Holy Cross College (Autonomous)
Nagercoil – 629 004
Affiliated to Manonmaniam Sundaranar University, Tirunelveli
Nationally Accredited with A+ Grade (CGPA 3.35) by NAAC IV Cycle
An ISO 9001 : 2015 Certified Institution

SSR
2019-2020
to
2023-2024

5.1.3 Capacity development and skills enhancement activities are organised for improving students' capability

FUTURE LINE BIOTECHNOLOGY

HOLY CROSS COLLEGE (AUTONOMOUS), NAGERCOIL-4

(Affiliated To Manonmaniam Sundaranar University, Tirunelveli)
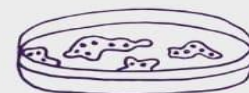Accredited With A + Grade (CGPA 3.35) By NAAC

Department of Botany

FUTURE LINE BIOTECHNOLOGY

Resource Person: Dr.V.C.Padmanaban,
Assitant Professor,
Kamaraj College of Engineering,
Virudhunagar.
Date: 04.02.2020

Organizing Secretary
J.Albino Wins,
Assistant Professor,
Department of Botany,
Holy Cross College
(Autonomous)
Nagercoil - 4.

Head of the Department
Dr. C. Jespin Ida,
Assistant Professor and Head
Department of Botany,
Holy Cross College (Autonomous)
Nagercoil - 4.

Dr. V. C. Padmanaban, an Assistant Professor in Kamaraj College of Engineering and Technolog, Madurai, delivered an enlightening Guest Lecture on the topic of "Future Line Biotechnology." The lecture proved to be a valuable learning experience for our students, with 22 postgraduate students.
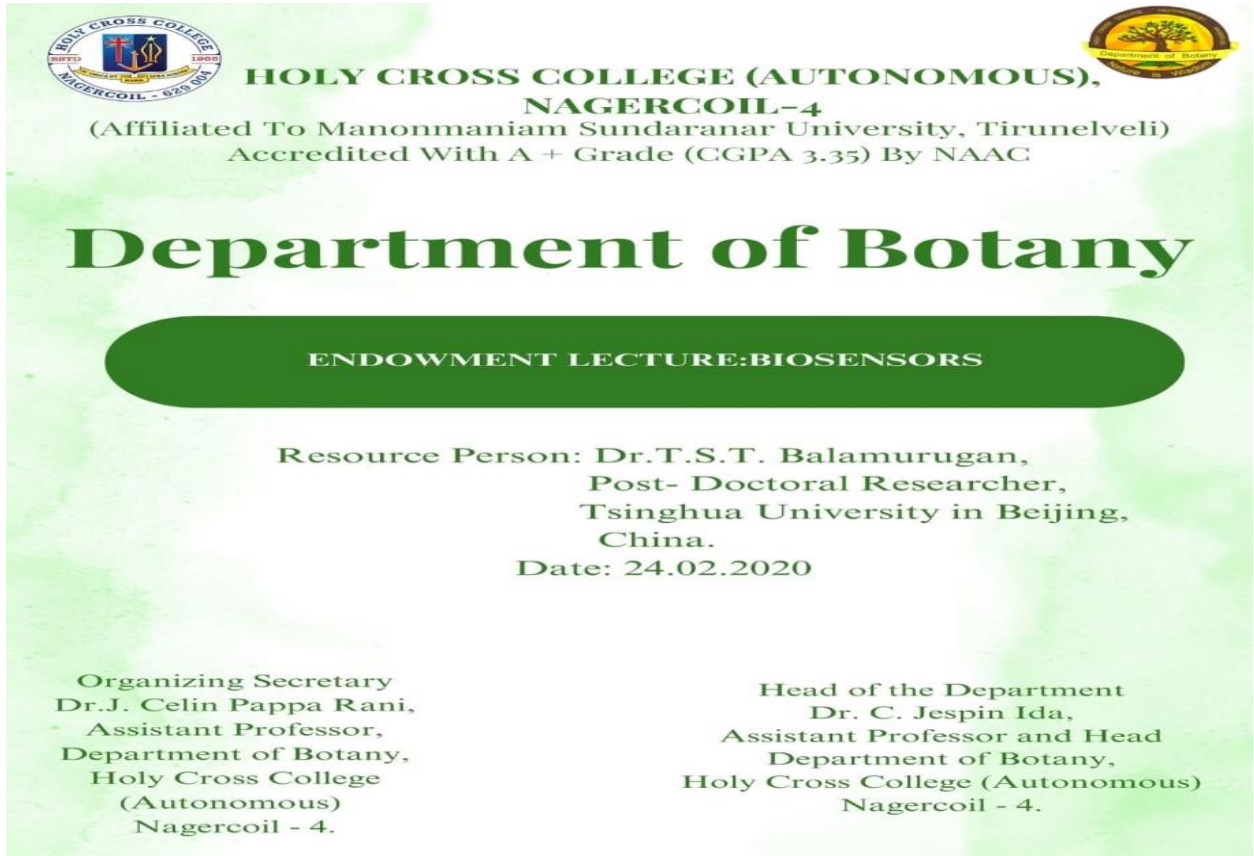
During the lecture, Dr. Padmanaban shed light on the significance of biotechnology and its promising future prospects. The students gained a profound understanding of this field and also had the opportunity to explore the latest trends and advancements in technology. This informative session expanded their knowledge and awareness of the evolving landscape of biotechnology.

