2022	Unit- V	Travel Organizations & Associations

Annual Academic Plan 2021-2022

Department of Tourism

III B.A (HETT) Semester-V Paper- V

Year	Unit	Paper- V Guiding & interpretation skills for Tourism
2021	Unit-I	Introduction of Guiding -Types of tour Guide – Responsibilities of Guides
2021	Unit-II	Leadership & social skills
2021	Unit-III	Guest Relationship management
2021	Unit-IV	Conducting Tours – Modes of Transportation
2022	Unit- V	Professional development – interpretative planning training

Annual Academic Plan 2021-2022

Department of Tourism

III B.A (HETT) Semester-V Paper- VI

Year	Unit	Paper- VI Travel Agency & Tour Operation Business
2021	Unit-I	History of Travel Agency – Responsibilities -functions of Travel Agency
2021	Unit-II	Difference between travel Agent – Tour operator
2021	Unit-III	Organization structure of Travel Agency
2021	Unit-IV	Organization of Tour operation
2022	Unit- V	Ticket Booking Visa – Pass Port

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DEPARTMENT OF COMMERCE

ANNUAL ACADEMIC PLAN 2021-2022

SEMESTER-I- FUNDAMENTALS OF ACCOUNTING

MONTH	TOPIC
November 2021	Introduction - Need for Accounting – Definition – Objectives, – Accounting Concepts and Conventions – GAAP - Accounting Cycle - Classification of Accounts and its Rules – Book Keeping and Accounting - Double Entry Book-Keeping - Journalizing - Posting to Ledgers, Balancing of Ledger Accounts
December 2021	Subsidiary Books: Types of Subsidiary Books - Cash Book, Three-column Cash Book- Petty Cash Book.
January 2022	Trial Balance and Rectification of Errors: Preparation of Trial balance - Errors – Meaning – Types of Errors – Rectification of Errors – Suspense Account
February 2022	Bank Reconciliation Statement: Need for Bank Reconciliation - Reasons for Difference between Cash Book and Pass Book Balances- Preparation of Bank Reconciliation Statement - Problems on both Favourable and Unfavourable Balance
March 2022	Final Accounts: Preparation of Final Accounts: Trading account – Profit and Loss account – Balance Sheet – Final Accounts with Adjustments

SEMESTER-I Business Organization and Management

MONTH	TOPIC
November 2021	Introduction Concepts of Business, Trade, Industry and Commerce: Business – Meaning, Definition, Features and Functions of Business - Trade Classification – Aids to Trade – Industry Classification and Commerce - Factors Influencing the Choice of Suitable form of Organisation
December 2021	Forms of Business Organizations: Features, Merits and Demerits of Sole Proprietor Ship and Partnership Business - Features Merits and Demerits of Joint Stock Companies - Public Sector Enterprises (PSEs) - Multinational Corporations (MNCs)- Differences between Private Limited Public Limited Company
January 2022	Company Incorporation: Preparation of Important Documents for Incorporation of Company - Certificate of Incorporation and Certificate of Commencement of Business -
February 2022	Contents of Memorandum and Articles of Association - Contents of Prospectus. Management: Meaning Characteristics - Fayol's 14 Principles of Management - Administration Vs Management - Levels of Management
March 2022	Functions of Management: Different Functions of Management - Meaning – Definition – Characteristics Merits and Demerits of Planning - Principles of Organization – Line and staff of Organization

SEMESTER-I Business Environment

MONTH	TOPIC
November 2021	Overview of Business Environment: Business Environment – Meaning – Characteristics – Scope -Macro and Micro Dimensions of Business Environment - Environmental Analysis.
December 2021	Economic Environment: Economic Environment – Nature of the Economy – Structure of Economy – Economic Policies & Planning the Economic Condition – NITI Ayog – National Development Council – Five Year Plans
January 2022	Economic Policies: Economic Reforms and New Economic Policy – New Industrial Policy – Competition Law – Fiscal Policy – Objectives and Limitations – Monetary Policy and RBI
February 2022	Social, Political and Legal Environment: Concept of Social Responsibility of Business towards Stakeholders- Demonetisation, GST and their Impact - Political Stability – LegalChanges.
March 2022	Global Environment : Globalization – Meaning – Role of WTO – WTO Functions - IBRD– Trade Blocks, BRICS, SAARC, ASEAN in Globalization.

