



AUXILIUM COLLEGE (Autonomous)

(Accredited by NAAC with A+ Grade with a CGPA of 3.55 out of 4 in the 3rd cycle)
Gandhi Nagar, Vellore – 6.

Auxilium Innovation & Incubation Centre

1. Establishment Certificate

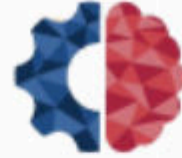
2. Department - Innovation Inside Activity

- **History**
- **Business Administration**
- **Computer Application**
- **Biochemistry**
- **Mathematics**
- **Physics**
- **Visual Communication**
- **Zoology**
- **Commerce (Banking & Insurance)**
- **Botany**
- **Microbiology**

3. Value Added Course



Ministry of
Education
Government of India



MoE's
INNOVATION CELL
(GOVERNMENT OF INDIA)



INSTITUTION'S
INNOVATION
COUNCIL
(MINISTRY OF EDUCATION GOVERNMENT)



CERTIFICATE OF ESTABLISHMENT

This is to certify that

Auxilium College (Autonomous), Vellore

has established an Institution's Innovation Council (IC202220706) in the campus as per the norms of Innovation Cell, Ministry of Education, Govt. of India during the academic calendar year 2022-23

Prof. Anil D. Sahasrabudhe
Chairman
AICTE

Dr. Abhay Jere
Chief Innovation Officer
Ministry of Education's Innovation Cell

Certificate No: 10257

Aishe Code: C-36394

Date: 05-07-2023



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Auxilium Innovation & Incubation Centre

Department of History

NAAC CYCLE IV SSR 2023

Department of History
Report on Innovation Inside
2021-2022

Programme: Inauguration of Innovation Inside

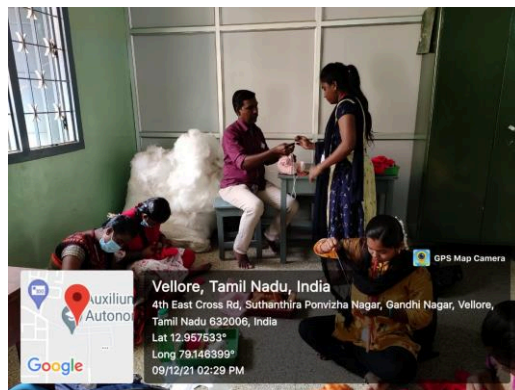
Date: 09.11.2021

The Department of History inaugurated the Innovation program through Virtual Mode –Google Meet on 9th of November 2021 at 3.30 p.m. The Department of History presented the Innovation program to the Principal of the College.

Theme: To provide job opportunity (part time) the department planned to teach them to learn Toy making and to make them an entrepreneur. The Rural Handicraft sponsors this program and the Faculty in charge for this activity is Dr.Ganga V.

Programme: Hands on Training on Soft Toy Making

Date: 29.11.2021 to 29.12.2021



As per the Innovation plan the Department started the hands on training on soft toy making from the Month of November 29th 2021. A trainer **Mr. R.Vincent** from outside the campus was appointed to give the training to the students of the department. From II History 8 Students and from III History 9 students joined to learn this innovation program. The students of the Department learnt this skill in the afternoon session for 3 hours every day. Within a month the students learnt this skill and made soft toys. They also exhibited the toys and sold it in the campus. As per the theme, we the department had organized and made the students to learn the skill and we made them to be an entrepreneur. This innovation innovate was a successful one.

Dr. Jayashree
PRINCIPAL
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Vellore District, Tamil Nadu.



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Auxilium Innovation & Incubation Centre

Auxilium Business Incubation Centre (2019-2020)

(Department of Business Administration)

NAAC CYCLE IV SSR 2023

Auxilium Business Incubation Centre

2019 - 2020

Programme: Inauguration of ABIC

Date: 08.03.2019

International women's Day was organized along with Matha skill development Centre on how women can employ their skills and earn from home. On the same day Auxilium business incubation Centre (ABIC) was inaugurated by Mr.Jawarilal Jain, Founder and Chairperson of AMBALAL group of companies. This day also marks the signing of Memoranda with Matha Skill Development Centre and Ambalal Group of Companies, Vellore



INSTALLATION OF ABIC

AUXILIUM BUSINESS INCUBATION CENTRE



MATHA SKILL DEVELOPMENT CENTRE



Awareness programme for Women were organized entrepreneurs Matha Educational Trust. Aari Workshop and Jute Bag making workshops were conducted in collaboration with Matha Skill Development Centre, where 12 students from BBA benefited from it.

Programme: Upscaled Entrepreneurship and Skill Development Programme
Date: 20.02.2020 – 21.02.2020



Industrial Motivational Campaign (IMC- Y) in collaboration with Matha Educational Trust was conducted for MBA students. It was a two-day programme that enriched the students on the skills needed to develop entrepreneurship.

Sr. Jagan Sathya
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Vellore District, Tamil Nadu.

2020-2021


Programme: Management Development Programme

Date: 21.05.2020 to 23.05.2020

Three-day Management Development Programme was conducted for the II MBA students on various themes such as Digital Marketing, Funding Avenues and Government Agencies, Determination of Plant and production programme and Machinery, Supply Chain Management. Value Chain Analysis and Growth Strategies. Zoom platform was used to enrich the students on various topics. Dr. Beulah Suresh, Ms. Preethi Prabhakaran, Dr. Divya Keerthiga, Ms. Bhuvaneshwari, Ms. Balapriya and Dr. Uma Mageswari.

Programme: Virtual National Seminar

Date: 27.05.2020 to 29.05.2020





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GANDHINAGAR, VELLORE, TAMIL NADU - 632 006.

The Intellectual Property Rights Cell (IPRC)
&
Auxilium Business Incubation Centre (ABIC)
Organises
A Virtual National Seminar
In Collaboration with
National Institute for Micro, Small & Medium Enterprises (ni-msme)
An Organisation of
Ministry of MSME, Govt. of India
Hyderabad, Telangana, India
on
"Own Your Future through the
Journey of Entrepreneurship"
27th – 30th May 2020

COORDINATORS

Coordinator of IPR Cell Dr. Sugantha Kumari.V Assistant Professor, Department of Chemistry Auxilium College, Vellore, Tamilnadu.	Coordinator of Auxilium Business Incubation Centre Dr. Beulah Suresh Head & Assistant Professor Department of Business Administration Auxilium College, Vellore, Tamilnadu auxiliummba@gmail.com	Session Hosted and Moderated by Mr. Dinesh Gajendran Catalyst & Executive Director Audacious Dreams Foundation
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HOST Partner www.audaciousdreams.org dinesh@audaciousdreams.org		NGO Partner MATHA EDUCATIONAL TRUST, VELLORE	
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Three-day Virtual National Seminar on the topic Own Your Journey through the Journey of Entrepreneurship was organised in Collaboration with National Institute for Micro, Small & Medium Enterprises (ni-msme), an Organisation of Ministry of MSME, Govt. of India, Hyderabad, Telangana, India. All the students of BBA, BBA(Hospital Administration) participated and benefited from the programme.

Programme: Micro Skillpreneurship Development Programme (MSDP)

Date: 01.07.2020-25.07.2020

Auxilium College Business Incubation Centre (ABIC), Auxilium College (Autonomous), Vellore, Coordinated with the Entrepreneurship Development Institute of India, Ahmedabad. Gujarat, in association with Matha Skill Development Centre, Gandhi Nagar, Vellore, and Sponsored by Accenture, Chennai organized a Webinar on Micro Skillpreneurs Development Programme (MSDP 067) from 10.30 am to 01.00 pm through Google Meet. The 25 days Sessions comprised of both theoretical and practical insights for the participants of the MSDP program. Mrs. Jayanthi, Staff, Madha Trust, did a practical demonstration of Various Millets Healthy Mix recipes to inculcate the students' knowledge of cooking methods for their Startups.

Programme: Entrepreneurship Development program

Date: 15.07.2020 to 16.07.2020

A National Level Virtual Entrepreneurship Development program was organized by Auxilium Business Incubation Centre (ABIC), Auxilium College & Department of Business Administration, Loyola College, Vettavalam in collaboration with COIR BOARD, Ministry of MSME, Govt.of. India, Regional Office, Pollachi, Tamil Nadu, & Matha Trust Education 2020 on "Fostering Entrepreneurial Attitude and Skills- The Role of Educational Institutions and Government" from 15.07.2020 to 16.07.2020. Mrs.Balapriya and Mrs.Subha Chandra, Assistant Professors of the Department of Business Administration were the hosts for the Webinar. Mr.G. Poopalan, (Regional Officer) COIR BOARD, Pollachi and Mr. Jaishankar, Faculty, EDII/Bangalore, and Mr. Suriyaprakash, ni-MSME, Hyderabad were the Resource Persons for both the days.

Programme: Micro Enterprise Development Program
Date :16.10.2020-31.10.2020

A 15 days Micro Enterprise Development Programme was conducted by Matha Educational Trust, Vellore on behalf of Integrated Agri Training from 16.10.2020 to 31.10.2020 on Mushroom Cultivation, Organic Farming, Backyard Entrepreneur, Vermi Compost. Around 30 participants participated in the programme. The training was conducted in Panchayat Office, Kaniyambadi. The training commenced with the inauguration in the presence of Mr Raghavan, Chairman, Mr Thirumeni- APO, Ms Amudhavalli-BDO, Ms Rajeswari-BDO and Mr M Gunasekaran - Director Matha Educational Trust. Mr Raghavan stressed on the importance of women becoming successful entrepreneurs. During the inauguration Mr Thirumeni elaborated on Micro Lab and on the importance on Entrepreneurs. It was followed by Mushroom cultivation by Mr M Gunasekaran. The training was from 10.00 am to 3.45 pm with a lunch break of one hour.

Dr. J. S. Sushila
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Vellore District, Tamil Nadu.

2021 - 2022

Programme: Webinar on Intellectual Property Rights

Date: 20.11.2021

Department of Business Administration organized a National Webinar on Intellectual Property Rights – Percieve your rights, via Zoom Platform where more than 350 members participated. Mr. Udhyaa Shankar, Assistant, Controller of Patent Office, Chennai was the resource person. The session covered the various aspects such as Patents, Trademarks, Industrial Design, Geographical Indications and Copyrights.

Dr. Ujwal Shankar

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2022 - 2023

Programme: International Entrepreneurship Day

Date : 23.11.2022



The Department of Business Administration, Auxilium College (Autonomous) in association with Ambalal Group of Companies, Vellore celebrated the International Entrepreneurship Day 2023 on 11.01.2023 in the College Auditorium. The chief guest was Dr M Venkada Subbu - Founder & Director Darling group of Companies Vellore and the guest of honour was Mr G Praburam, the founder of Alubee Die Casters, Hosur.

As a part of the International Entrepreneurship Day, Ambalal groups handpicked few successful entrepreneurs of Vellore and awarded them “AMBALAL AWARDS”. The chief guest and guest of honour stressed on the nuances of doing business and shared their viewpoints among the budding entrepreneurs of Auxilium College. During the programme, the students participated in a webinar delivered by Ms. Angel Joe, Hyderabad.

The students of BBA, MBA and B.Com participated in the programme. The programme came to end with the vote of thanks proposed by Dr Beulah Suresh.

Programme: Management Development Programme

Date: 09.01.2023 – 14.01.2023



The Department of Business Administration conducted a one-week Management Development Programme (MDP) in association with Matha Educational Trust, Gandhi Nagar sponsored by MSME. 25 students of III BBA participated in the programme. Dr. Beulah Suresh, Dr. Bhuvaneshwari, Dr. S. Renuga Devi, Dr. M. Bala Priya, Dr. S. Uma Mageswari and Ms. Dhivya Bharathi were the resource persons for the MDP. A wide range of topics were covered during the programme that enable the students to be successful entrepreneurs. The topics include Motivation & Self Confidence, Why Self Employment? And Its advantages over wage employment, Women Resilient Entrepreneur, Collecting ideas from friends, peers and supervisors about Management skills, HR Management, Reduces risk and unpredictability related to external recruitment of managers, Export Management, Marketing Management, Personnel Management, Financial Management, 4 P's of Marketing & Govt. Schemes, FSSAI & Legal Formalities, Risk Taking & Goal setting, Decision Making, Communication Skills and Creative thinking. The MDP started with an inauguration. Students actively participated in the programme.

Dr. Beulah Suresh
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Auxilium Innovation & Incubation Centre

Department of Computer Application

NAAC CYCLE IV SSR 2023

Department of Computer Application

2021-2022

Programme: Inauguration of Innovative Target 2021

Date: 10.11.2021

Department of Computer Applications Innovative Plan Inauguration started at 11 am on 10.11.2021

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INNOVATION INSIDE
Creative Projects of Auxilium College Vellore

Department of Computer Applications
Cordially invites you to the
**Inauguration on
Innovative Target - 2021
TECHNOLOGY FOR YOUTH**
On
10th November 2021, at 11:00 am
Meeting Platform - Google Meet
<https://meet.google.com/vix-fvax-chhm>

Principal: Dr.(Sr.) Jaya Santhi R.
Vice - Principal (Shift II): Dr.(Sr.) Amala Valarmathy A.
Head of the Department: Dr. S. Lavanya
Co-Ordinator: Ms. Anbu Selvi Remitta A.

gzb-vucr-vka

REC

S.NO	Innovative Plan	Theme	Duration
1	Course on Microsoft Packages, Digital Designing and Live Streaming	Service & Social Responsibility	2 months
2	Survey on Women Education from the College adopted Village (K.V Kuppm)	College Survey	4 Weeks Survey

Anbu is presenting

Lavanya

Anbu

You

Jaya 4 others

Department: Department of Computer Applications (Shift II)

Head of the Department: Dr. S.Lavanya,

Project Co-ordinator: Ms. Anbu Selvi Remitta A.