Latitude: 8.154984
Longitude: 77.415089
Elevation: 52.23m
Accuracy: 9.6m
Time: 04-02-2020 11:51
Note: Guest Lecture on Future line Biotechnology

ENDOWMENT LECTURE – BIOSENSORS

On 24-02-2020, Dr. T.S.T. Balamurugan, a Post-Doctoral Researcher at Tsinghua University in Beijing, China, shared his expertise by delivering a lecture on "Biosensors." His enlightening presentations explained the fundamentals of biosensors and their future potential on a global scale. Both undergraduate (UG) and postgraduate (PG) students actively participated in this informative session.

Dr. Balamurugan's lecture provided students with a comprehensive understanding of the current state of biosensors in various fields and their significant relevance in today's context. This opportunity to delve into the world of biosensors not only enriched their knowledge but also offered insights into the latest technological trends. It was a valuable experience that expanded their awareness of the evolving landscape of biosensor technology.

DATA SCIENCE AND BIG DATA ANALYTICS WITH SOFT SKILLS

Department of Computer Science

. 2019-2020 . .

Report for the Short Term Course on Data Science and Big Data Analytics with Soft Skills

In the era of digital transformation, data has become the cornerstone of decision-making across industries. The fusion of Data Science and Big Data Analytics has emerged as a powerful tool for extracting actionable insights from vast datasets. Keep it in mind the Department of Computer Science of Holy Cross College conducted a short-term course on Data Science and Big Data Analytics, enriched with soft skills training from 22nd November 2019 to 4th December, 2019. The trainers are Mr. Jebin and Mr. Jeevan from ICT Academy, Nagercoil.

Course Objectives:

To provide participants with a comprehensive understanding of Data Science and Big Data Analytics principles and methodologies.

To equip participants with practical skills in data collection, preprocessing, analysis, and visualization using relevant tools and technologies.

To cultivate soft skills essential for effective collaboration, communication, and problem-solving in data-driven environments.

To empower participants to apply acquired knowledge and skills in real-world scenarios to drive informed decision-making.

Course Structure:

Module 1: Introduction to Data Science and Big Data Analytics

Overview of Data Science and its applications.

Introduction to Big Data and its characteristics.

Tools and technologies for handling Big Data (e.g., Hadoop, Spark).

Module 2: Data Acquisition and Preprocessing

Data collection methods (e.g., web scraping, APIs).

Data preprocessing techniques (e.g., cleaning, transformation).

Module 3: Exploratory Data Analysis (EDA)

Statistical analysis fundamentals.

Data visualization techniques (e.g., matplotlib, seaborn).

Module 4: Machine Learning

Introduction to machine learning algorithms (e.g., regression, classification).

Model evaluation and validation techniques.

Module 5: Big Data Analytics

Distributed computing concepts.

Big Data processing frameworks (e.g., MapReduce, Apache Flink).

Module 6: Soft Skills Development

Effective communication strategies.

Teamwork and collaboration exercises.

Problem-solving and critical thinking workshops.

This short-term course provides participants with a holistic skill set essential for success in today's data-driven world. By combining technical expertise with effective communication, teamwork, and problem-solving abilities, participants are equipped to navigate the complexities of data analysis and drive informed decision-making in diverse professional settings. A total of 45 students attended the course. Sr. Jothi, Head of the Department organized the sessions.