SEMESTER-I INSURANCE PROMOTION

MONTH	TOPIC
November 2021	Introduction of Insurance - Types of insurances. Growth of Insurance sector in India - Regulatory mechanism (IRDA) - Its functions
December 2021	Life Insurance plans. Health insurance plans. Products and features. Contents of documents- Sales Promotion methods - Finding prospective customers -Counselling -
January 2022	Helping customers in filing - Extending post-insurance service to customers.
February 2022	General Insurance - It's products (Motor, Marine, Machinery, Fire, Travel and Transportation) and features.
March 2022	Contents of documents. Dealing with customers - Explaining Products to Customers - Promoting Customer loyalty. Maintenance of Records

SEMESTER-I ENTREPRENEURSHIP DEVELOPMENT

MONTH	TOPIC
November 2021	Entrepreneurship: Definition and Concept of entrepreneurship – Entrepreneur- Characteristics – Classification of Entrepreneurs –Role of Entrepreneurship in Economic Development –Start-ups.
December 2021	Idea Generation and Project Formulation: Ideas in Entrepreneurships – Sources of New Ideas – Techniques for Generating Ideas –
January 2022	Preparation of Project Report –Contents; Guidelines for Report preparation – Project Appraisal Techniques –Economic Analysis-Financial Analysis-Market Analysis.
February 2022	Institutions Supporting and Taxation Benefits: Central level Institutions: NABARD; SIDBI,– State Level Institutions –
March 2022	DICs – SFC - Government Policy for MSMEs - Tax Incentives and Concessions.

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DEPARTMENT OF COMMERCE

ANNUAL ACADEMIC PLAN 2021-2022

SEMESTER-II Financial Accounting

MONTH	TOPIC
June 2022	Depreciation: Meaning and Causes of Depreciation - Methods of Depreciation: Straight Line – Written Down Value –Annuity and Depletion Method. Unit-II:Provisions and Reserves: Meaning – Provision vs. Reserve – Preparation of Bad Debts Account –
July 2022	Provision for Bad and Doubtful Debts – Provision for Discount on Debtors Provision for Discount on Creditors - Repairs and Renewals Reserve A/c. Bills of Exchange: Meaning of Bill – Features of Bill – Parties in the Bill Discounting of Bill
August 2022	– Renewal of Bill – Entries in the Books of Drawer and Drawee. Consignment Accounts: Consignment - Features - Proforma Invoice - Account Sales –Del- credere Commission - Accounting Treatment in the Books of Consigner and Consignee - Valuation of Closing Stock - Normal and Abnormal Losses
September 2022	Joint Venture Accounts: Joint Venture - Features - Difference between Joint- Venture and Consignment – Accounting Procedure – Methods of Keeping Records–One Vendor Keeps the Accounts and Separate Set off Books Methods

SEMESTER-II
Business Economics

MONTH	TOPIC
June 2022	Introduction: Meaning and Definitions of Business Economics - Nature and Scope of Business Economics -Micro and Macro Economics and their Interface
July 2022	Demand Analysis: Meaning and Definition of Demand – Determinants to Demand– Demand Function -Law of Demand – Demand Curve – Exceptions to Law of Demand - Elasticity of Demand – Measurements of Price Elasticity of Demand.
August 2022	Production, Cost and Revenue Analysis: Concept of Production Function – Law of Variable Proportion -Law of Returns to Scale - Classification of Costs -Break Even Analysis Advantages. Market Structure: Concept of Market – Classification of Markets -Perfect Competition – Characteristics –
September 2022	Equilibrium Price -Monopoly – Characteristics – Equilibrium Under Monopoly. Unit-V: National Income: Meaning – Definition – Measurements of National Income - Concepts of National Income -Components of National Income-Problems in Measuring National Income

SEMESTER-II
Banking Theory and Practice

MONTH	TOPIC
June 2022	Introduction: Meaning & Definition of Bank – Functions of Commercial Banks – Credit Creation with Examples - Kinds of Banks – Central Banking Vs. Commercial Banking.
July 2022	Banking Systems: Unit Banking, Branch Banking, Investment Banking - Innovations in Banking – E banking - Online and Offshore Banking, Internet Banking - Anywhere Banking - ATMs – RTGS- NEFT – MobileBanking
August 2022	Types of Banks: Indigenous Banking - Cooperative Banks, Regional Rural Banks, SIDBI, NABARD - EXIM bank. Banker and Customer: Meaning and Definition of Banker and Customer – Types of Customers – General Relationship and Special Relationship between Banker and Customer - KYC Norms.
September 2022	Collecting Banker and Paying Banker: Concepts - Duties & Responsibilities of Collecting Banker – Holder for Value – Holder in Due Course – Statutory Protection to Collecting Banker - Responsibilities of Paying Banker - Payment Gateways.