S.No	Project Title	Sponsors	In-Charge
1	Women Dropout Survey	NIL	Ms. Anbu Selvi Remitta A
2	Digital Designing Course	Students of Department of Computer Applications	Ms. Anbu Selvi Remitta A Ms. Kokila A Ms. Deeba K Ms. Vijaya Bharathi R

Programme: Women Dropout Survey

Date: 04.12.2021

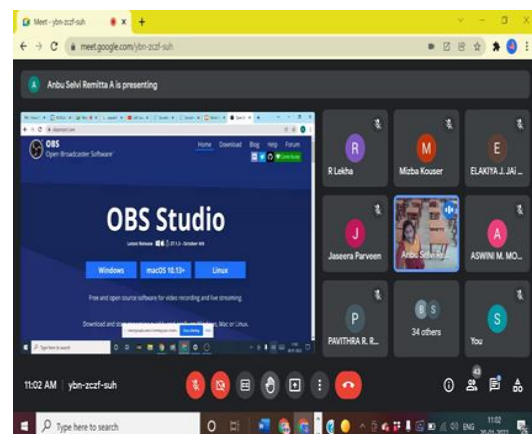
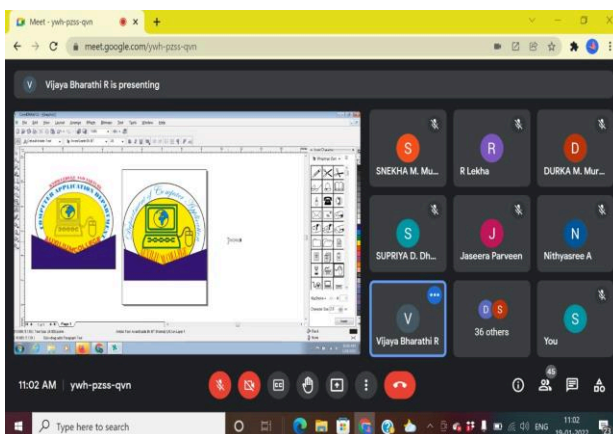
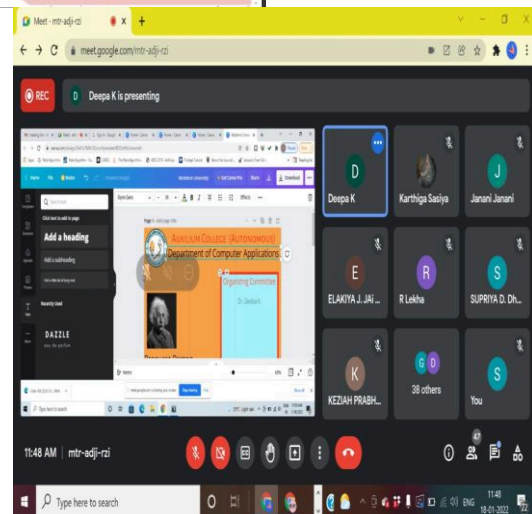
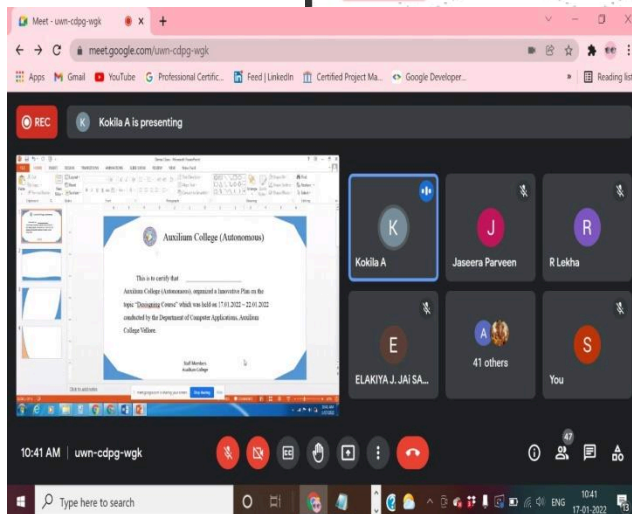
The students of the Department of Computer Applications visited “CHENANGKUPPAM” village near Gudiyattam taluk on 4.12.2021 for the Women Education Dropout survey under the age group of 18.

Students have taken survey of around 250 families. In the survey, around 26 women were identified as drop outs.



Programme: Course on Digital Designing and Live Streaming

Date: 17.01.2022 to 20.01.2022



The topics of the Course Programme are as follow:

- Certificate Creation & Autocrat Tool
- Canva
- Corel Draw
- Youtube Live Streaming

Day 1: (17.01.2022)

- Certificate Creation & Autocrat Tool was handled by Ms. Kokila A., Assistant Professor, Department of computer Applications (Shift II).
- She demonstrated the Design Process of Certificate Creation by using Shapes tool and Edit Points. A new tool of “Autocrat” was taught to send the certificates automatically to the participants by filling the Google Feedback Form. It was very interesting and she explained about various design process of creation. She encouraged our students to create and find out their own design process of certificate creation

DAY 2 (18.01.2022)

- Canva session was handled by Dr. Deeba. She taught about “Canva” and its usage. Students were taught to design a basic brochure. Tips, tricks and do’s in designing a brochure was also taught. In the end of the session the students were asked to design a brochure out of the instincts gained and the students did so well.

Day 3 (19.01.2022)

Logo Creation using CorelDraw11 software was handled by Ms.Vijayabharathi R Assistant Professor, Department of Computer Applications (Shift II).She demonstrated the Design Process of LOGO Creation by using CorelDraw 11 software. It was very interesting and she explained about various design process of creation. She encouraged our students to create their own Logo Design process.

Day 4 (20.01.2022)

- YouTube live streaming was demonstrated by Ms. Anbu Selvi Remitta A , Assistant Professor Department of Computer Applications. With the help of a professional live streaming platform, students hosted live stream events. Students can also become an entrepreneur. It is a great way to widen business or organization’s reach.

Dr. Jyoti Sush - 2

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Auxilium Innovation & Incubation Centre

Department of Biochemistry

NAAC CYCLE IV SSR 2023

Department of Biochemistry

INNOVATION AND INITIATION REPORT

2021-2022

Programme: Launch of innovations and creative projects

Date: 12.11.2021

PG Department of Biochemistry conducted “Launch of innovations and creative projects” on 12.11.2021 at 2.00pm through google meet. Dr. G. Abi Beulah, Head of the Department, initiated the program with a short prayer seeking the blessings of God and extended a warm welcome to Dr. (Sr.) Jaya Shanthi R, Principal and Dr. (Sr.) Amala Valarmathy A, Vice Principal and faculty members of the department.

Following the welcome note the session was handed over to Dr. M. D. Lakshmi Priya, Co-ordinator of Innovations inside for her presentation. The presentation was about amalgamating innovation in teaching- learning environment for which the students of II PG Biochemistry were given the opportunity to explore their educational experience in a research environment by pursuing their M.Sc project and acquiring skills in analytical techniques in the Department of Biochemistry, Saveetha Dental College, Chennai.

The department also plans an initiative in taking up a creative project which was presented by Dr. B. Lavanya, Co-ordinator of Innovations inside. Her presentation included the plan of conducting the case study on the rate of prevalence of rheumatoid diseases in Vellore district. The study will target the government hospitals in Vellore district and take up a survey on the cases reported with thyroid and rheumatoid diseases between the years 2015-2021.

Dr.(Sr). Jaya Shanthi R, Principal and Dr. (Sr). Amala Valarmathy. Vice Principal (Shift II) appreciated the initiatives taken by the department and assured their support for the success of the innovative plans and projects. Vote of thanks was proposed by Ms. Aruna A, Assistant professor, Department of Biochemistry.

Second report was submitted on 03.01.2022. The innovative and initiative plans adopted by the department of Biochemistry are progressing and the details are furnished below:

1. M.Sc students sent for their project has started to write their introduction and review of literature for their thesis. They are supposed to visit Saveetha Dental College, Department of Biochemistry, Saveetha University, Chennai again for acquiring cumulative results of their research work done.

2. Regarding seeking permission to get access to concern hospitals is under process. Formal letter from the college will be submitted to the Directors of the hospitals and their concern regarding the same is expected to start the work. Hospitals to be approached are: 1. CMCH, Vellore 2. Narayani Hospital, Sripuram 3. Govt. Hospital, Adukkamparai 4. Govt Hospital, Gudiyattam.

The innovative initiative plan completed was hands on training and project work by PG students in Saveetha University, Chennai. Students had hands on training in animal handling, RNA isolation, DNA amplification, quantification of DNA and enzyme assay. Project work completed by the students were on topics: 1) Therapeutic role of antioxidant vitamins on PCB induced changes in insulin resistance in cardiac tissue, 2) Molecular studies in glyphosate exposed changes in neuroinflammatory signalling molecules in diabetic rats, 3) Vitamin C and E modulates PCB-induced diabetic nephropathy in adult male rats, 4) Impact of glyphosate on insulin signal transduction in liver of experimental diabetic rats, 5) Role of vitamin C and E on Nrf2 signaling in PCB in induced experimental diabetic rats.



Handling tissue homogenizer



DNA amplification



Running amplified DNA in agarose gel electrophoresis



Performing enzyme assay



Performing ELISA

Sr. Vigneshwari
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Auxilium Innovation & Incubation Centre

PG & Research Department of Chemistry

NAAC CYCLE IV SSR 2023

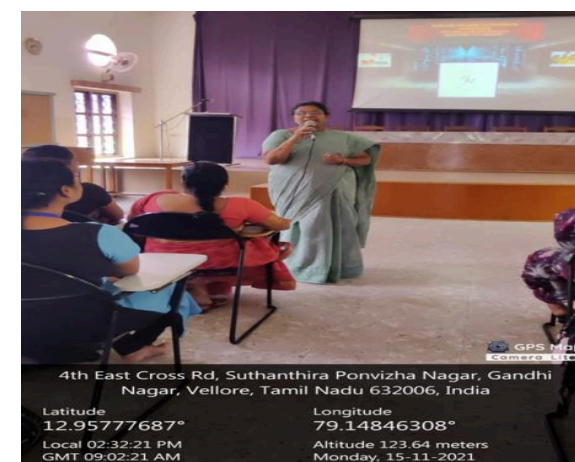
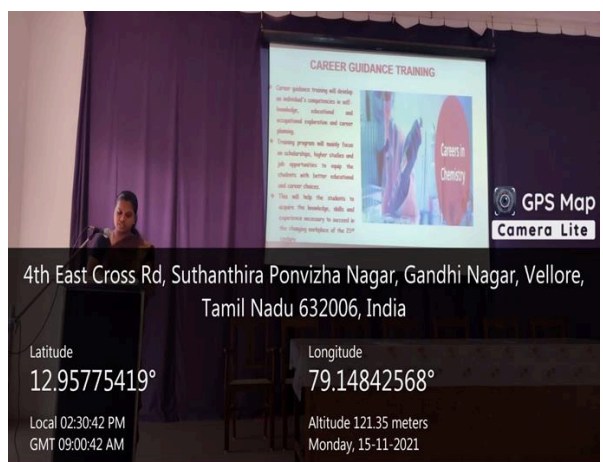
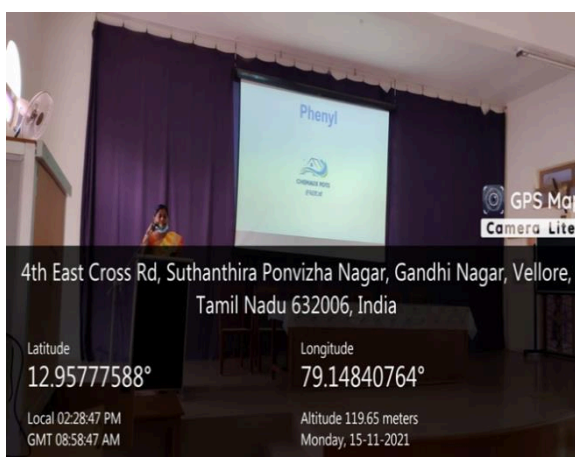
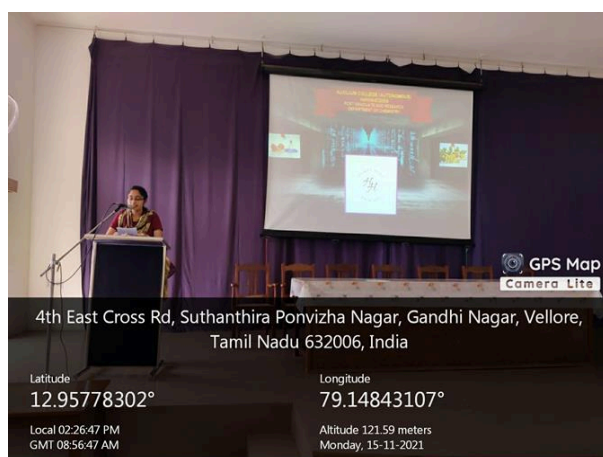
PG & Research Department of Chemistry

2021-2022

Programme: Inauguration of Innovative Initiatives

Date: 15.11.2021

The inauguration of the Innovative initiatives of the Department of Chemistry was held on **15/11/2021**. The meeting began with a prayer followed by a welcome note by Dr. V. Sugantha Kumari, Assistant Professor and Co-ordinator of the Innovative Initiatives of the Department. The initiatives undertaken by the department are Entrepreneurial Skill training and Career Guidance Training.



The scope of the preparation of hair oil (*Herbo Heal*) and phenyl (*CHEMAUX PDTS*) were presented by Ms. Irene of III B.Sc. Chemistry and Dr. R. Sangeetharani, Assistant Professor of Chemistry respectively. The scope of the Career guidance training was presented by Dr. D. Subashini, Assistant Professor of Chemistry. Dr. S. Jhancy Mary, Head

and Associate Professor, Department of Chemistry gave a detailed insight on these initiatives. Vote of thanks was proposed by Ms. T. Atheeba Firdouse of III B.Sc, Chemistry.

1. **Herbo heal hair oil** is totally pure, organic prepared using herbs, encourages healthy hair growth and restores volume. It nourishes the scalp to strengthen hair follicles and combat hair fall and dandruff. Herbo heal hair oil has no side effects and it is more effective for hair growth.
2. **Phenyl** is highly concentrated, economical and very effective all-purpose cleaner and deodorizer with pure pine oil which acts a natural disinfectant. Kills 99.9% germs and drives away mosquitoes, cockroaches and tiny insects with proper dilution. After cleaning it gives long-lasting fragrance of pine.
3. **Career guidance training** develops an individual's competencies in self-knowledge, educational and occupational exploration and career planning. Training program mainly focuses on scholarships, higher studies and job opportunities to equip the students with better educational and career choices.

Programme: Entrepreneurial Training

Date: 22.12.2021



Herbal Oil: Expenses for the purchase of materials, Induction Stove and coconut oil is Rs. 9270.

Phenyl: Expense for the purchase of materials, plastic things and chemicals is Rs.4310.

Herbal Heal hair oil and Phenyl were prepared by the students of the Department.

2022-2023

Programme: Entrepreneurial Training

Date: 22.09.2022

**Innovative Initiatives of the Chemistry Department
Entrepreneurial Training**



60 bottles of phenyl were prepared and 30 bottles were sold for an amount of Rs. 1500.

Sr. Vigneshwari
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Auxilium Innovation & Incubation Centre

Department of Mathematics

NAAC CYCLE IV SSR 2023

Auxilium College (Autonomous), Vellore - 6

Department of Mathematics

“PRINT HUB”

Objectives:

- To enhance the entrepreneurial skills of the students.
- To instill career opportunities for the students.

Introduction:

The Department of Mathematics has taken up the responsibility of providing print out, photocopy, soft binding and spiral binding services to the college as a part of AIIC. We trained the second year and third year students of B.Sc. Mathematics in soft and spiral binding.

Materials Purchased:

For the binding purpose we purchased the following materials.

Soft Binding Machine – 1

Spiral Machine – 1

Paper Cutter Machine – 1

Stapler pins of different sizes, Spirals of different sizes, etc.