Sr. Jothi
HEAD OF THE DEPARTMENT
DEPARTMENT OF COMPUTER SCIENCE
HOLY CROSS COLLEGE (AUTONOMOUS)
NAGERCOIL

HARDWARE, SOFTWARE AND NETWORKING PROGRAM

Holy Cross College (Autonomous)

Affiliated to Manonmaniam Sundaranar University, Tirunelveli
Accredited with A+ Grade (CGPA-3.35 IV Cycle) by NAAC

Department of Computer Science

Organises

A Training on Hardware, Software and Networking

Dr.Subitha
Dr. Anto Kumar
Dr.John Roobert
Mr.John Paul
Assistant Professors of CSE
St. Xavier's Catholic College of Engineering, Chunkankadai

Venue:

St. Xavier's Catholic College of Engineering, Chunkankadai

03.06.2019 - 08.06.2019

Head of the Department
Sr.S.Jothi Antony

Department of Computer Science
2019-2020
Report for the Training on Hardware, Software and Networking

The training on Hardware, Software, and Networking aimed to equip participants with comprehensive knowledge and practical skills. The training programme was conducted from 03.06.2019 to 08.06.2019 at St. Xavier's Catholic College of Engineering, Chunkankadai. The trainers are Dr.Subitha , Dr. Anto Kumar, Dr. John Roobert, Mr. John Paul Assistant Professors, St. Xavier's Catholic College of Engineering, Chunkankadai.

Objectives:

- To understand the fundamentals of computer hardware components and their functions.
- To gain proficiency in operating system software and application software.
- To comprehend the principles of computer networking, including network protocols, topologies, and security measures.
- To develop practical skills through hands-on exercises and simulations.

Contents Covered:

1. Hardware Fundamentals:

Introduction to computer hardware components: CPU, RAM, motherboard, storage devices (HDD, SSD), etc.

Understanding input and output devices: keyboard, mouse, monitor, printer, etc.

Basics of computer architecture and assembly.

2. Software Essentials:

Overview of operating systems: Windows, macOS, Linux.

Installation and configuration of operating systems.

Introduction to application software: word processors, spreadsheets, presentation software, etc.

Software troubleshooting and maintenance.

3. Networking Basics:

Introduction to computer networks and their importance.

Understanding network protocols: TCP/IP, HTTP, FTP, etc.

Network topologies: star, bus, ring, mesh.

Network devices: routers, switches, hubs, modems.

Network security measures: firewalls, encryption, VPNs.

The training program utilized a combination of lectures, hands-on practical sessions, case studies, and group discussions to facilitate learning. Each module started with a theoretical overview followed by practical exercises to reinforce concepts.

Outcomes of the Training

- Enhanced understanding of computer hardware components and their roles in system functioning.
- Proficiency in installing and configuring various operating systems.
- Improved knowledge of software applications and troubleshooting techniques.
- Comprehensive understanding of networking principles, protocols, and security measures.
- Development of practical skills through hands-on exercises and simulations.

The Hardware, Software, and Networking training provided participants with a solid foundation in essential aspects of information technology. By combining theoretical knowledge with practical exercises, participants gained valuable skills that are applicable in various professional settings. The training successfully achieved its objectives of equipping participants with comprehensive knowledge and practical skills in hardware, software, and networking. The session was organized by the Head of the Department Sr. Jothi Antony. A total of 46 students have participated and benefitted from the training.

Sr. Jothi
HEAD OF THE DEPARTMENT
DEPARTMENT OF COMPUTER SCIENCE
HOLY CROSS COLLEGE (AUTONOMOUS)
NAGERCOIL

CONTENT MANAGEMENT SYSTEM

RESOURCE PERSONS

MR.JOHN PINO
DR.ANNROSE
MRS.ANGELIN
MR.GAVASKAR
MR.AJIN

DATE

3.06.2019–
08.06.2019

VENUE

ST.XAVIERS CATHOLIC
COLLEGE OF ENGINEERING
,NAGERCOIL

HOLY CROSS COLLEGE (AUTONOMOUS) NAGERCOIL
AFFILIATED TO MANONMANIAM SUNDARANAR UNIVERSITY
ACCREDITED WITH A+GRADE AND (CGPA 3.35) BY NAAC

DEPARTMENT OF COMPUTER SCIENCE

WORKSHOP ON CONTENT
MANAGEMENT SYSTEM

Department of Computer Science

2019-2020

Report for the Workshop on Content Management System

The Workshop on Content Management System (CMS) was conducted with the aim of providing participants with a comprehensive understanding of CMS platforms, their functionalities, and practical skills in utilizing them effectively. The workshop was conducted for the III B.Sc Computer Science students from 03.06.2019 to 08.06.2019 at St. Xavier's Catholic College of Engineering, Chunkankadai. The trainers are Mr. John Pino, Dr.Annrose, Mrs. Angelin, Mr. Gavaskar, Mr.Ajin Assistant Professors, St. Xavier's Catholic College of Engineering, Chunkankadai.