SEMESTER-II
ADVERTISING

MONTH	TOPIC
June 2022	Introduction of advertising concepts- functions - Types of advertising - Creative advertising messages - Factors determining opportunities of a product/service/Idea
July 2022	Role of advertising agencies and their responsibilities - scope of their work and functions - - Ethical issues - Identifying target groups -Laws in advertising. Advertising Statutory Bodies in India - Role of AAAI (Advertising Agencies Association of India), ASCI (Advertising Standard Council of India)
August 2022	. Advertising Statutory Bodies in India - Role of AAAI (Advertising Agencies Association of India), ASCI (Advertising Standard Council of India)
September 2022	Types of advertising – Basic characteristics of a typical advertisement –Reaching target groups - Local advertising – Feedback on impact of advertisement - Business promotion.

SEMESTER-II AGRICULTURAL MARKETING

MONTH	TOPIC
June 2022	Introduction of Agriculture and agricultural products (including agriculture, horticulture, sericulture, floriculture, aquaculture- genetic culture and dairy product)- Agricultural Marketing Role of marketing Concepts Goods and services Movement of product from farm to consumer - Middlemen - Moneylenders Types of agricultural markets
July 2022	Basic structure and facilities of an agricultural market Primary, secondary and tertiary markets- Functioning of Market Yards-Market information Rythu Bharosa Kendras (RBK) - Govt market policies and regulations-
August 2022	Contract farming-Govt Apps for marketing of agri products Planning production assembling - grading - transportation- storage facilities. Price fixation. Dissemination of market information -and role of ICT. Marketing –
September 2022	Mix- Product element- Place element- Price element- Promotion element. Selection of target market. Government programs in support of Agricultural marketing in India

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SEMESTER-III- ADVANCE ACCOUNTING

MONTH	TOPIC
NOVEMBER 2021	Accounting for Non Profit Organizations: Non Profit Entities- Meaning - Features of Non-Profit Entities –Provisions as per Sec 8 - Accounting Process- Preparation of Accounting Records - Receipts and Payments Account- Income and Expenditure Account - Preparation of Balance Sheet
DECEMBER 2021	Single Entry System: Features – Differences between Single Entry and Double Entry – Disadvantages of Single Entry- Ascertainment of Profit and Preparation of Statement of Affairs
JANUARY202 2	Hire Purchase System: Features –Difference between Hire Purchase and Instalment Purchase Systems - Accounting Treatment in the Books of Hire Purchaser and Hire Vendor - Default and Repossession
FEBRUARY202 2	Partnership Accounts-I: Meaning – Partnership Deed - Fixed and Fluctuating Capitals-Accounting Treatment of Goodwill - Admission and Retirement of a Partner. Partnership Accounts-II: Dissolution of a Partnership Firm – Application of Garner v/s Murray Rule in India – Insolvency of one or more Partners

SEMESTER-III BUSINESS STATISTICS

MONTH	TOPIC
NOVEMBER 2021	<p>: Introduction to Statistics: Definition, importance and limitations of statistics - Collection of data - Schedule and questionnaire – Frequency distribution – Tabulation - Diagrammatic and graphic presentation of data using Computers</p>
DECEMBER 2021	<p>Measures of Central Tendency: Types of Averages – Qualities of Good Average - Mean, Median, Mode, and Median based Averages-Geometric Mean – Harmonic Mean</p>
JANUARY2022	<p>Measures of dispersion and Skewness: Properties of dispersion – Range - Quartile Deviation –Mean Deviation- Standard- Deviation- Coefficient of Variation</p> <p>Skewness and Kurtosis: Measures of Skewness: Absolute and Relative Measures- Co-efficient of Skewness: Karl Pearson’s, Bowley’s and Kelly’s - Kurtosis: Meso kurtosis, Platy kurtosis and</p>
FEBRUARY2022	<p>Measures of Relation: Meaning and use of correlation – Types of correlation-Karlpearson’s correlation- coefficient –Spearman’s Rank correlation</p>