Beneficiaries:

Sixteen students from III B.Sc Mathematics and Twelve students from II B.Sc. Mathematics were trained to do soft and spiral bindings. We trained the students after college hours.





Cost for Binding:

Soft Binding:

No. of Pages	Cost
Less than 50	Rs 30
50 – 75	Rs 40
75 - 100	Rs 70
101 - 150	Rs 90
151 - 200	Rs 110

Spiral Binding:

No. of Pages	Cost
Less than 50	Rs 30
50 - 75	Rs 40
75 - 100	Rs 70
101 - 150	Rs 90
151 - 200	Rs 110

Print outs and Photo copies – Rs 2/ per page.

Accounts Details:

Separate registers are maintained for Bindings and Print Outs.

Accomplished Work:

- 22 spiral binding and 5 soft bindings are done by the students.

Dr. Jayashree
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PG & Research Department of Physics

NAAC CYCLE IV SSR 2023

PG & Research Department of Physics

As a part of innovation programme, in order to give awareness to students about Conservation of energy and energy harvesting, Science spectacle and Awareness Program – Science Exhibition was organized by PG Department of Physics on 10th December 2021. This event was organized by the innovative program co-ordinator Dr.S.Reena Devi in consultation with the head of the department Dr.P.Nisha Santhakumari. The PG students presented their working models along with posters related to energy conservation in the field of Solar energy, Wind energy, Mechanical Energy and Sensors etc.in the allied Physics laboratory. Dr.Sr. R.Jaya Santhi, Principal and the Vice principal Sr. Sumathi M inaugurated the exhibition. The exhibition was open to students of other departments of our college and neighboring institutions - Auxilium School and Auxilium College of Education. More than 400 students visited the exhibition and enriched their knowledge. The students gave a clear and detailed explanation of their models and posters.

Some of the projects presented are Aloe Vera Battery, Bio Gas, Foot step Generator, Road power generator, Solar water tank, Solar water pump, Li-Fi Technology, Dark light Sensor, Finger Print Attendance, Turbine Wind Energy, Water level indicator, Temperature Sensor with Arduino, Tesla Coil with Home Automation, Fire Alarm, Bidirectional Visitors counter, and Thermostat.

Thirty five posters were displayed on Energy conservation on Wireless Sensor Network, Hydro-electricity, Free energy Electric bulb, Geothermal, Nuclear, Tidal and Bio energy, Transparent Solar Panel, Concrete Road, Energy Storage System, Nuclear Energy, Bladeless wind turbine and Space based Polar Power.

The best three teams were awarded for Models and posters. E-Certificates were issued to all the participants. Feedback was received from the guests and participants. The program was a grand success.

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 Gandhinagar vellore-632006

PG DEPARTMENT OF PHYSICS
 Cordially invites you for the
Science Spectacle and Awareness Program
 On
CONSERVATION OF ENERGY

Date: 10th December
 Time: 10.00am to 05.00pm

Venue: Science Block (Physics Laboratory)

Principal: Dr.(Sr.) Jaya Santhi.R
 Vice Principal: Dr.(Sr.) Jacintha
 Head of the Department: Dr.Nisha shantha kumari.P
 Co-Ordinator: Dr.Reena Devi.S



Dr. Jaya Santhi.R

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 Vellore District, Tamil Nadu.



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Auxilium Innovation & Incubation Centre

Department of Communication Media

NAAC CYCLE IV SSR 2023

DEPARTMENT OF COMMUNICATION MEDIA

2021-2022

Programme: Wall Painting Project

Date: 05.05.2022

The students of Communication media have painted scout awareness paintings and slogans in the walls of the scout den at Katpadi Railway station.



Sr. Vijayalakshmi

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Gandhi Nagar, Vellore - 632 006.
Vellore District, Tamil Nadu.

Programme: Wall Painting Project

Date: 19.05.2022 to 22.05.2022 & 08.06.2022 to 09.06.2022



The students of department of communication media have painted motivational, patriotic, awareness paintings on the walls of Central Prison of Vellore, Men's Jail Wing in two phases: 19th to 22nd May 2022 and 8th to 9th June 2022.

Sr. Vigneshwari
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Auxilium Innovation & Incubation Centre

PG & Research Department of Zoology

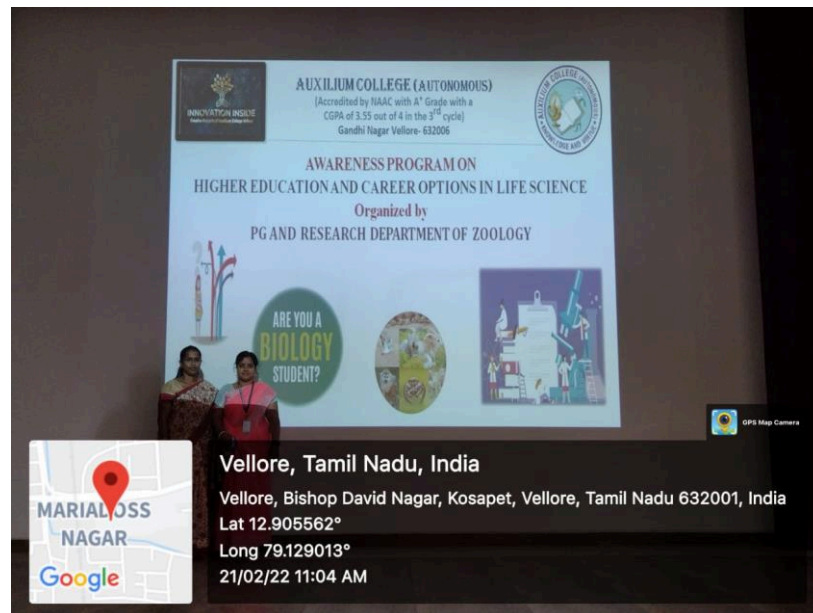
NAAC CYCLE IV SSR 2023

**PG & Research Department of Zoology
2021-2022**

**Programme: Innovative Project-Awareness Program on Higher Education and
Career options in Life Science**

Date: 21.02.2022

Dr.Anu.K and Ms.Anuradha.M, from the department of Zoology conducted an "Awareness Program on Higher Education and Career options in Life Science" as a part of our Innovative project for higher secondary students. Through this program, students were benefited by gaining knowledge about the various courses available in and around Vellore district.



Dr. Anu K
PRINCIPAL
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Vellore District, Tamil Nadu.

2022-2023

Programme: Innovative Project-Awareness Program on Higher Education and Career options in Life Science

Date: 16. 09.2022



Innovative project co-ordinator Dr.Arockiamary.J.S and in-charge Dr.Anu.K and Ms.Anuradha.M, from the department of Zoology conducted an "Awareness Program on Higher Education and Career options in Life Science" as a part of our Innovative project for higher secondary students. Through this program students were benefited by gaining knowledge about the various courses available in and around Vellore district.

Dr. Anu K
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Auxilium Innovation & Incubation Centre

Department of Commerce (Banking & Insurance)

NAAC CYCLE IV SSR 2023

Department of (Commerce Banking and Insurance)

Department Innovation Initiative

2021-2022

Programme: Inauguration of Department Innovation Initiative

Date: 11.11.2021

Department Innovation Initiative was inaugurated on 11-11-2021. Three plans were decided and executed.

I. Service Marketing:

Students were trained to help rural people in filling various bank and insurance form.

II. Training Internship:

Students were selected for sponsorship by LIC, ICICI Life Insurance and Aditya Birla Sunlife Insurance. They were given training for IRDA exam, 27 students cleared the exam successfully.

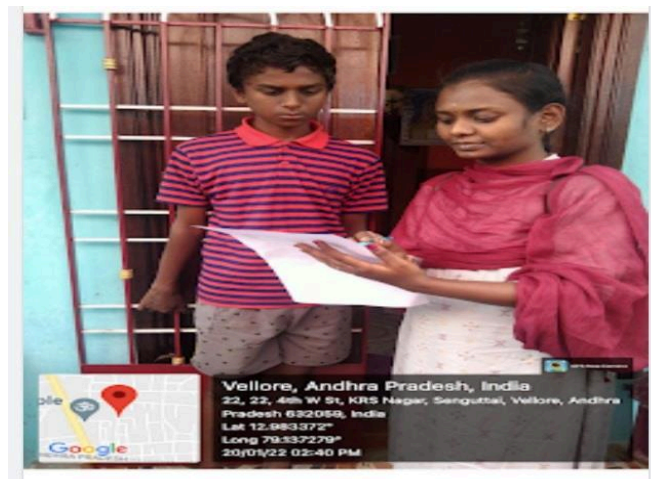
III. Society Relationship:

Each students from 3rd year and 2nd year was asked to create awareness about chief minister comprehensive health Insurance scheme Tamil Nadu(CMCHISTN) among their neighbors and economically backwards people. Students filled 128 applicants and guided them to submit in collectorate office.

Department won IIIrd prize for Department Innovative Initiative.

Activity- I

Dr. Vijayalakshmi
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Vellore District, Tamil Nadu.



Activity -II



Vellore, Tamil Nadu, India
 35/A, Thendral Nagar, THEANRAL NAGAR, Sathuvachari,
 Vellore, Tamil Nadu 632009, India
 Lat 12.935629°
 Long 79.149914°
 04/12/21 12:08 PM

Activity- III



Dr. Vijay Sushini

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Auxilium Innovation & Incubation Centre

Department of Botany

NAAC CYCLE IV SSR 2023

Department of Botany

2019-2020

Programme: Hands on training on “Edible mushroom cultivation”

Date: 07.02.2020

Enviro club organized One day Hands on training on “Edible mushroom cultivation” on 7 th February, 2020. Dr. P.William James, EFGC Biological Farm was the resource person and gave insights of substrate preparation, inoculation, and cultivation techniques.. 110 students from all the departments (II and III year) actively participated and underwent the training. Participants gained valuable insights into sustainable practices, promoting self-sufficiency in edible mushroom production. The training successfully combined theory with practical applications. At the end of the programme certificates were distributed.



Dr. P. William James

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Vellore District, Tamil Nadu.

2022-2023

Programme: Herbal Plants Exhibition and Free Siddha Medical Camp

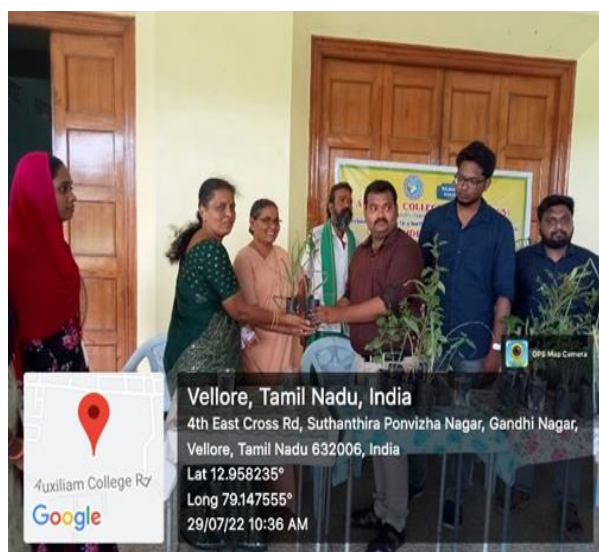
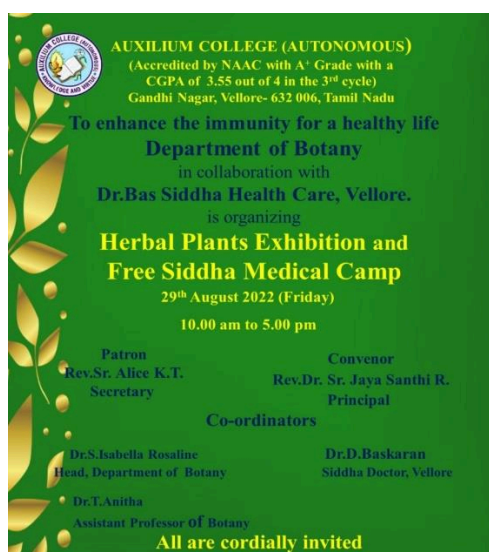
Date: 29.07.2022

To enhance the immunity for a healthy life, the Department of Botany collaborated with Dr. Bas Siddha Health Care, Vellore to organize a Herbal Plants Exhibition and Free Siddha Medical Camp on 29.07.2022. The exhibition intends to create awareness among the students about the utilization and importance of medicinal plants growing in this biosphere. The medicinal plant exhibition was inaugurated by Sr. Sumathi, Vice Principal, and Dr. Baskaran, Siddha Doctor, Impcops Director.

The main attraction of the exhibition was exhibiting nearly 80 rare medicinal species, and explaining their use and the important phytoconstituents present in them. The exhibition provided a platform for students to see, and experience the true scent of, medicinal plants. The significance of medicinal gardens, and awareness about preservation, conservation, and stewardship of natural resources, made a huge impact on the minds of the students.

A team of seven doctors led by Dr. Baskaran conducted the free Siddha medical camp and also distributed Siddha medicines to the students and staff. More than 500 students and 50 staff benefited from the free Siddha medical camp. Free herbal masks and medicinal plants were distributed to students.

The medicinal plant exhibition and free Siddha camp were a grand success and provided a path to reshape students' attitudes towards medicine and medicinal plants.



Sr. Sumathi
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Vellore District, Tamil Nadu.



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Auxilium Innovation & Incubation Centre

Department of Microbiology

NAAC CYCLE IV SSR 2023

Auxilium College (Autonomous), Vellore - 6

Department of Microbiology (Shift – II)

Innovative Intrapreneurship

an efficacious maneuver.....

Motto: The invisible sustaining the visible

Duration: 10.11.2021 to 31.01.2022 (Extension till: Feb, 2022)

HOD / Overall Co- Ordinator: Ms. B.V.Gowri

Project Inaugurated on: 10.11. 2021

Staff Strength: 7

Target Plans to be completed: 4

Target Plan achieved/completed: 1

Target Plans in Progress: 2

Target Plan yet to be started: 1

Table 1. Innovative Plans:

S.No	Project Title	Sponsors	Project In-Charge	Status
1	Clinical oriented training	1. Sri Narayani Hospital and research center, Vellore. 2. Naruvi Hospital, Vellore 3. Apollo Hospital, Melvisharam	1. Ms. B. V. Gowri	Yet to be started
2	Industrial Visits	1. Biocon Biotechnologies, Bangalore 2. Bharath Biotech, Telangana 3. Abode Biotech, Telangana 4. BioGrademy, New Delhi	1. Ms. T. Malathi 2. Dr. R. Manjula	In Progress

Dr. Vigneshwaran
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3	Surveillance study on Lactose intolerance among different age group women (College Survey for Societal benefit)	1. Sri Narayani Hospital and research center, Vellore	1. Dr. V. N. Kalpana 2. Dr. A. Nithya	In Progress (Surveillance report gathering)
4	Analyzing the quality of air and water - Auxilium College and Auxilium Girls Hr.Sec School (Service responsibility)	1. Auxilium College (Provide the recommendations to the management for enhancing sanitation if needed)	1. Ms. R. Deepa 2. Dr. G. Ramya	Completed (College) Yet to complete (School)
Projects Successfully Completed				
1	Analyzing the quality of air and water - Auxilium College	Auxilium College (Provide the recommendations to the management for enhancing sanitation if needed)	1. Ms. R. Deepa 2. Dr. G. Ramya	Completed

Brief Report:

Innovative plan 1: Clinical oriented training

Due to the long-lasting COVID-19 pandemic situation and the onerous measures such as lockdown and stay-at-home orders, the hospitals denied the entry of students for the purpose of clinical training thereby the innovative plan 1 was held up and it is yet to be started.