Objectives:

- To introduce participants to the concept of Content Management Systems and their significance in website development.
- To familiarize participants with popular CMS platform WordPress.
- To provide hands-on experience in setting up and managing content using a CMS.

Contents Covered during the workshop:

1. Introduction to Content Management Systems:

- Definition and significance of CMS.
- Benefits of using a CMS for website development and management.
- Overview of popular CMS platforms and their market share.

2. Popular CMS Platform:

  WordPress

  Installation, themes, plugins, and basic configuration.

3. Hands-on Sessions:

- Setting up a website using WordPress.
- Content creation, editing, and management within the chosen CMS platform.
- Customizing website appearance and functionality using themes, plugins, and modules.
- Backup and security measures for CMS-based websites.

The workshop employed a combination of lectures, demonstrations, hands-on exercises. Live demonstrations were conducted to showcase advanced features and customization options available in WordPress. Participants left the workshop with practical skills and knowledge that can be applied to develop and manage websites efficiently using CMS platforms.

The workshop Content Management System proved to be beneficial for both beginners and experienced individuals looking to enhance their skills in web development and content management. The workshop was organized by the Head of the Department Sr. Jothi Antony. A total of 45 students have participated and benefitted from the workshop.

Sr. Jothi

HEAD OF THE DEPARTMENT
DEPARTMENT OF COMPUTER SCIENCE
HOLY CROSS COLLEGE (AUTONO....
NAGERCOIL

CLOUD COMPUTING

HOLY CROSS COLLEGE (AUTONOMOUS),NAGERCOIL
AFFILIATED TO MANONMANIAM SUNDARANAR UNIVERSITY
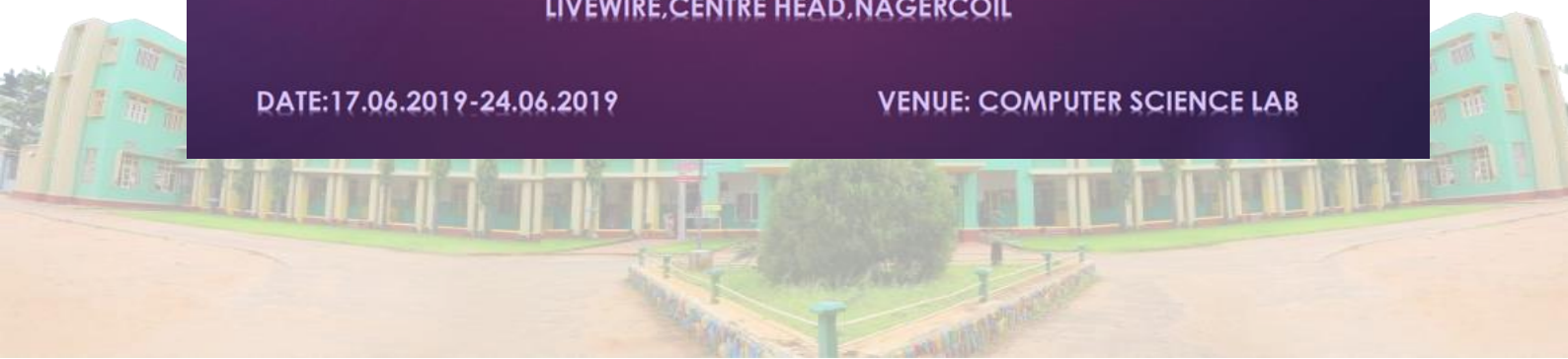ACCREDITED WITH A+ GRADE(CGPA 3.35)BY NAAC

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE COURSE ON CLOUD COMPUTING

RESOURCE PERSON
MR.S.SARATH SUNDAR
LIVEWIRE,CENTRE HEAD,NAGERCOIL

DATE:17.06.2019-24.06.2019   VENUE: COMPUTER SCIENCE LAB

Department of Computer Science

2019-2020

Report for the Certificate Course on Cloud Computing

The Certificate Course on Cloud Computing aimed to provide participants with comprehensive knowledge and practical skills in leveraging cloud technologies for various applications. The workshop was conducted from 17.06.2019 to 24.06.2019 at Holy Cross College (Autonomous), Nagercoil. The resource person was Mr. S. Sarath Sundar, Livewire, Centre Head, Chennai.