SEMESTER-III MARKETING

MONTH	TOPIC
NOVEMBER 2021	Introduction: Concepts of Marketing: Product Concept – Selling Concept - Societal Marketing Concept – Marketing Mix - 4 P’s of Marketing – Marketing Environment. Consumer Markets and Buyer Behavior: Buying Decision Process – Stages – Buying Behavior –
DECEMBER 2021	Product Management: Product Life Cycle - New products, Product mix and Product line decisions - Design, Branding, Packaging and Labeling.
JANUARY2022	Market Segmentation – Selecting Segments – Advantages of Segmentation. Pricing Decision: Factors influencing price determination, Pricing strategies: Skimming and Penetration pricing.
FEBRUARY2022	Promotion and Distribution: Promotion Mix - Advertising - Publicity – Public relations - Personal selling and Direct marketing - Distribution Channels – Online marketing- Global marketing.

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SEMESTER-IV-Corporate Accounting

MONTH	TOPIC
APRIL2022	Accounting for Share Capital – division of share capital – equity share vs preferenceshares -Issue and forfeiture of shares (preparation of journals)- concept & process of book building - Issue of rights and bonus shares - Buyback of shares
MAY2022	Issue of Debentures – difference between share and debenture – types of debentures - Employee Stock Options – Accounting Treatment for Convertible and Non-Convertible debentures
JUNE 2022	Valuation of Goodwill and Shares: Need and methods - Normal Profit Method, Super Profits Method – Capitalization Method - Valuation of shares - Need for Valuation - Methods of Valuation - Net assets method, Yield basis method, Fair value method
JULY 2022	Company Final Accounts: Preparation of Final Accounts – Adjustments relating to preparation of final accounts – Profit and loss account and balance sheet.
AUGUST 2022	Provisions of the Companies Act, 2013 relating to issues of shares and debentures - Book Building- Preparation of Balance Sheet and Profit and Loss Account – Schedule-III.

SEMESTER-IV- COST AND MANAGEMENT ACCOUNTING

MONTH	TOPIC
APRIL 2022	Introduction: Cost Accounting: Definition – Features – Objectives – Functions – Scope – Advantages and Limitations - Management Accounting: Features– Objectives–Functions – Elements of Cost –Preparation of Cost Sheet
MAY 2022	Material and Labour Cost: Techniques of Inventory Control – Valuation of Material Issues: FIFO - LIFO -Simple and Weighted Average Methods. Labour: Direct and Indirect Labour Cost – Methods of Payment of Wages- Incentive Schemes - Time Rate Method, Piece Rate Method, Halsey, Rowan Methods and Taylor Methodsonly
JUNE 2022	Job Costing and Batch Costing: Definition and Features of Job Costing – Economic Batch Quantity (EBQ) –Preparation of Job Cost Sheet–Problems on Job Cost Sheet
JULY 2022	Financial Statement Analysis and Interpretation: Financial Statements- Features, Limitations. Need, Meaning, Objectives, and Process of Financial Statement Analysis- Comparative Analysis – Common Size Analysis and Trend Analysis
AUGUST 2022	Marginal Costing: Meaning and Features of Marginal Costing – Contribution –Profit Volume Ratio- Break Even Point –Margin of Safety–Estimation of Profit and Estimation of Sales

SEMESTER-IV AUDITING

MONTH	TOPIC
NOVEMBER 2021	<p>Introduction: Meaning – Objectives – Importance of Auditing – Characteristics - Book Keeping vs Auditing - Accounting vs Auditing – Role of Auditor in Checking Corporate Frauds.</p>
DECEMBER 2021	<p>Types of Audit: Based on Ownership, Time and Objective - Independent, Financial, Internal, Cost, Tax, Government, Secretarial Audits.</p> <p>Planning of Audit: Steps to be taken at the Commencement of a New Audit – Audit Programme</p>
JANUARY2022	<p>- AuditNote Book- Audit Working Courses - Audit Evidence - Internal Check, Internal Audit and InternalControl.</p> <p>VouchingandInvestigation:DefinitionandImportanceofVouching– ObjectivesofVouching-Vouchingof Cashand</p>
FEBRUARY2022	<p>TradingTransactions–Investigation-Auditingvs.Investigation</p> <p>Company Audit and Auditors Report: Auditor's Qualifications – Appointment and Reappointment –Rights, Duties, Liabilities and Disqualifications-</p> <p>AuditReport:Contents–Preparation -</p> <p>RelevantProvisionsofCompaniesAct, 2013</p>