Innovative Plan 2: Industrial Collaboration

Dr. Vigneshwaran

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Vellore District, Tamil Nadu.

72	Old library	51
73	Pathway – 3 (From admin towards library)	20
74	Pathway -1 (From convent towards school)	53
75	Pathway- 2 (From gate towards computer block)	44
76	PG hostel 1st floor	25
77	PG hostel ground floor	155
78	Physics lab (EVE)	55
79	Physics PG lab	77
80	Physics staff room (Shift -II)	110
81	Physics UG lab	143
82	Principal room	127
83	Science block toilet – 1st floor	81
84	Science block toilet – 2nd floor	14
85	Staff parking area	43
86	Student Vehicle parking area	179
87	Students’ toilet- New	44
88	Students’ toilet- old	37
89	Tamil staff room	35
90	Vice principal room – Day	12
91	Vice principal room – Evening	61
92	Water tank	90
93	Zoology PG lab	10
94	Zoology staff room	16
95	Zoology UG lab	30

Dr. Jagan Mohan - 2

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Vellore District, Tamil Nadu.

Table 3. Most Probable Number Technique – Analyzing water Quality

S.No.	Location of water sample	Number of tubes showing positive in 10 ml, 1ml & 0.1 ml	MPN/100 ml
1.	Administrative Block	0 0 0	<2
2.	Science Block	0 0 0	<2
3.	Computer block	0 0 0	<2
4.	Students Toilet	1 1 5	14
5.	Staff Toilet	1 2 5	17
6.	Hostel Mess	0 0 1	2
7.	Canteen	0 0 2	4
8.	Water Tank	0 0 0	<2

A Report to the Management:

Alarming most of the places in the campus were heavily contaminated with microbial load. A proper sanitary measure is to be undertaken periodically to control the environmental factors which favors the growth and multiplication of indoor microflora to safeguard the health of people inside the campus. Nevertheless, till the time we have clear cut Standard Operating Procedures and guidelines, the issue demands continuous surveillance by the infection control teams to provide a safe environment. To a happy note the water in Auxilium campus collected from different location had less microbial load that revealed maintenance of standard chlorination protocol.

Dr. Jyoti Suresh - a

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Gandhi Nagar, Vellore - 632 006.
Vellore District, Tamil Nadu.



GPS Map Camera



Vellore, Tamil Nadu, India
4th East Cross Rd, Suthanthira Ponvizha Nagar,
Gandhi Nagar, Vellore, Tamil Nadu 632006, India
Lat 12.95735°
Long 79.148303°
26/11/21 12:39 PM

Dr. Jagan Sathish

PRINCIPAL
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Gandhi Nagar, Vellore - 632 006.
Vellore District, Tamil Nadu.



GPS Map Camera



Vellore, Tamil Nadu, India
4th East Cross Rd, Suthanthira Ponvizha Nagar,
Gandhi Nagar, Vellore, Tamil Nadu 632006, India
Lat 12.957376°
Long 79.148052°
26/11/21 03:23 PM

Sr. Vigneshwari
PRINCIPAL
AUXILIUM COLLEGE (Autonomous)
Gandhi Nagar, Vellore - 632 006.
Vellore District, Tamil Nadu.



Vellore, Tamil Nadu, India

4th East Cross Rd, Suthanthira Ponvizha Nagar,
Gandhi Nagar, Vellore, Tamil Nadu 632006, India

Lat 12.957381°


Long 79.148329°

26/11/21 12:52 PM

Dr. Jagan Sathya

PRINCIPAL
AUXILIUM COLLEGE (Autonomous)
Gandhi Nagar, Vellore - 632 006.
Vellore District, Tamil Nadu.



 GPS Map Camera



Vellore, Tamil Nadu, India

4th East Cross Rd, Suthanthira Ponvizha Nagar,
Gandhi Nagar, Vellore, Tamil Nadu 632006, India

Lat 12.957399°

Long 79.14834°

26/11/21 12:56 PM

Sr. Jyoti Sathya
PRINCIPAL
AUXILIUM COLLEGE (Autonomous)
Gandhi Nagar, Vellore - 632 006.
Vellore District, Tamil Nadu.



Vellore, Tamil Nadu, India

4th East Cross Rd, Suthanthira Ponvizha Nagar,
Gandhi Nagar, Vellore, Tamil Nadu 632006, India

Lat 12.957381°

Long 79.148329°

26/11/21 12:52 PM

Sr. Vigneshwari

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Vellore District, Tamil Nadu.



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Gandhi Nagar, Vellore – 6.

Syllabus – Value Added Courses

SL.No.	Value Added Course Names
1	Cottage Industries
2	Tamil Cultural Culinary Arts
3	Tamil for Competitive Examinations (TNPSC)
4	Inclusive Commerce and Governance for Sustainability
5	Application of Data Analytics
6	Learning Open-Source Simulation Software - SCILAB
7	Fundamentals of Data Analytics
8	Fashion Designing
9	Entrepreneurial Skills in Botany
10	Digital Marketing
11	Intellectual Property Rights
12	Sustainable Development Goals
13	Application of Business Analytics using Advanced Excel ,Python and Tableau
14	Class Based Programming
15	Software Development Framework Using Core MVC
16	Web Framework for Data Science
17	Mobile Application Development
18	Portrayal Of Art

Department of Chemistry

Value-Added Course

VACCHCI22 - COTTAGE INDUSTRIES

Code	Title of The Paper	Hours
VACCHCI22	Cottage Industries	30

Learning Objectives:

- To teach basic skills in needle work, hand embroidery, paper craft and baking.
- To impart skills for preparing household small-scale products.
- To enable the students to initiate start-ups for employment.

Course Learning Outcomes:

CLO1: The students will develop skills in hand embroidery, bead work and mirror work.

CLO2: The students will be able to bake cookies, bread and cakes.

CLO3: The students will be able to prepare house hold small scale products such as soap, phenyl, herbal oil, mosquito repellent and dish washing powder.

CLO4: The students will be able to initiate start-ups for employment.

CLO5: The students will learn the art of packing, branding and marketing.

Unit 1: Embroidery and Needle work

(6 hours)

Motif –Meaning, types, placement. Hand Embroidery: Introduction tools and equipments. Basic stitches of Hand embroidery- Techniques and Applications. Types of stitches – Back stitch, chain stitch, stem stitch, feather stitch, fish hole stitch, cross stitch and satin stitch. Basics in bead work and mirror work.

Unit 2: Baking

(6 hours)

Basic baking ingredients – Essential equipment and uses. Characteristics and functions of flour, sugar, eggs and milk Products, leavening agents, chocolate and cocoa, salt, spices and flavourings in the baking of cakes. Textures and decoration of cakes. Yeast - raised products – White bread and Wheat bread. White dinner rolls – Basic sweet dough. Cookies – Drop cookies – Rolled cookies – Bar cookies.

Unit 3: Paper Craft

(6 hours)

Different types of Paper craft- Flower craft, wall hangings, decorative paper work, Paper bags, card making and origami.

Unit 4: Small Scale Products

(6 hours)

Preparation of household products: Phenyl, Soap and Shampoo – Basic ingredients, method of preparation, packing and marketing.

Unit 5: Small Scale Products

(6 hours)

Herbal hair growth oil, Herbal Mosquito repellent and dish wash powder: Collection and storage of raw materials, preparation, packing and marketing.

தமிழ்த்துறை

VACTACE22 - TAMIL FOR COMPETITIVE EXAMINATIONS (TNPSC)

Code	Title of paper	Hours
VACTACE22	Tamil for Competitive Examinations (TNPSC)	30

கற்றலின் வெளிப்படுத்திறன்

1. தமிழ் இலக்கியத்தின் வாயிலாக போட்டித் தேர்வுக்கு மாணவிகளை ஆயத்தப்படுத்துதல்
2. போட்டித் தேர்வினை எதிர்க்கொண்டு வேலை வாய்ப்பினை பெற வழிவகுத்தல்
3. தன்னம்பிக்கையுடன் வாழ வழி செய்தல்

அலகு - ஒன்று

(6 மணி நேரம்)

இலக்கியங்கள்

1. திருக்குறள் தொடர்பான செய்திகள், மேற்கோள்கள், தொடரை நிரப்புதல் (இருபத்தைந்து அதிகாரம் மட்டும்) அன்பு, பண்பு, கல்வி, கேள்வி, அறிவு, அடக்கம், ஒழுக்கம், பொறை, நட்பு, வாய்மை, காலம், வலி, ஒப்புரவறிதல், செய்நன்றி, சான்றாண்மை, பெரியாரைத் துணைக்கோடல், பொருள் செயல்வகை, வினைத்திட்டம், இனியவை கூறல், ஊக்கமுடைமை, ஈகை, தெரிந்து செயல்வகை, இன்னா செய்யாமை, கூடா நட்பு, உழவு.
2. அறநூல்கள் - நாலடியார், நாண்மணிக்கடிகை, பழமொழி நானூறு, முதுமொழிக்காஞ்சி, திரிகடுகம், இன்னா நாற்பது, இனியவை நாற்பது, சிறுபஞ்ச மூலம், ஏலாதி, ஒளவையார் பாடல்கள் தொடர்பான செய்திகள், பதினெண்கீழ்க்கணக்கு நூல்களில் பிற செய்திகள்.
3. கம்பராமாயணம், இராவண காவியம் தொடர்பான செய்திகள், பாவகை, சிறந்த தொடர்கள்.
4. புறநானூறு, அகநானூறு, நற்றிணை, குறுந்தொகை, ஐங்குறுநூறு, கலித்தொகை தொடர்பான செய்திகள், மேற்கோள்கள், அடிவரையறை, எட்டுத்தொகை, பத்துப்பாட்டு நூல்களில் உள்ள பிற செய்திகள்.
5. சிலப்பதிகாரம்-மணிமேகலை தொடர்பான செய்திகள், மேற்கோள்கள், சிறந்த தொடர்கள், உட்பிரிவுகள் மற்றும் ஐம்பெரும் - ஐஞ்சிறு காப்பியங்கள் தொடர்பான செய்திகள்.
6. பெரிய புராணம்- நாலாயிர திவ்வியப்பிரபந்தம் - திருவிளையாடற் புராணம் - தேம்பாவணி - சீராப்புராணம் தொடர்பான செய்திகள்.

அலகு - இரண்டு

(6 மணி நேரம்)

இலக்கியங்கள்

1. சிற்றிலக்கியங்கள்

திருக்குற்றாலக்குறவஞ்சி - கலிங்கத்துப்பரணி - முத்தொள்ளாயிரம், தமிழ்விடு
தூது - நந்திக்கலம்பகம் - முக்கூடற்பள்ளு - காவடிச்சிந்து - முத்துக்குமாரசாமி
பிள்ளைத்தமிழ் - இராஜ ராஜ சோழன் உலா - தொடர்பான செய்திகள்.

2. மனோன்மணியம் - பஞ்சாலி சபதம் - குயில் பாட்டு - இரட்டுற மொழிதல்
(காளமேகப் புலவர்) - அழகிய சொக்கநாதர் தொடர்பான செய்திகள்.
3. நாட்டுப்புற பாட்டு - சித்தர் பாடல்கள் தொடர்பான செய்திகள்.
4. சமய முன்னோடிகள் - அப்பர், சம்பந்தர், சுந்தரர், மாணிக்கவாசகர், திருமூலர்,
குலசேகர ஆழ்வார், ஆண்டாள், சீத்தலைச் சாத்தனார், எச்.ஏ. கிருட்டிணனார்,
உமறுப்புலவர் தொடர்பான செய்திகள், மேற்கோள்கள், சிறப்புப் பெயர்கள்.

அலகு - மூன்று

(6 மணி நேரம்)

இலக்கணம்

1. பொருத்துதல் - பொருத்தமான பொருளைத் தேர்வு செய்தல், புகழ் பெற்ற நூல்,
நூலாசிரியர்.
2. தொடரும் தொடர்பும் அறிதல் (அ) இத்தொடரால் குறிக்கப்படும் சான்றோர்
(ஆ) அடைமொழியால் குறிக்கப்படும் நூல்.
3. பொருந்தாச் சொல்லைக் கண்டறிதல்.
4. பிழைதிருத்தம் - சந்திப்பிழை நீக்குதல், ஒருமை பன்மை பிழைகளை நீக்குதல்,
மரபுப் பிழைகள், வழுஉச் சொற்களை நீக்குதல், பிறமொழிச்சொற்களை
நீக்குதல்.
5. ஆங்கிலச் சொல்லுக்கு நேரான தமிழ்ச் சொல்லை அறிதல்.
6. ஒலி வேறுபாடறிந்து சரியான பொருளை அறிதல்.
7. ஒரெழுத்து ஒரு மொழிக்கு உரிய பொருளைக் கண்டறிதல்.
8. வேர்ச்சொல்லைத் தேர்வு செய்தல்.
9. வேர்ச்சொல்லைக் கொடுத்து, வினைமுற்று, வினையெச்சம்,
வினையாலணையும் பெயர், தொழிற் பெயரை உருவாக்கல்.
10. அகர வரிசைப்படி சொற்களைச் சீர்செய்தல்.
11. சொற்களை ஒழுங்குபடுத்தி சொற்றொடர் ஆக்குதல்
12. பெயர்ச்சொல்லின் வகை அறிதல்
13. இலக்கணக் குறிப்பறிதல்
14. விடைக்கேற்ற வினாவைத் தேர்ந்தெடுத்தல்
15. எவ்வகை வாக்கியம் எனக் கண்டெழுதுதல்
16. தன்வினை, பிறவினை, செய்வினை, செயப்பாட்டுவினை, வாக்கியங்களை
கண்டெழுதுதல்.

17. உவமையால் விளக்கப்பெறும் பொருத்தமான பொருளைத் தேர்ந்தெழுதுதல்
18. எதுகை மோனை, இயைபு இவற்றுள் ஏதேனும் ஒன்றை தேர்ந்தெழுதுதல்
19. பழமொழிகள்

அலகு - நான்கு

(6 மணி நேரம்)

தமிழ் அறிஞர்களும் தமிழ்த் தொண்டும்

1. பாரதியார், பாரதிதாசன், நாமக்கல் கவிஞர், கவிமணி தேசிக விநாயகனார், தொடர்பான செய்திகள், சிறந்த தொடர்கள் சிறப்புப் பெயர்கள்
2. மரபுக் கவிதை - முடியரசன், வாணிதாசன், சுரதா, கண்ணதாசன், உடுமலை நாராயண கவி, பட்டுக்கோட்டை கல்யாண சுந்தரம், மருதகாசி தொடர்பான செய்திகள், அடைமொழிப் பெயர்கள்
3. புதுக்கவிதை - ந. பிச்சமூர்த்தி, சி.சு. செல்லப்பா, தருமு சிவராமு, பசுவய்யா, இரா. மீனாட்சி, சி.மணி, சிற்பி, மு. மேத்தா, ஈரோடு தமிழன்பன், அப்துல்ரகுமான், கலாப்பிரியா, கல்யாணஜீ, ஞானக்கூத்தன், - தொடர்பான செய்திகள், மேற்கோள்கள், சிறப்புத் தொடர்கள்.
4. தமிழில் கடித இலக்கியம் - நாட்குறிப்பு, ஜவகர்லால் நேரு, மகாத்மா காந்தி, மு.வரதராசனார், பேரறிஞர் அண்ணா, தொடர்பான செய்திகள்
5. நிகழ்கலை (நாட்டுப்புற கலைகள்) தொடர்பான செய்திகள்
6. தமிழில் சிறுகதைகள் தலைப்பு - ஆசிரியர் - பொருந்துதல்
7. கலைகள் - சிற்பம் - ஓவியம் - பேச்சு - திரைப்படக்கலை தொடர்பான செய்திகள்
8. தமிழின் தொன்மை - தமிழ்மொழியின் சிறப்பு, திராவிட மொழிகள் தொடர்பான செய்திகள்
9. உரைநடை - மறைமலை அடிகள் பரிதிமாற்கலைஞர், ந.மு.வேங்கடசாமி நாட்டார் ரா.பி.சேதுப்பிள்ளை
10. தமிழ்பணி தொடர்பான செய்திகள்

அலகு - ஐந்து

(6 மணி நேரம்)

தற்கால நடப்பு நிகழ்வுகள்

1. நடப்பாண்டில் வழங்கப்படும் விருதுகள்
2. நடப்பாண்டில் வெளியிடப்படும் நூல்கள்
3. நடப்பாண்டில் விளையாட்டு நிகழ்வுகள்
4. நடப்பாண்டில் அரசியல் நிலவரங்கள்
5. நடப்பாண்டில் பொருளாதார மாற்றங்கள்

தமிழ்த் துறை
Value-Added Course

சமையல் நுண்கலை – பாடத்திட்டம்

VACTATC22 – TAMIL CULTURAL CULINARY ARTS

Code	Title of paper	Hours
VACTATC22	Tamil Cultural Culinary Arts	30

கற்றலின் வெளிப்படுத்திறன்

- மனிதரின் அடிப்படைத் தேவைகளில் ஒன்றான உணவை சுவையுள்ளதாகவும், ஆரோக்கியமானதாகவும் சமைப்பதின் அவசியத்தை அறியச் செய்தல்.
- சமையல் கலை கற்பிப்பதன் மூலமாக மாணவிகளுக்கு சுய வேலைவாய்ப்பை ஏற்படுத்த உணக்கமளித்தல். சமையல் தொடர்பான வேலைவாய்ப்பு அறிமுகம் செய்தல்.
- சமையல் கலையை சமூக வரலாற்று தொடர்பு சாதன நோக்கில் அறிய செய்து சமையல் கலையில் உள்ள கருத்தாக்கங்களை மறுமதிப்பிடு செய்யவைத்தல்.

அலகு - ஒன்று

சமையல் கலை – அறிமுகம்

(2 மணி நேரம்)

சமையல் குறித்த அறிமுகம் – வரலாறு – உணவு பொருட்கள் அறிமுகம்- அவற்றின் பண்புகளும் - அடிப்படை தயாரிப்புகள்- சமையல் அறை பாதுகாப்பு.

செயல் முறை வகுப்பு – 1

(3 மணி நேரம்)

தமிழர் இயற்கை உணவு வகைகள் பழங்களை ரசங்களை செய்தல்.

அலகு – இரண்டு

பல்வேறு உணவு வகைகள்

(2 மணி நேரம்)

உணவு உற்பத்தியின் அடிப்படை கோட்பாடுகள் - இந்திய உணவு வகைகள்- முதன்மையான உணவு - தானிய உணவு - காய்கறி உணவு - முட்டை வகை உணவு - பழச்சாறு வகைகள் - குளிர்பானங்கள் - சாண்ட்விச் மற்றும் மில்க் ஷேக்.

செயல் முறை வகுப்பு - 2

(3 மணி நேரம்)

உணவிற்கான இடம் தயாரிப்பு, தானிய உணவு வகைகள், காய்கறி உணவு வகைகளை செய்ய சொல்லிதருதல்.

அலகு – மூன்று ஆரோக்கியமான உணவு முறைகள்

(3 மணி நேரம்)

தமிழ் மருத்துவ உணவு – பழக்கவழக்கங்கள் - பதப்படுத்துதல் – விழிப்புணர்வு - சரிவிகித உணவு – உணவு உட்கொள்ளும் முறை - பாரம்பரிய சிறுதானிய உணவு

செயல் முறை வகுப்பு - 3

(4 மணி நேரம்)

கஷாயம், துவையல், மசியல், பச்சடி, சாமை, திணை கேசரி, கேழ்வரகு அடை, கொழுக்கட்டை, உளுந்து புட்டு, சுசீயம், வல்லாரை, தூதுவளை, கறிவேப்பிலை பொடி தயாரிப்பு.

அலகு - நான்கு பெண்களும் உணவும்

(3 மணி நேரம்)

பெண்களின் வாழ்வும் உணவும்(மாதவிடாய், கருத்தறித்தல், மகப்பேறு கால உணவுகள்)- உடல்நலமும் உணவும் - சமையலறை மேலாண்மை - உணவுப் பொருட்கள் வாங்குவதை திட்டமிடல் - பராமரிப்பு மற்றும் பாதுகாத்தல் - அலங்காரப்படுத்துதல் .

செயல் முறை வகுப்பு - 4

(4 மணி நேரம்)

உணவு வகைகளை திட்டமிட அலங்காரிக்க சொல்லித்தருதல்

அலகு - ஐந்து உணவு மற்றும் சமூக கலாச்சாரம்

(3 மணி நேரம்)

சமூக கட்டமைப்பு உணவு வகைகள் - சமையலும் பாரம்பரிய அறிவும் - பாலின சமத்துவமும் சமயல் கலையும் - சமையலும் திரைப்படமும் - சமையல் குறிப்பு எழுதுதல்.

செயல் முறை வகுப்பு - 5

(3 மணி நேரம்)

உணவு குறித்த களஆய்வு நேர்காணல் விழிப்புணர்வு முகாம்.

பார்வை நூல்கள்

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6. சிறுதானிய சமையல் மற்றும் சாறுகள் – ராதா சீனிவாசன், கற்பகம் புத்தகாலயம், 2014
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Department of Commerce
Value-Added Course
VACCOGS22 - INCLUSIVE COMMERCE AND GOVERNANCE FOR
SUSTAINABILITY - GLOBAL TRENDS

Code	Title of The Paper	Hours
VACCOGS22	Inclusive Commerce And Governance For Sustainability - Global Trends	30

Course Learning Outcomes:

- Understand the role of business in the transition to sustainable development to create a prosperous future for all.
- Providing Sustainable Financial Literacy to young people with an opportunity to participate in the global development and nation building process.
- To initiate and participate in a service-learning programme through economic literacy
- Providing practical experience on climate finance, Grassroot experiential learning workspace
- Demonstrate Individual contributions to a Collaborative Team Case

Course Outline:

The Curriculum is prepared to have the United Nations Sustainable Development Goals as a base to emphasize the knowledge of Commerce & Business among young people to engage and evolve in the developmental process

Unit I

International Monetary Fund & Sustainable Development Goals - People –Fostering Inclusion – Prosperity–Growth-Job and Poverty Reduction – Planet - Engaging in Climate Action – Peace-Strengthening Governance and Tackling Corruption – Partnerships - Financing the SDGs (Practical and Cases)

Unit II

Diving into goals – Quality Education for a Financially Literate Society – An Insight – Gender-based Financial Liberty – Income Inequality – Outcome Based Experiential learning and Community Immersion – Entrepreneurs Talk series.

Unit III

Global Trends for Business and Society – Environment and Social Consumerism – Carbon footprint – Reuse-Reduce-Recycle – Climate Finance Awareness – Introduction and Indulgence with Global Lectures/Speakers.

Unit IV

Experiential Learning on Policy Making - Policy Maker - Model Finance Ministry - Budget Planning - Industry - Trade - Commerce & Business - Skill Development

Unit V

Sustainable Business - Business Plan Making and Contest – Project submission- Monitoring & Evaluation – Project Pitching & Presentation - Practical Learning on Seed Funds- Venture Capitalism

Course Delivery Mode: Blended (Online-Offline)

**Sessions and schedules will be altered based on the participants and the Institution’s timeline/needs*

**Support and facilitation will be provided by various intergovernmental organisations and youth networks*

Methodology:

Brainstorming | Experiential Learning, Field Visits & Projects | Storytelling | Group Discussion | Paper presentation | Case Studies | Lectures | Impact Stories | Practitioners View | Policy Papers

Department of Mathematics (PG)

Value-Added Course

**VACMAAD22 - APPLICATION OF DATA ANALYTICS USING ADVANCED EXCEL,
R AND TABLEAU**

Code	Title of The Paper	Hours
VACMAAD22	Application of Data Analytics using Advanced Excel, R and Tableau	30

Course Objectives

The course will develop the skills necessary to do Data Analytics (Bivariate and Multivariate Techniques also real time projects along with case study). Augmented with case studies, lectures, and research notes, course aims to deepen the understanding of methods for collecting, analysing, and summarizing data pertinent to solving Data problems.

Course Learning Outcomes

- Students can do their final year projects on their own. Students can build their carrier into Data Scientist and Analytics stream.
- Students can become Freelancer by doing Data Analyst or Analytics projects to outsider, this is applicable only if students who are really interested in this stream.

Course Syllabus

Unit I: Data Analytics Introduction and Data Analytics Using Advanced MS Excel – Hands-On (10 Hours)

1.1 Data Analytics Introduction - Data Analytics Brief - Data Statistics - Descriptive and Inferential - Data Visualization - Data Analytics Algorithm in Detail - Supervised Learning Algorithm - Unsupervised Learning Algorithm - Reinforcement Learning Algorithm - Data Analytics Importance and Key challenges - Life of Data Analytics Expert - Data Analytics Application.

1.2 Descriptive Statistics using Advanced Excel: Central Tendency - Mean - Median, Mode, Percentiles and Quartiles - Dispersion - Variance, Standard Deviation and Range - Interquartile Range - Numerical Measures -Detecting Outliers. Data Visualisation Using Excel: Graphs - Charts - create a chart and change chart type - switch row/column and chart title - legend

position and data labels - column chart, line chart, pie chart and bar chart - area chart, scatter chart, trend line.

1.3 Correlation: Correlation Analysis - Formulation of Correlation Matrix - Mapping Correlation concept with Real Time Example. Regression - Linear Regression Analysis - Formulation of Regression Model - Bivariate Regression - Multiple Regressions - Conducting Multiple Regression - Mapping Bivariate Regression with Real Time Example.

1.4 Pivot Table and Pivot Chart: Inserting a PivotTable - Choosing Fields and Sort Data - Two-Dimensional Pivot Table - Data Table -insert a table and sort a table - filter a table and total row. Pivot Chart - Group Pivot Table Items - Multi - level Pivot Table - Frequency Distribution - Pivot Chart and Slicers - Update Pivot Table - Calculated Field/Item - T-Test - Parametric Test - T –test (One and Two - Sample - Z - test (One and Two Sample) - F – Test (One and Two Sample).

1.5 Statistical Functions: Average function and average if function - Median, mode and standard deviation - Min function, max function, large and small function - Negative numbers to zero, random numbers and rank - Percentiles and quartiles forecast and trend. Logical Function - If function, and function and or function - nested if and roll the dice.

1.6 Lookup Function: Vlookup function and Hlookup functions - match and index and choose, text rates and offset - left lookup and two-way lookup, locate maximum value and indirect - Formula Error - ##### error, #name? Error and #value! Error - #div/0! Error and #ref! Error, iferror and iserror - Circular reference and formula auditing and floating-point errors.

1.7 Data Validation and Data Table: create data validation rule and input message and error alert - data validation result and rejection of invalid dates - budget limit and prevent duplicate entries - product codes and drop-down list, dependent drop-down list. Compatibility Function - Scenario Manager - Create Scenario using Scenario Manager - Using the Scenario Summary - Using Goal seek Analysis - Data Tables - Quadratic Equation - Using a Two Input Data Table. Data Table - insert a table and sort a table - filter a table and total row - structured references and table styles.

1.8 Solver- Load Solver Add-In: Formulate the Model - Trial and Error - Solve the Model - Transportation Problem - Assignment Problem - Shortest path problem - Maximum Flow Problem - Capital Investment - Sensitivity Analysis.

Unit II: Data Visualisation Using Tableau– Hands-On

(10 Hours)

2.1 Tableau Basics: Your First Bar chart - The Data Challenge - Who Gets the Annual Bonus - Connecting Tableau to a Data File - CSV File - Navigating Tableau - Creating Calculated Fields - Adding Colors - Adding Labels and Formatting - Exporting Your Worksheet.

2.2 Time series, Aggregation, and Filters: Working with Data Extracts in Tableau - Working with Time Series - Understanding Aggregation, Granularity, and Level of Detail - Creating an Area Chart & Learning about Highlighting - Adding a Filter and Quick Filter.

2.3 Tableau - Maps, Scatterplots, and Your First Dashboard: Joining Data in Tableau - Creating a Map, Working with Hierarchies - Creating a Scatter Plot, Applying Filters to Multiple Worksheets - Let's Create our First Dashboard! - Adding an Interactive Action - Filter - Adding an Interactive Action – Highlighting.

2.4 Joining and Blending Data, PLUS: Dual Axis Charts: Understanding how LEFT, RIGHT, INNER, and OUTER Joins Work - Joins with Duplicate Values - Joining on Multiple Fields – The Showdown: Joining Data vs. Blending Data in Tableau - Data Blending in Tableau and Dual Axis Chart - Creating Calculated Fields in a Blend (Advanced Topic) - Section Recap".