SEMESTER-IV INCOME TAX

MONTH	TOPIC
NOVEMBER 2021	Introduction: to Income Tax Law - Basic concepts: Income, Person, Assesse, Assessment year, Agricultural Income, Capital and revenue, Residential status, Income exempt from tax
DECEMBER 2021	Income from salary: Allowances, perquisites, profits in lieu of salary, deductions from salary income, computation of salary income and qualified savings eligible for deduction u/s 80C
JANUARY2022	Income from House Property: Annual value, let-out/self occupied/ deemed to be let-out house, deductions from annual value - computation of income from house property
FEBRUARY2022	Income from Capital Gains (including problems on long term capital gains)- Income from other sources - (from Individual point of view) - chargeability - and assessment Computation of total income of an individual - Deductions under section - 80

SEMESTER-IV BUSINESS LAW

MONTH	TOPIC
NOVEMBER 2021	Contract Meaning and Definition of Contract-Essential elements of valid Contract -Valid, Void and Voidable Contracts - Indian Contract Act, 1872
DECEMBER 2021	Offer and Acceptance Definition of Valid Offer, Acceptance and Consideration -Essential elements of a Valid Offer, Acceptance and Consideration
JANUARY2022	Capacity of the Parties and Contingent Contract Rules regarding to Minors contracts - Rules relating to contingent contracts - Different modes of discharge of contracts-Rules relating to remedies to breach of contract.
FEBRUARY2022	Sale of Goods Act 1930 Contract of sale - Sale and agreement to sell - Implied conditions and warranties - Rights of unpaid vendor. Cyber Law and Contract Procedures - Digital Signature - Safety Mechanisms.

SEMESTER-IV ACCOUNTING FOR SERVICE ORGANISATION

MONTH	TOPIC
NOVEMBER 2021	<p>Non-Trading/ Service Organizations:</p> <p>Concept -Types of Service Organizations-Section (8) and other Provisions of Companies Act, 2013.</p> <p>Electricity Supply Companies:</p> <p>Accounts of Electricity supply companies: Double Accounting system-Revenue Account - Net revenue Account - Capital Account - General Balance Sheet</p>
DECEMBER 2021	<p>Bank Accounts</p> <p>Bank Accounts - Books and Registers to be maintained by Banks – Banking Regulation Act, 1969 -Legal Provisions Relating to preparation of Final Accounts</p>
JANUARY2022	<p>Insurance Companies</p> <p>Life Insurance Companies -Preparation of Revenue Account, Profit and Loss Account, Balance Sheet (including problems)-LIC Act, 1956</p>
FEBRUARY2022	<p>General Insurance</p> <p>Principles - Preparation of final accounts - with special reference to fire and marine insurance (theory only)-GICAct, 1972.</p>

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SEMESTER-V PURCHASE MANAGEMENT

MONTH	TOPIC
September 2022	Unit-I: Introduction: Purchase Function - Supply Management – Sources of Purchase: Local vs. Global - Negotiation & Bargaining - Purchasing Methods - e-Procurement –DGS & D.
October 2022	Purchasing Function: Right Quantity - Economic Order Quantity - Re-order Levels - ABC Analysis - Right Price, Time - Tendering: Single, Limited, Open, Global tenders
November 2022	Vendor Analysis: Identification of vendor – Selection - Criteria and Methodology of evaluation - Vendor Rating – Maintenance of Vendor relations. Buyer-Supplier Relationships: Transformation of buyer-supplier relationships - Developing and managing collaborative and alliance relationships– joint problem solving, Information sharing.
December 2022	Supply Chain Management: JIT in the supply management - Cross-Functional Teams: Cross-functional teams and supply management - challenges of cross-functional teams, prerequisites to success.