2.5 Table Calculations, Advanced Dashboards, Storytelling: Downloading the Dataset and Connecting to Tableau - Mapping: how to Set Geographical Roles - Creating Table Calculations for Gender - Creating Bins and Distributions for Age - Leveraging the Power of Parameters - How to Create a Tree Map Chart - Creating a Customer Segmentation Dashboard - Advanced Dashboard Interactivity - Analyzing the Customer Segmentation Dashboard - Creating a Storyline".

Unit III: Data Science Using Python - Hands-on

(10 Hours)

3.1 Introduction to R: What is R? And Why R? - Different “flavors” of R-Installing R Studio Desktop-Understanding R Studio-Installing Packages and Libraries in R Studio-Setting Your Work Directory.

3.2 R Implementation: Data Variables |Data Types |Operators |Keywords |Exceptions-Functions |R Data Structures |Vectors and Lists |Strings and Matrices |Arrays and Factors |Data Frames |Packages |R Interfaces |R- CSV files Read and Write and analyze the data |R- Excel files Read and Write and analyze the data.

3.3 Data Visualization: Line Plots |Bar Charts |Pie Chart and Histogram |Scatter Plots and Parallel Coordinates|Advanced Plotting|Exporting Plots and Other Plotting Packages.

3.4 Predictive Customer Analytics: Formulation of Regression Model|Bivariate Regression|Statistics Associated with Bivariate Regression Analysis|Conducting Bivariate

Regression Analysis|Multiple Regressions|Conducting Multiple Regression|Mapping Bivariate Regression with Real Time Example.

3.5 Bank Loan Modelling: Logistic Function| Single Predictor Model| Determine Logistic Cut off|Estimated Equation for Logistic Regression.

3.6 Time Series Analysis and Forecasting: Introduction to Time Series Analysis - Trend Line Analysis, Pattern Identification - Time Series Smoothing Methods - Time Series Prediction Analysis - Python - Simple Predictive Analysis - Linear Predictive Analysis - Implementation of Predictive Analysis Using Python - Multiple Predictive Model using Python - What is Multiple Predictive Model? - Building the Multiple Predictive Model using Python - Assumption of Multiple Predictive Model.

3.7 Python Correlation Analysis: What is Correlation Analysis? - Correlation Coefficient and Hypothesis Testing - Product Movement Correlation, Partial Correlation and Non Metric Correlation.

Teaching Methodology:

- Case Study Discussion
- Project Problem Solving
- Experiential Learning

Delivery Mode:

- Blended Learning – Both Online and offline

Course Reference material:

- **Data Analytics Using Advanced Excel** by Cory Lesmeister and Dr. Sunil Kumar Chinnamgari
- **R Software Machine Learning Projects** by Dr. Sunil Kumar Chinnamgari
- **Tableau 10 Complete Reference:** Transform your Data with rich data visualizations and interactive dashboards with Tableau by Joshua N. Milligan (Author), Tristan Guillevin (Author).
- **Learning Tableau 2019:** Tools for Data Intelligence, data prep, and visual analytics, 3rd Edition Paperback – March 27, 2019 by Joshua N. Milligan (Author).

Assessment Methods:

- Case study problem solving
- MCQ

Department of Mathematics (PG)

Value-Added Course

VACMASS22 - LEARNING OPEN-SOURCE SIMULATION SOFTWARE – SCILAB

Code	Title of The Paper	Hours
VACMASS22	Learning Open-Source Simulation Software - SCILAB	30

Course Objectives

1. To introduce *SCILAB* which is a free open-source scientific software package alternative to MATLAB.
2. To know the benefits of SCILAB.
3. To develop the knowledge for solving numerical problems through *SCILAB*.
4. To learn the SCILAB tool XCOS which is a graphical editor to design hybrid dynamical systems models.
5. To acquire knowledge to use *SCILAB* software package in a Signal Processing and Python context.

Course Learning Outcomes

The Learners will be able to

1. Understand and apply SCILAB as computational tool.
2. Perform mathematical Modelling in SCILAB.
3. Develop programs in SCILAB.
4. Evaluate, analyze and plot results using SCILAB.
5. Solve Non-linear, linear equations and ODE using SCILAB.
6. Understand the concepts of DSP and Python with SCILAB programs.
7. Develop SCILAB Toolbox for calling functions.

Course Syllabus

Unit I: Introduction to SCILAB

(6 Hours)

Introduction to SCILAB and its benefits - Self learning of SCILAB through Spoken Tutorials - The amazing resource of SCILAB Textbook Companion - SCILAB Lab migration, Toolboxes and Forums - Installing – Expressions - Vector Operations - Matrix Operations - Conditional Branching - Iteration - Scripts and Functions.

Unit II: 2D Visualization and Introduction to SCILAB XCOS (6 Hours)

Plotting 2D graphs - XCOS Introduction - File handling - User Defined Input and Output - Integration - Solving Non-linear Equations.

Unit III: Solving Linear Equations and ODE using SCILAB (6 Hours)

Linear equations Gaussian Methods - Linear equations Iterative Methods - Interpolation - ODE Euler methods - ODE Applications - Optimization Using Karmarkar Function.

Unit IV: Signal Processing with SCILAB (6 Hours)

Digital Signal Processing - Control systems - Discrete systems - Calling User Defined Functions in XCOS - Simulating a PID controller using XCOS - Developing SCILAB Toolbox for calling external C libraries.

Unit V: Python Interaction Mechanism in SCILAB (6 Hours)

Developing SCILAB Toolbox for calling Python and its functions - Interactive Simulation in XCOS using slider - User-defined variables in XCOS - Loading and saving data in XCOS - Conditional operations in XCOS - Super Blocks in XCOS.

Course Content: E-Resources

1. <https://spoken-tutorial.org/watch/Scilab/Introduction+to+Scilab+and+its+benefits/English/>
2. <https://spoken-tutorial.org/watch/Scilab/Self+learning+of+Scilab+through+Spoken+Tutorials/English/>
3. <https://spoken-tutorial.org/watch/Scilab/The+amazing+resource+of+Scilab+Textbook+Companion/English/>
4. <https://spoken-tutorial.org/watch/Scilab/Scilab+Lab+migration,+Toolboxes+and+Forums/English/>
5. <https://spoken-tutorial.org/watch/Scilab/Installing/English/>
6. <https://spoken-tutorial.org/watch/Scilab/Getting+Started/English/>

7. <https://spoken-tutorial.org/watch/Scilab/Vector+Operations/English/>
8. <https://spoken-tutorial.org/watch/Scilab/Matrix+Operations/English/>
9. <https://spoken-tutorial.org/watch/Scilab/Conditional+Branching/English/>
10. <https://spoken-tutorial.org/watch/Scilab/Iteration/English/>
11. <https://spoken-tutorial.org/watch/Scilab/Scripts+and+Functions/English/>
12. <https://spoken-tutorial.org/watch/Scilab/Plotting+2D+graphs/English/>
13. <https://spoken-tutorial.org/watch/Scilab/Xcos+Introduction/English/>
14. <https://spoken-tutorial.org/watch/Scilab/File+handling/English/>
15. <https://spoken-tutorial.org/watch/Scilab/User+Defined+Input+and+Output/English/>
16. <https://spoken-tutorial.org/watch/Scilab/Integration/English/>
17. <https://spoken-tutorial.org/watch/Scilab/Solving+Non+linear+Equations/English/>
18. <https://spoken-tutorial.org/watch/Scilab/Linear+equations+Gaussian+Methods/English/>
19. <https://spoken-tutorial.org/watch/Scilab/Linear+equations+Iterative+Methods/English/>
20. <https://spoken-tutorial.org/watch/Scilab/Interpolation/English/>
21. <https://spoken-tutorial.org/watch/Scilab/ODE+Euler+methods/English/>
22. <https://spoken-tutorial.org/watch/Scilab/ODE+Applications/English/>
23. <https://spoken-tutorial.org/watch/Scilab/Optimization+Using+Karmarkar+Function/English/>
24. <https://spoken-tutorial.org/watch/Scilab/Digital+Signal+Processing/English/>
25. <https://spoken-tutorial.org/watch/Scilab/Control+systems/English/>
26. <https://spoken-tutorial.org/watch/Scilab/Discrete+systems/English/>
27. <https://spoken-tutorial.org/watch/Scilab/Calling+User+Defined+Functions+in+XCOS/English/>

28. <https://spoken-tutorial.org/watch/Scilab/Simulating+a+PID+controller+using+XCOS/English/>
29. <https://spoken-tutorial.org/watch/Scilab/Developing+Scilab+Toolbox+for+calling+external+C+libraries/English/>
30. <https://spoken-tutorial.org/watch/Scilab/Developing+Scilab+Toolbox+for+calling+Python+and+its+functions/English/>
31. <https://spoken-tutorial.org/watch/Scilab/Interactive+Simulation+in+Xcos+using+slider/English/>
32. <https://spoken-tutorial.org/watch/Scilab/User-defined+variables+in+Xcos/English/>
33. <https://spoken-tutorial.org/watch/Scilab/Loading+and+saving+data+in+Xcos/English/>
34. <https://spoken-tutorial.org/watch/Scilab/Conditional+operations+in+Xcos/English/>
35. <https://spoken-tutorial.org/watch/Scilab/Super+Blocks+in+Xcos/English/>

Learning Methodology:

- Audio-Video tutorial of STP-IIT Bombay.
- Self-paced, E-learning method.

Assessment Method:

The Value-added course certificate of Auxilium College will be given to the students who receive the Certificate for Completion of Training from Spoken Tutorial-IIT Bombay (Spoken Tutorial Project (STP) is a project of the National Mission on Education through Information and Communication Technology (NMEICT) funded by the Ministry of Education (MoE), Govt. of India. It is endorsed by AICTE and UGC, also comes under Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNMTT) and Swayam Platform).

The pass percentage for the Online test conducted by Spoken Tutorial is 40%.

Department of Mathematics

Value-Added Course

VACMAFD22 - FUNDAMENTALS OF DATA ANALYTICS

Code	Title of The Paper	Hours
VACMAFD22	Fundamentals of Data Analytics	30

Course Learning Outcomes:

To help the students rekindle their critical thinking and widen their knowledge of data analytics.

Unit 1 - Working with Data (6 hours)

Introduction - Working with Data - The OSEMN Framework - Obtaining Data - Scrubbing Data - Exploring Data - Modelling Data -Interpreting Data

Unit 2 - Python for Data Analysis (6 hours)

Introduction - Python for Data Analysis - Data and Data Formats - Myths of Programming

Unit 3 - Variables and data Structures in Python (6 hours)

Introduction to Python: Variables Part 1 - Introduction to Python: Variables Part 2
Introduction to Python: Variables Part 3 - Introduction to Python: Data Structures

Unit 4 - Conditional Statements and Functions in Python (6 hours)

Introduction to Python: Conditional Statements – Iteration - A Simple Marketing Analysis with Example - Functions in Python - Built In Functions - Function Writing

Unit 5 - Data Cleaning and Processing (6 hours)

Introduction: Data Cleaning and Processing - Working with Data in Spread sheets - Number - Formats and Sorting in Google Sheets - Filtering Data with Google Sheets - Functions in Google Sheets - Data Visualization in Google Sheets

Book for Study:

Rudolf Mathar, Gholamreza Alirezaei, Emilio Balda, Arash Behboodi - Fundamentals of Data Analytics _ With a View to Machine Learning-Springer International Publishing_Springer (2020)

Book for Reference:

LjubomirPerkovic, “Introduction to computing using Python”, 2nd Edition, John Wiley & Sons, 2012.

ASSESSMENT METHOD

A Practical Examination of two hours duration for 50 marks will be conducted at the end of the course.

Department of Social Work

Value-Added Course

VACSWFD22 – FASHION DESIGNING

Code	Title of The Paper	Hours
VACSWFD22	Fashion Designing	30

Course Learning Outcomes:

At end of the course the student should be able to:

1. Produce their own marketable products
2. Unleash their creativity and generate income
3. Convert Waste to wealth

Engross in Social Responsibility and Community Engagement

Unit I: Textile Industry based Product & Selecting the Nature's Block (8 Hours)

The basics of the fabrics, selecting the base materials, Characteristics of the process, the spectrum of Nature's Block available, Determination of Nature's block, choosing of the block, Waste to Wealth Principle.

Unit II: Product development and showcasing and Goodie Based on Paper and Pulp industry (9 Hours)

Ecofriendly Bio based Printing on Fabric using the Nature's Block, Artefact development, showcasing the merchandisable product, Need of Goodies, Behavioral and neural science behind Goodies, Cases studies on Goodies, Effect of Goodie on relationship building, reducing stress and improving moods, knowing the process of paper and pulp industry

Unit III: Biological and organic waste materials as the raw material (4 Hours)

Fundamentals of color, Coloring agents, natural dyes, Mordants, Biological or organic waste material into pressed merchandisable flower greeting cards.

Unit IV: Marketing strategies (4 Hours)

Strategic planning - SWOT analysis, Business plan preparation -Business Model Canvas (BMC), Training and Development. Stage gate approach to product development, Return on Investment, Commercialization, stages of commercialization of products

Unit V: Business Management Skills (5 Hours)

Understanding Marketing, Marketing and Product development, Capturing and connecting customers, Building strong Bands, and creating value. E-business and E- marketing, Business to Business Marketing, Consumer Marketing. Collaboration agreement, Strategic collaboration, Nature of Operation and Material Management, Operation and Material Management Costs, Distribution and sale of products, outsourcing

Department of Botany

Value-Added Course

VACBTES22 - ENTREPRENEURIAL SKILLS IN BOTANY

Code	Title of The Paper	Hours
VACBTES22	Entrepreneurial Skills In Botany	30

Unit I: Nursery and Garden: (4 Hours)

Definition, objectives, and scope of the nursery, planning, and seasonal activities - Planting - direct seedling and transplants, economy of the nursery.

Unit II: Organic Manure Production: (4 Hours)

Introduction, Composting, production of compost and constitution of compost, Factors affecting decomposition. Vermiculture and vermicomposting: Definition, Advantages, Role of Earthworms in soil fertility. Importance of Organic Manure.

Unit III: Vegetative Propagation of Horticulture plants: (4 Hours)

Introduction, Economic importance, and classification of horticulture crops. Types and Methods of Vegetative propagation: Cutting, Layering, Grafting, and Budding. Propagation of plants for ornamental purposes.

Unit IV: Kitchen and Terrace Gardening: (4 Hours)

Introduction, Garden and its types, Tools and equipment required for the garden preparation, Vegetable garden, kitchen garden, Plan of Terrace Garden, Advantages of Terrace gardening.

Unit V: Herbal Products: (4 Hours)

Preparation of Herbal hair oil, herbal face pack, herbal shampoo, herbal toothpaste, herbal soap, herbal food products

Student activity: (10 Hours)

Preparation of Organic manure /herbal products, Visit the Nursery and Horticultural department.