SEMESTER-V COST ACCOUNTING

MONTH	TOPIC
September 2022	Introduction: Cost Accounting: Definition – Features – Objectives – Functions – Scope – Advantages and Limitations - Management Accounting: Features– Objectives–Functions – Elements of Cost –Preparation of Cost Sheet
October 2022	Material and Labour Cost: Techniques of Inventory Control – Valuation of Material Issues: FIFO - LIFO -Simple and Weighted Average Methods. Labour: Direct and Indirect Labour Cost – Methods of Payment of Wages- Incentive Schemes - Time Rate Method, Piece Rate Method, Halsey, Rowan Methods and Taylor Method only
November 2022	Job Costing and Batch Costing: Definition and Features of Job Costing – Economic Batch Quantity (EBQ) –Preparation of Job Cost Sheet–Problems on Job Cost Sheet. Financial Statement Analysis and Interpretation: Financial Statements- Features, Limitations. Need, Meaning, Objectives, and Process of Financial Statement Analysis-
December 2022	Comparative Analysis – Common Size Analysis and Trend Analysis Marginal Costing: Meaning and Features of Marginal Costing – Contribution –Profit Volume Ratio- Break Even Point –Margin of Safety–Estimation of Profit and Estimation of Sales

SEMESTER-V BUSINESS LEADERSHIP

MONTH	TOPIC
September 2022	Introductory: Leadership - Traits, Skills and Styles- Leadership Development Qualities of a Good Leader.
October 2022	Decision-Making and Leadership: Leadership for Sustainability - Power Influence, Impact -
November 2022	Leadership Practices - Organizations and Groups: Organizational Culture and Leadership - Leadership in Business Organizations
December 2022	Special Topics: Profiles of a few Inspirational Leaders in Business – Jemshedji Tata - Aditya Birla - Swaraj Paul - L N Mittal - N R Narayana Murthy - Azim Premji, etc.

SEMESTER-V STORESE MANAGEMENT

MONTH	TOPIC
September 2022	Stores Function: Layout and Organization - Stores Responsibilities - Relationships with Other Departments - Logistics - Supply Chain - Coding of materials - Methods of Coding
October 2022	Material Receipt and Issue: Receipts from Suppliers - Inspection - Authorization of issues - Methods of issue - Records and Systems - Manual Systems Computerized Systems - Recent Developments Stock Control Techniques: Approaches to Control - ABC Analysis - Provision of Safety Stock - Stocktaking Procedure -
November 2022	Obsolescence and Redundancy - Prevention of Deterioration - Stock Checking. Stores Operations: Storehouse Location - Centralization of Storage - Measurement of Stores efficiency - Health and Safety directives on stores operations -
December 2022	Manual and Mechanical lifting - Control of Substances Hazardous to Health Regulations - Storage Equipment. Procedure Manuals: Need for Manuals - Preparation of the Manual - Contents of the Manual - Publication and Distribution - Implementation of the Manuals.

SEMESTER-V COMMERCIAL GEOGRAPHY

MONTH	TOPIC
September 2022	<p>The Earth: Internal structure of the Earth – Latitude – Longitude – Realms of the Earth – Evolution of the Earth – Environmental pollution - Global Warming - Measures to be taken to protect the Earth.</p> <p>India – Agriculture: Land Use - Soils - Major crops – Food and Non-food Crops</p>
October 2022	<p>Importance of Agriculture – Problems in Agriculture – Agriculture Development.</p> <p>India – Forestry: Forests – Status of Forests in Andhra Pradesh – Forest (Conservation) Act, 1980 – Compensatory Afforestation Fund (CAF) Bill, 2015</p>
November 2022	<p>- Forest Rights Act, 2006 and its Relevance – Need for protection of Forestry</p> <p>India – Minerals and Mining: Minerals – Renewable and non Renewable – Use of Minerals – Mines – Coal, Barites, etc. – Singareni Coal mines and Mangampeta Barites - District- wise Profile.</p>
December 2022	<p>India – Water Resources – Rivers: Water resources - Rationality and equitable use of water – Protection measures - Rivers - Perennial and peninsular Rivers - Interlinking of Rivers - Experience of India and Andhra Pradesh.</p>

SEMESTER-V GST Fundamentals

MONTH	TOPIC
September 2022	Introduction: Overview of GST - Concepts - Limitations of VAT - Need for Tax Reforms -Justification for introduction of GST - Shortcomings and advantages at the Central Level and StateLevel on introduction of GST- Process of Introduction of GST - Constitutional Amendments.
October 2022	GST: Principles - Comprehensive structure of GST model in India: Single DualGST. Transactions covered under GST. Taxes and Duties: Subsumed under GST Taxes and Duties outside the purview of GST.
November 2022	containing Alcohol - Tax on Petroleum products - Tax on Tobacco products - Taxation Inter-State Goods and Services Tax: Major advantages of IGST Model – InterstateInter-State Goods and Services Tax: Major advantages of IGST Model - Interstate Goods
December 2022	Service Tax: Transactions within a State under GST - Interstate Transactions under GST -Illustrations. Time of Supply of Goods & Services: Value of Supply - Input Tax Credit - Distribution ofCredit - Matching of Input Tax Credit - Availability of credit in special circumstances- Cross utilization of ITC between the Central GST and the State GST.

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SEMESTER VI -MARKETING

MONTH	TOPIC
February 2022	: Introduction: Concepts of Marketing: Product Concept – Selling Concept - Societal Marketing Concept – Marketing Mix - 4 P’s of Marketing – Marketing Environment.
March 2022	Consumer Markets and Buyer Behavior: Buying Decision Process – Stages – Buying Behavior – Market Segmentation – Selecting Segments – Advantages of Segmentation.
April 2022	Product Management: Product Life Cycle - New products, Product mix and Product line decisions - Design, Branding, Packaging and Labeling. Pricing Decision: Factors influencing price determination, Pricing strategies: Skimming and Penetration pricing.
May 2022	Promotion and Distribution: Promotion Mix - Advertising - Publicity – Public relations - Personal selling and Direct marketing - Distribution Channels –

	Online marketing- Global marketing.
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SEMESTER VI-AUDITING

MONTH	TOPIC
February 2022	Auditing: Meaning – Objectives – Importance of Auditing – Auditing as a Vigil Mechanism – Role of Auditor in checking corporate frauds.
March 2022	Types of Audit: Based on Ownership and time - Independent, Financial, Internal, Cost, Tax, Government, Secretarial audits. Planning of Audit: Steps to be taken at the commencement of a new audit
April 2022	- Audit programme - Audit note book - Internal check, internal audit and internal control. Vouching and Investigation: Vouching of cash and trading transactions - Investigation, Auditing vs. Investigation
May 2022	Company Audit and Auditors Report: Auditor's Qualifications – Appointment and Reappointment – Rights, duties, liabilities and disqualifications - Audit report: Contents – Preparation - Relevant Provisions of Companies Act, 2013.

SEMESTER VI-MANAGEMENT ACCOUNTING

MONTH	TOPIC
February 2022	Management Accounting: Interface with Financial Accounting and Cost Accounting - Financial Statement analysis and interpretation: Comparative analysis – Common size analysis and trend analysis
March 2022	Ratio Analysis: Classification, Importance and limitations - Analysis and interpretation of Accounting ratios - Liquidity, profitability, activity and solvency ratios
April 2022	Fund Flow Statement: Concept of fund: Preparation of funds flow statement. Uses and limitations of funds flow analysis Cash Flow Statement: Concept of cash flow – Preparation of cash flow statement - Uses and limitations of cash flow analysis
May 2022	Break-Even Analysis and Decision Making: Calculation of Break-even point - Uses and limitations - Margin of safety – Make/Buy Decision - Lease/own Decision

TALLY WITH GST

MONTH	TOPIC
February 2022	Introduction to GST, Difference between GST and VAT – Taxes subsumed under GST, Exempt from GST, components of GST Registration, benefits of GST. GST Transaction, GST Rates, Ledgers, Ledger Creation –
March 2022	Single and multiple ledgers, altering ledgers, configure stock ledger, GST rate allocation to stocks. GST Invoices – Creating New Voucher types,
April 2022	Customizing the existing voucher types with applicable GST rates, alteration of vouchers, deletion of vouchers, input tax credit on purchase vouchers.
May 2022	GST Returns – Regular monthly filing of returns composition, quarterly filling returns, generation for returns Form GSTR-1, Form GSTR-2 and Forjlm GSTR – 3. Payment of GST taxes online, reverse charge mechanism, records to be maintained.