Suggested Readings

1. Bose T.K. & Mukherjee, D. 1972, Gardening in India, Oxford & IBH Publishing Co., New Delhi.
2. Sandhu, M.K. 1989. Plant Propagation, Wile Eastern Ltd., Bangalore, Karnataka.
3. Kumar, N. 1997. Introduction to Horticulture, Rajalakshmi Publications, Nagercoil.
4. Pande, H. 2015. Herbal Cosmetics - Asia Pacific Business press, New Delhi.

Department of Business Administration (UG)

Value-Added Course

VACBADM22 - DIGITAL MARKETING

Code	Title of The Paper	Hours
VACBADM22	Digital Marketing	30

Course Learning Outcomes:

1. To give an in-depth understanding and advanced knowledge of the digital marketing domains.
2. Impart skills to apply digital marketing tactics for achieving business objectives.
3. Empower participants to analyze and communicate public opinion of a brand or a company to stakeholders.
4. Provide a strategic framework to assess and implement various digital marketing practices.

Unit I - Introduction

Introduction to Internet Marketing - Overview of Industry - History of Internet Marketing - 2017 Trends - Setting Goals and defining Metrics - Social Media Marketing - An introduction to platforms and platform personality - Choosing social platforms for marketing - Facebook Marketing – best practices & case examples - Twitter Marketing – best practices & case examples - LinkedIn Marketing – best practices & case examples - Blog / Communities - – best practices & case examples

Unit II - Search Engine Optimization

SEO: Definition, history and evolution - SEO Trends - How does Search Engine work? - Basics of on page and off page SEO - SERP Analysis

Unit III - Google Analytics

Understanding various parameters under Google Analytics - How to get insights - Advantage of integrating website with Google Analytics -Influencer Marketing - What is influencer marketing - How to choose the right influencer - Tools to measure degree of influence by an influencer - Measurement of influencer marketing campaign

Unit IV - Mobile Marketing

Overview on Mobile Marketing - Introduction to Mobile Marketing - Understanding importance of User Interface and User experience while using Mobile - Types of mobile ads - Mobile marketing strategies

Unit V - Online Reputation Management

Online Reputation Management - Introduction to ORM - Trends in ORM - How ORM could be used to develop meaningful content - What are various Tools for online listening and how to use them.

Teaching Methodology

- Case Study Discussion

- Project Problem Solving
- Experiential Learning

Delivery Mode

- Blended Learning – Both Online and offline

Text Books

1. Chaffey, D., & Smith, P. R. , Digital marketing excellence: planning, optimizing and integrating online marketing. Taylor & Francis. (2017).
2. Dodson, I. , The art of digital marketing: the definitive guide to creating strategic, targeted, and measurable online campaigns. John Wiley & Sons. (2016).
3. Kaufman, I., & Horton, C. , Digital marketing: Integrating strategy and tactics with values, a guidebook for executives, managers, and students. (2014).

Reference Books

1. Routledge. Royle, J., & Laing, A ,The digital marketing skills gap: Developing a Digital Marketer Model for the communication industries. International Journal of Information Management. (2014).
2. Stokes, R., E-Marketing: The essential guide to digital marketing. Quirk e Marketing (2011).

E-resources

- <https://www.webmarketingacademy.in>
<https://www.digitalmarketer.com>

Department of Business Administration (PG)

Value-Added Course

VACBAIP22 - INTELLECTUAL PROPERTY RIGHTS

Code	Title of The Paper	Hours
VACBAIP22	Intellectual Property Rights	30

Course Learning Outcomes:

1. To introduce the fundamental aspects of Intellectual property Rights.
2. To disseminate knowledge on patents, patent regime in India.
3. To communicate the basic understanding on copyrights and its related rights and registration aspects.
4. To initiate the skill on trademarks, registration aspects and Geographical Indication (GI) □
5. To be aware on the current trends in IPR and Govt. steps in fostering IPR.

Unit I - Introduction to IPR

Definition- History of IPR - Meaning of Property- Intellectual Property-Intellectual Property Rights- Types of intellectual property- Importance of Intellectual Property Rights- Agencies responsible for Intellectual Property Registration- TRIPS.

Unit II - Trade Mark

Definition - Purpose and Function of Trademarks- Types- Acquisition of Trade Mark Rights- Laws related to Trade Mark- Selecting and Evaluating Trademark- Registration of Trademarks - Trade Secret and its Protection.

Unit III - Patent

Meaning- Criteria for Obtaining Patents - Novelty - Inventive step - Utility - Non patentable Inventions - Procedure for Registration - Term of Patent - Rights of Patentee - Basic concept of Compulsory License and Government use of Patent.

Unit IV - Copyrights & Geographical Indication

Definition - Fundamentals of Copyright law- Copyright Board and its Functions - Originality of Material- Right of Reproduction- Right to perform the Work Publicly- Copyright Ownership Issues- Notice of Copyright – Infringement of Copyrights – Meaning of GI-Features-Registration Procedure.

Unit V - Current trends in IPR

Meaning- Application - Registration - Procedure-New development of Intellectual property: New developments in Trade Mark Law- Copyright Law- Patent Law- International Overview on Intellectual Property- International Trade Mark Law- Copyright Law- Patent Law.

Teaching Methodology

- Case Study Discussion

- Project Problem Solving
- Experiential Learning

Delivery Mode

- Blended Learning – Both Online and offline

Text Books

1. Nithyananda, K V. (2019). Intellectual Property Rights: Protection and Management. India, IN: Cengage Learning India Private Limited.
2. Neeraj, P., & Khusdeep, D. (2014). Intellectual Property Rights. India, IN: PHI learning Private Limited.

Reference Books

1. Ahuja, V K. (2017). Law relating to Intellectual Property Rights. India, IN: Lexis Nexis.
2. Rocque Reynolds, Natalie P. Stoianoff, Alpana Roy (2015) Intellectual Property: Text and Essential Cases , Federation Press.

E-resources

- <http://www.bdu.ac.in/cells/ipr/docs/ipr-eng-ebook.pdf>
- https://www.wipo.int/edocs/pubdocs/en/intproperty/489/wipo_pub_489.pdf

Department of Business Administration (PG)
Value-Added Course
VACBASD22 - SUSTAINABLE DEVELOPMENT GOALS

Code	Title of The Paper	Hours
VACBASD22	Sustainable Development Goals	30

Global Understanding for Sustainable Development Goals (Promoting Social Business and Entrepreneurship)

Course Learning Outcomes:

1. Mainstreaming students to involve in the Post-2015 Development Agenda, engage and contribute towards the success of Sustainable Development Goals (SDGs).
2. Providing students with an opportunity to participate in the SDG & Business interventions.
3. To initiate and participate in Youth Leadership and Youth Work projects
4. Providing workspace for youth to frame, and exhibit their skills and mentoring them with various leadership qualities including the spirit of social entrepreneurship.

Unit I - Introduction

Introduction – Sustainable Development Goals – History – Agenda – Objectives – Classification of Goals – Factors influencing contribution towards SDGs.

Unit II - SDG 1, 2, 4

SDG 1, 2, 4 – No poverty, Zero Hunger & Quality Education – SDG 3 – Good Health & Wellbeing – SDG 5, 10 – Gender Equality & Reduced Inequalities – Experiential learning and Self & Social immersion – Entrepreneurs Talk series.

Unit III - SDG 6, 13, 14, 15

SDG 6, 13, 14, 15 – Clean water and sanitation, Climate Action, Life Below Water & Life on Land – SDG 7, 12 – Affordable and clean energy & Responsible consumption and production – Experiential learning and Self & Social immersion – Entrepreneurs Talk series.

Unit IV - SDG 8, 9

SDG 8, 9 – Decent Work and Economic Growth, Industry, Innovation, and Infrastructure & Sustainable cities and communities – SDG 16, 17 - Peace, Justice and Strong Institutions & Partners for the goals. Experiential learning and Self & Social immersion – Entrepreneurs Talk series.

Unit V- Social Entrepreneurship

Social Entrepreneurship – How to promote – Media management – Social Innovation Summit & Exhibition – Project submission and evaluation – Project pitching & presentation.

Teaching Methodology

- Brainstorming
- Experiential Learning, Field Visits & Projects
- Storytelling
- Group Discussion
- PPT presentation
- Paper presentation

Delivery Mode

- Blended Learning – Both Online and offline

Text Books

1. Yoko Mochizuki and Eleni Christodoulou, Textbooks for Sustainable Development - A Guide to Embedding, UNESCO MGIE (2017)
2. Paula Caballero and Patti Londoño , Redefining Development: The Extraordinary Genesis of the Sustainable Development Goals (The Policy and Practice of Governance) (2022)

Reference Books

1. Paul Nelson - Global Development and Human Rights: The Sustainable Development Goals and Beyond (UTP Insights) (2022)
2. Wendy Steele and Lauren Rickards ,The Sustainable Development Goals in Higher Education: A Transformative Agenda? (2021)
3. Evan Thomas, The Global Engineers: Building a Safe and Equitable World Together (Sustainable Development Goals Series) (2020)

E-resources

- <https://sdgacademy.org/>
- <https://www.un.org/sustainabledevelopment/student-resources/>
- <https://www.un.org/sustainabledevelopment/education/>
- <https://www.unsdglearn.org/courses/climate-change-the-science-and-global-impact/>
- 5. <https://en.unesco.org/themes/education/sdgs/material>

Department of Business Administration (PG)
Value-Added Course
VACBABA22 - APPLICATION OF BUSINESS ANALYTICS USING
ADVANCED EXCEL, PYTHON AND TABLEAU

Code	Title of The Paper	Hours
VACBABA22	Application Of Business Analytics Using Advanced Excel, Python And Tableau	30

Course Learning Outcomes:

1. To develop the skills necessary to do Business Analytics (Bivariate and Multivariate Techniques also real time projects along with case study).
2. To deepen the understanding of methods for collecting, analysing, and summarizing data pertinent to solving Business problems.

Unit I - Business Analytics Introduction

Business Analytics Introduction - Business Analytics Introduction- Business Analytics Brief - Data Statistics - Descriptive and Inferential - Data Visualization - Business Analytics Algorithm in Detail - Supervised Learning Algorithm - Unsupervised Learning Algorithm - Reinforcement Learning Algorithm - Business Analytics Importance and Key challenges - Life of Business Analytics Expert - Business Analytics Application.

Unit II - Data Analytics Using Advanced MS Excel – Hands-On

Descriptive Statistics using Advanced Excel:- Central Tendency - Mean - Median, Mode, Percentiles and Quartiles - Dispersion - Variance, Standard Deviation and Range - Interquartile Range - Numerical Measures -Detecting Outliers. Data Visualisation Using Excel: Graphs - Charts - create a chart and change chart type - switch row/column and chart title - legend position and data labels - column chart, line chart, pie chart and bar chart - area chart, scatter chart, trend line.

Correlation - Correlation Analysis - Formulation of Correlation Matrix - Mapping Correlation concept with Real Time Example. Regression - Linear Regression Analysis - Formulation of Regression Model - Bivariate Regression - Multiple Regressions - Conducting Multiple Regression - Mapping Bivariate Regression with Real Time Example.

Pivot Table and Pivot Chart -Inserting a PivotTable - Choosing Fields and Sort Data - Two Dimensional Pivot Table - Data Table -insert a table and sort a table - filter a table and total row. Pivot Chart - Group Pivot Table Items - Multi - level Pivot Table - Frequency Distribution - Pivot Chart and Slicers - Update Pivot Table - Calculated Field/Item - T-Test - Parametric Test - T –test (One and Two - Sample - Z - test (One and Two Sample) - F – Test (One and Two Sample).

Statistical Functions - Average function and average if function - Median, mode and standard deviation - Min function, max function, large and small function - Negative numbers to zero, random numbers and rank - Percentiles and quartiles forecast and trend. Logical Function - If function, and function and or function - nested if and roll the dice.

Lookup Function - Vlookup function and Hlookup functions - match and index and choose, text rates and offset - left lookup and two way lookup, locate maximum value and indirect - Formula Error - ##### error, #name? Error and #value! Error - #div/0! Error and #ref! Error, iferror and iserror - Circular reference and formula auditing and floating point errors.

Data Validation and Data Table - create data validation rule and input message and error alert - data validation result and rejection of invalid dates - budget limit and prevent duplicate entries - product codes and drop down list, dependent drop down list. Compatibility Function - Scenario Manager - Create Scenario using Scenario Manager - Using the Scenario Summary - Using Goal seek Analysis - Data Tables - Quadratic Equation - Using a Two Input Data Table. Data Table - insert a table and sort a table - filter a table and total row - structured references and table styles.

Solver- Load Solver Add-In - Formulate the Model - Trial and Error - Solve the Model - Transportation Problem - Assignment Problem - Shortest path problem - Maximum Flow Problem - Capital Investment - Sensitivity Analysis

Unit III - Data Visualisation Using Tableau– Hands-On

Tableau Basics: Your First Bar chart - The Business Challenge - Who Gets the Annual Bonus - Connecting Tableau to a Data File - CSV File - Navigating Tableau - Creating Calculated Fields - Adding Colors - Adding Labels and Formatting - Exporting Your Worksheet.

Time series, Aggregation, and Filters - Working with Data Extracts in Tableau - Working with Time Series - Understanding Aggregation, Granularity, and Level of Detail - Creating an Area Chart & Learning about Highlighting - Adding a Filter and Quick Filter.

Tableau - Maps, Scatterplots, and Your First Dashboard - Joining Data in Tableau - Creating a Map, Working with Hierarchies - Creating a Scatter Plot, Applying Filters to Multiple Worksheets - Let's Create our First Dashboard! - Adding an Interactive Action - Filter - Adding an Interactive Action – Highlighting.

Joining and Blending Data, PLUS: Dual Axis Charts - Understanding how LEFT, RIGHT, INNER, and OUTER Joins Work - Joins with Duplicate Values - Joining on Multiple Fields – The Showdown: Joining Data vs. Blending Data in Tableau - Data Blending in Tableau and Dual Axis Chart - Creating Calculated Fields in a Blend (Advanced Topic) - Section Recap".

Table Calculations, Advanced Dashboards, Storytelling - Downloading the Dataset and Connecting to Tableau - Mapping: how to Set Geographical Roles - Creating Table Calculations for Gender - Creating Bins and Distributions for Age - Leveraging the Power of Parameters - How to Create a Tree Map Chart - Creating a Customer

Segmentation Dashboard - Advanced Dashboard Interactivity - Analyzing the Customer Segmentation Dashboard - Creating a Storyline"

Unit IV - Data Science Using Python - Hands-on

Python Introduction - IDE and Python Packages - Python Introduction - Python IDE - Spyder, Jupiter and Notebook - Numpy Packages - Pandas Packages - Matplotlib Packages - Scipy Packages - Sklearn Packages
Python Data Types - Dictionary, List and Set and Variable Declaration - String Declaration - Tuple Declaration - Python Programming - Dictionary Declaration - List Declaration - Set Declaration - Python Data Types.

Numpy Packages - Array Handling and Manipulation - Declaration of Array - Universal Function of Numpy - Binary Functions of Numpy - Logical Functions of Numpy - Statistical Functions of Numpy.