AGRICULTURAL AND RURAL MARKETING

MONTH	TOPIC
February 2022	Concept of Rural Market: Rural market Characteristics - Rural markets and Environmental factors - Agricultural Market Yards.
March 2022	Rural vs. Urban Consumer – Relevance of Marketing mix for Rural market/Consumers - Problems in rural market - Life Style Marketing – Rural market Segmentation.
April 2022	Problems and Challenges in Agriculture Marketing - Market Yards - Support prices - Rural Warehousing. Role of CCI, Tobacco Board, Spices Board, Coffee Board, Tea Board - Agriculture Price Commission.
May 2022	Role of Government and Non-Govt. Agencies in the development of rural and agricultural Marketing - Strategies for supply of Seed, Fertilizers, Pesticides, Farm Equipment.

WAREHOUSE MANAGEMENT

MONTH	TOPIC
February 2022	Functions of Warehouses - Warehousing Cost - Warehousing Management Systems (WMS) - Strategic planning for Warehousing - Supply Chain and Warehousing.
March 2022	Retail product tracking in warehouse using RFID - Role of government in warehousing - Warehousing and Supply Chain.
April 2022	Structure - Inventory Receiving - Picking - Locating - Dispatching Maintenance - Security and Safety - Records Maintenance. Health and Safety Risks at Warehouse, Assessment of Risks, Management of Health and Safety risks
May 2022	- Bar Code Scanners, Wireless LAN, Mobile Computers, Radio Frequency Identification (RFID). FCI, CWC, Reliance - Wal-Mart - KFC - ICT Applications in Warehouse - World-class Warehousing.

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HSC 303: Child Development

November 2021	Principles of Growth and Development and Factors influencing growth and Development of Children. Determinants of Development
December 2021	Stages of Pre-natal development Infancy Babyhood
January 2022	Early Childhood Period Late Childhood Period
February 2022	Childhood disabilities Gifted Children Importance of Early Identification and special education
March 2022	Parenting Styles Behavioural Problems Juvenile delinquency – Definition and Causative factors

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HSC 405: Resource Management and Family Economics

June 2022	Management Process Systems Approach to Management Values, Goals & Standards
July 2022	Resources Decision Making Conflict Resolution
August 2022	Time Management Energy Management Work Simplification
September 2022	Family as an Economic Unit Family Income Family Expenditure,Budget,Savings

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HSC 403: Human Development and Family Dynamics

June 2022	Adolescence Major concerns during adolescence
July 2022	Young Adult Hood Preparation for Marriage Pre-marital counselling
August 2022	Values and goals of marriage Transition to Parenthood Post- marital counselling. Family
September 2022	Middle adulthood Late Adulthood

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HSC 501: Human Development

November 2021	Growth and development, Prenatal period- stages of pre natal development with its Hazards
December 2021	Pregnancy Parturition Babyhood-characteristics- physical, motor, language, social, emotional and cognitive developments
January 2022	Early childhood ,Late childhood
February 2022	Puberty, Adolescence
March 2022	Adjustment problems in the family

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H.SC 504: Sociology

November 2021	Sociology- its relation to other social sciences, socialization, agents of socialization, social institutions
December 2021	Social groups ,Different types of family structure, changing village system in India
January 2022	Indian city- consequences of planned and unplanned industrialization, Prevailing practices- current social problems Juvenile delinquency uncontrolled population
February 2022	Areas needing social change- social reforms and progress with special reference to women. Concept of welfare state- Directive principles of the Indian constitution
March 2022	Causes for growth of population, Consequences of population explosion, Population Education

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H. Sc 601: Early Childhood Care and Education

June 2022	History and significance of ECCE Types of preschools, Qualities of preschool teachers, records and registers to be maintained
July 2022	ECE Philosophers Western ECE Philosophers Indian
August 2022	Play behavior in children- stages of play behavior Types of play Preschool program
September 2022	Importance of parent teacher meeting Needs of children Rights of Child Organization and programs for child welfare

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H. Sc 604: Family Dynamics

June 2022	Marriage , Criteria for mate selection, Practice of dowry and its present status, legal provisions related to marriage and family
July 2022	Areas of marital adjustment Family definition - functions, types of families - nuclear and joint
August 2022	Characteristics of a family ,Importance of family life education Stages in family life cycle Old age
September 2022	Preparation for parenthood Parenting styles Structure and forms of a family Status of women in the modern world

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