Unit V - Data Science Using Python - Hands-on

Pandas Packages - Data frame and Loading Excel, CSV File - Pandas Packages - Accessing File Processing - Merging the Data frame - Joins - Inner, Outer, Left and Right - handling the Null values - Handling the Duplicates.

Matplotlib Packages - Line graph and Visualisation - Introduction to Matplotlib packages - Representation of Line Graph - Representation of Multi Line Graph - Including the Legends - Histogram, Scatter Diagram, Box Plot and Bar Graph Representation of Histogram - Representation of Scatter Diagram - Representation of Box Plot - Representation of Bar Graph - Area Chart, Dual Axis, Array reshaping, reverse matrix analysis Representation of Area Chart - Representation of Dual Axis.

Python - Time Series Analysis and Forecasting - Introduction to Time Series Analysis - Trend Line Analysis, Pattern Identification - Time Series Smoothing Methods - Time Series Prediction Analysis - Python - Simple Predictive Analysis - Linear Predictive Analysis - Implementation of Predictive Analysis Using Python - Multiple Predictive Model using Python - What is Multiple Predictive Model? - Building the Multiple Predictive Model using Python - Assumption of Multiple Predictive Model. Python Correlation Analysis - What is Correlation Analysis? - Correlation Coefficient and Hypothesis Testing - Product Movement Correlation, Partial Correlation and Non Metric Correlation

Teaching Methodology

- Case Study Discussion
- Project Problem Solving
- Experiential Learning

Delivery Mode

- Blended Learning – Both Online and offline

Text Books

1. Data Analytics Using Advanced Excel by Cory Lesmeister and Dr. Sunil Kumar Chinnamgari
2. Tableau 10 Complete Reference: Transform your business with rich data visualizations and interactive dashboards with Tableau by Joshua N. Milligan (Author), Tristan Guillevin (Author)
3. Python Crash Course: A Hands-On, Project-Based Introduction to Programming by Eric Matthes

Reference Books

1. Learning Tableau 2019: Tools for Business Intelligence, data prep, and visual analytics, 3rd Edition , 2019 by Joshua N. Milligan (Author)
2. Introduction to Machine Learning with Python: A Guide for Data -2016 by Andreas C. Mueller (Author), Sarah Guido (Author)
3. Python Machine Learning Projects by Dr. Sunil Kumar Chinnamgari

E-resources

- <https://analyticsindiamag.com>
<https://towardsdatascience.com>

Department of Computer Application
Value-Added Course
VACCACP22 – CLASS BASED PROGRAMMING

Code	Title of The Paper	Hours
VACCACP22	Class Based Programming	30

Course Learning Outcomes:

- To understand the basic concepts of Object and Classes, Pointers, Functions, and File Operations.
- To gain knowledge about various types of data along with the structures and its algorithms.

Unit I:

Advanced Classes and Object Oriented programming: Objects- Classes – Inheritance – Reusability – Creating New Data types – Polymorphism and Overloading - Recursion: Need of Recursion – Properties of Recursion – Recursion Functions.

Unit II:

Virtual functions and Polymorphism: Pointers to Objects – this Pointer – Pointers to Derived Classes – Virtual Functions – Pure Virtual Functions. - Exceptions, Templates, and Standard Template Library.

Unit III:

Linked Lists: Representation in Memory - Traversing a Linked List - Searching - Insertion and Deletion - Two way Lists - Application Stacks - Array Representation - Arithmetic Expressions- Queues - Priority Queues.

Unit IV:

Trees - Binary Trees - Representation in Memory - Tree Traversals - Binary Search Trees - Searching Inserting and Deleting. Mapping Console I/O Operations - Files: File streams – File operations – File pointers – Command Line Arguments.

Unit V:

1. Program to implement String Manipulations.
2. Program to implement Recursion.
3. Program to implement Classes and Objects.
4. Program to implement Virtual Functions and Polymorphism.
5. Program to implement using Stack.
6. Program to implement using Queue.
7. Program to implement using Searching Techniques.
8. Program to implement File concepts.

Books for Study:

1. Balagurusamy E., “Object Oriented Programming with C++”, Sixth Edition, Tata McGraw Hill Publication, 2014.
2. Seymour Lipschutz, “Data Structures: Schaum’s Outline Series”, Revised Edition, McGraw Hill Publication, 2011.

Books for Reference:

1. Herbert Schildt, “The complete Reference C++”, Edition IV, Tata McGraw Hill Publication, 2015.
2. Yashawant P. Kanetkar, ” Let Us C++”, Edition II, BPB Publication, 2003.
3. Ellis Horowitz, Sartaj Sahni, Susan Andeson Freed, “Fundamentals of Data Structures in C”, 2nd Edition, Universities Press Pvt Ltd, ,2018
4. Alfred V.Aho, John E.Hopcroft, Jeffrey D.Ullman , “Data Structures and Algorithms” , 1st Edition, Pearson Education, 2004.

Open Educational Resources (OER):

1. <https://beginnersbook.com/2017/08/cpp-oops-concepts/>
2. https://www.tutorialspoint.com/cplusplus/cpp_object_oriented.htm
3. https://www.youtube.com/watch?v=h4kUiFOb_v0
4. <http://www.ddegjust.ac.in/studymaterial/mca-3/ms-17.pdf>

Department of Computer Application

Value-Added Course

VACCASD22 – SOFTWARE DEVELOPMENT FRAMEWORK USING CORE MVC

Code	Title of The Paper	Hours
VACCASD22	Software Development Framework Using Core MVC	30

Course Learning Outcomes:

- To gain knowledge about the methodologies to develop .Net based application.
- Understand the benefits of MVC design over traditional ASP.NET Web Forms.
- To learn about Windows, Forms and Role-Based Authentication.
- To learn about the Razor Syntax Fundamentals, Layout View, Sections and Partial Views.
- To build and deploy ASP.NET MVC application to the server.

Unit I

Introduction : ASP.NET MVC-Introduction- First MVC Application- Exploring Controllers - Controller Viewdata & TempData - Controller Action Methods - Controller Action Method Parameter - Controller Action Filters - Controller Action Custom Filters.

Unit II

Exploring Razor Views: View Razor Syntax - View Layouts - View Partialviews - View Tightly Coupled Model. Digging into HTMLHelper Methods: Html Helpers Part-I - Html Helpers Part-II - Html Helper Model Binding - Html Helper Display and Editors Methods - Html Helper Viewdata Binding - Html Helper Custom Templates - Html Helper Reusing Helpers.

Unit III

Understanding Model Binders: Default Model Binder - Custom Model Binder. Validation and Annotations: Model Validation - Unobtrusive Client Validations - Metadata Validation. Using Entity Framework: MVC and EF Crud Operations - MVC and EF Crud Operation Using BO Class - MVC and EF Crud Operations Using Generic BO Class.

Unit IV

Authentication and Authorization: Windows Authentication - Forms Authentication - Role Based Authentication - Anti Forgery Token - URL Routing - Working with Areas. JQuery and Ajax: Ajax Helper Methods Controller - JQuery UI - JQuery Template.

Unit V

Bundling and Minification - Mobile Compatibility - Web API: Web API First Example - Performing Crud Using Web API.

Books for Study:

1. Nimit Joshi , “Programming ASP.NET MVC 5 A Problem Solution Approach “, 2013.
2. Matthew MacDonald TMH, “The Complete Reference ASP.NET”, First Edition, Mcgraw Hill, 2002.

Books for Reference:

1. Kogent Learning Solutions Inc, “ASP.NET 2.0 Black Book”, Platinum Edition, DreamTech Press, 2006.
2. Dino Esposito “Introducing Microsoft ASP .NET 2.0”, First Edition, PHI Publisher.
3. Matthew MacDonald, “Pro ASP.NET 4 in C#”, 4th Edition, 2010.

Open Educational Resources (OER):

1. <https://docs.microsoft.com/en-us/aspnet/mvc/overview/older-versions-1/controllers-and-routing/aspnet-mvc-controllers-overview-cs>
 2. https://www.c-sharpcorner.com/UploadFile/g_arora/Asp-Net-mvc-series-for-beginners-part-1/
 3. <https://www.codeproject.com/Articles/207797/Learn-MVC-Model-View-Controller-step-by-step-in>
 4. https://en.wikipedia.org/wiki/ASP.NET_MVC
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Department of Computer Application

Value-Added Course

VACCASD22 – SOFTWARE DEVELOPMENT FRAMEWORK USING CORE MVC

Code	Title of The Paper	Hours
VACCASD22	Software Development Framework Using Core MVC	30

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Unit I

Introduction : ASP.NET MVC-Introduction- First MVC Application- Exploring Controllers - Controller Viewdata & TempData - Controller Action Methods - Controller Action Method Parameter - Controller Action Filters - Controller Action Custom Filters.

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Exploring Razor Views: View Razor Syntax - View Layouts - View Partialviews - View Tightly Coupled Model. Digging into HTMLHelper Methods: Html Helpers Part-I - Html Helpers Part-II - Html Helper Model Binding - Html Helper Display and Editors Methods - Html Helper Viewdata Binding - Html Helper Custom Templates - Html Helper Reusing Helpers.

Unit III

Understanding Model Binders: Default Model Binder - Custom Model Binder. Validation and Annotations: Model Validation - Unobtrusive Client Validations - Metadata Validation. Using Entity Framework: MVC and EF Crud Operations - MVC and EF Crud Operation Using BO Class - MVC and EF Crud Operations Using Generic BO Class.

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2. Dino Esposito “Introducing Microsoft ASP .NET 2.0”, First Edition, PHI Publisher.
3. Matthew MacDonald, “Pro ASP.NET 4 in C#”, 4th Edition, 2010.

Open Educational Resources (OER):

1. <https://docs.microsoft.com/en-us/aspnet/mvc/overview/older-versions-1/controllers-and-routing/aspnet-mvc-controllers-overview-cs>
 2. https://www.c-sharpcorner.com/UploadFile/g_arora/Asp-Net-mvc-series-for-beginners-part-1/
 3. <https://www.codeproject.com/Articles/207797/Learn-MVC-Model-View-Controller-step-by-step-in>
 4. https://en.wikipedia.org/wiki/ASP.NET_MVC
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Department of Computer Science
Value-Added Course
VACCSAD22 – ANDROID DEVELOPMENT

Code	Title of The Paper	Hours
VACCSAD22	Android Development	30

Course Learning Outcomes:

- To study the basic concept of android development tools and frameworks.
- To understand the concepts of Intents and Services.
- To learn about Networking and Mobile Apps.
- To provide Graphics Design, Packages and deployment of Android application tools.
- To study about Security, Hacking and development process of Mobile App.

Unit I:

Introduction: Introduction to Mobile Computing – Introduction to Android Development Environment - Factors in Developing Mobile Applications: Mobile Software Engineering - Frameworks and Tools - Generic UI Development - Android User - More on UIs: VUIs and Mobile Apps - Text-to-Speech Techniques - Designing the Right UI - Multichannel and Multimodal UIs.

Unit II:

Intents and Services: Android Intents and Services - Characteristics of Mobile Applications - Successful Mobile Development - Storing and Retrieving Data: Synchronization and Replication of Mobile Data - Getting the Model Right - Android Storing and Retrieving Data - Working with a Content Provider.

Unit III:

Communications Via Network and the Web: State Machine - Correct Communications Model - Android Networking and Web - Telephony: Deciding Scope of an App - Wireless Connectivity and Mobile Apps - Android Telephony - Notifications and Alarms: Performance - Performance and Memory Management - Android Notifications and Alarms.

Unit IV:

Graphics: Performance and Multithreading - Graphics and UI Performance - Android Graphics -
Multimedia: Mobile Agents and Peer-to-Peer Architecture - Android Multimedia. Location:
Mobility and Location Based Services – Android - Packaging and Deploying - Performance
Best Practices - Android Field Service App.

Unit V:

Security and Hacking: Active Transactions - More on Security - Hacking Android -
Platforms and Additional Issues: Development Process - Architecture, Design, Technology
Selection - Mobile App Development Hurdles – Testing.

Books for Study:

1. Wei Meng Lee, “Beginning Android 4 Application Development”, John Wiley & Sons Inc, 1st Edition Inc, 2012.
2. Reto Meier, “Professional Android 4 Application Development”, John Wiley & Sons Inc, 1st Edition, 2012.

Books for Reference:

1. ZigurdMednieks, Laird Dornin, Blake Meike G, and Masumi Nakamura, “Programming Android”, O’Reilly Inc, 2nd Edition, 2012.
2. OnurCinar, “Android Apps with Eclipse”, Apress, Springer (India) Private Limited, 2nd Edition, 2012.

Open Educational Resources (OER):

1. <http://developer.android.com/training/basics/firstapp/index.html>
2. www.vogella.com/articles/Android/article.html
3. <https://hackernoon.com/applicationlifecycleinios12b6ba6af78b>
4. <https://www.tutlane.com/tutorial/ios/ioslifecyclearchitecture>
5. <https://developer.android.com/guide/components/activities/activitylifecycle>

VALUE-ADDED COURSE
DEPARTMENT OF COMMUNICATION
MEDIA IN COLLABRATION WITH DOT IMAGINE INSTITUTE
VACVCPA22 - PORTRAYAL OF ART

Course Code	Title of The Course	Hours
VACVCBD22	Portrayal of Art	30

Course Learning Outcomes:

- To develop the basic skills in Art through Drawing and modeling in the students and to enable them to expand their visual expression through portraying of skills.

Course Syllabus:

Unit I: Basic Drawing (6 hours)

Basic structure of objects, drawing straight lines, the foundation of perspective, angels of lights and eye view. Elements of Drawing, Perspective Drawing, Level /Distance/ Direction & Angeles, Types of color, color mixing, water color, poster color (K1, K2, K3)

Unit II: Light and Shades (6 hours)

Pencil drawing and shading, Pen drawing, Composition Drawing, Material Maintenance, Lights and dimension – lines and curves of different thickness-creative patterns – effects of lights –and differences-landscape. (K1, K2, K3, K4)

Unit III: Perspective (6 hours)

Principles of Design-Balance-Emphasis, Proportion, Variety and Unity, Tree, Birds, Flowers, Animals, Human figure, (K1, K2, K3, K4)

Unit IV: Still Life Techniques (6 Hours)

Caricature drawing, Portrait drawing, live portrait, Oil pastel techniques, color filling techniques, still life drawing, Object drawing, Design, Outdoor Drawing, Clay modeling, Memory Drawing, Enlarge and Reduce drawing. (K1, K2, K3, K4)

Unit V: Practical Exercises (6 hours)

- Alphabets and numbers
 - Overlaying (Geometrical Shapes, Irregular shapes)
 - Patterns and structure in day-to-day life
 - Perspectives
- Cognitive level: K1, K2, K3, K4, K5

The drawing record should contain exercise completed by each student on every practical class. All exercises must be in pencil and different medium – water color, poster color