Objectives:

- To introduce participants to the fundamentals of cloud computing and its key concepts.
- To familiarize participants with different cloud service models (IaaS, PaaS, SaaS) and deployment models (public, private, hybrid).

Modules Covered

Module 1

- Introduction to Cloud Computing:
- Definition and characteristics of cloud computing.
- Evolution of cloud computing and its benefits.
- Overview of virtualization and containerization technologies.

Module 2

- Cloud Service Models:
- Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS).
- Understanding the differences and use cases for each service model.

Module 3

- Cloud Platforms:
- Amazon Web Services (AWS): Services, pricing, and basic architecture.
- Microsoft Azure: Core services, management tools, and integration options.
- Google Cloud Platform (GCP): Key services, deployment models, and data analytics tools.

The course employed a combination of lectures, hands-on labs, demonstrations, and interactive discussions to facilitate learning. Each module started with a theoretical overview followed by practical exercises to reinforce concepts. The course proved to be beneficial for individuals seeking to enhance their skills in cloud computing and advance their careers in the field of IT infrastructure and software development. The session was organized by the Head of the Department Sr. Jothi Antony. A total of 46 students have participated and benefitted from the course.

Sr. Jothi
HEAD OF THE DEPARTMENT
DEPARTMENT OF COMPUTER SCIENCE
HOLY CROSS COLLEGE (AUTONOMOUS)
NAGERCOIL

TALLY

HOLY CROSS COLLEGE (AUTONOMOUS)NAGERCOIL
AFFILIATED TO MANONMANIAM SUNDARANAR UNIVERSITY
ACCREDITED WITH A+ GRADE (CGPA 3.35) BY NAAC

DEPARTMENT OF COMPUTER SCIENCE

WORKSHOP ON TALLY

RESOURCE PERSON
MRS.AMALA PUSHPAM,BITS NAGERCOIL

DATE
17.06.2019-24.06.2019

VENUE:COMPUTER SCIENCE LAB

Department of Computer Science

2019-2020

Report for the Workshop on Tally

The Workshop on Tally was organized with the objective of equipping participants with practical skills and knowledge in using Tally software for accounting and financial management purposes. The workshop was conducted from 17.06.2019 to 24.06.2019 at Holy Cross College (Autonomous), Nagercoil. The resource person was Mrs. Amala Pushpam, Trainer from BITS, Nagercoil.

Modules Covered during the workshop:

Module 1:

Introduction to Tally:

Overview of Tally software and its importance in accounting.

Installation and setup of Tally software.

Module 2:

Basic Accounting Functions:

Creating and maintaining company accounts.

Recording financial transactions: journal entries, ledger entries, vouchers.

Module 3:

Financial Reporting:

Generating basic financial reports: Balance Sheet, Profit & Loss statement.

Understanding financial statements and their significance.

Module 4:

Advanced Features:

Inventory management: stock items, stock groups, and units of measurement.

Payroll processing: employee master creation, salary details, payroll processing.

Each module began with a theoretical overview of the topic followed by practical demonstrations in Tally software. Participants were provided with access to Tally software and guided through step-by-step instructions for performing various accounting tasks. Live demonstrations were conducted to showcase advanced features and best practices in using Tally for efficient accounting and financial management. Participants gained a comprehensive understanding of Tally software and its features.

The workshop helped the students to enhance their skills in accounting software and streamline financial management processes using Tally. The workshop was organized by the Head of the Department Sr. Jothi Antony and Mrs. Anto Hepzie Bai, Assistant Professor. A total of 45 students have participated and benefitted from the workshop.

Sr.Jothi

HEAD OF THE DEPARTMENT
DEPARTMENT OF COMPUTER SCIENCE
HOLY CROSS COLLEGE (AUTONOMOUS)
NAGERCOIL

COMPUTER HARDWARE

Thrust Area	: Skill Development
Date	: 22-11-2019 to 27-11-2019
Duration	: 09:00 A.M – 03:15 P.M.
Mode of session delivery	: Offline
No. Beneficiaries	: 25 II M. Sc Physics
Objective	: To gain hands-on experience and knowledge about various hardware components, including CPUs, RAM, storage devices, motherboards, power supplies, and peripheral devices.
Benefits	: Training helps the students to understand how different hardware components work together and the importance of compatibility

The summer training programme on the topic "Computer Hardware" was held from 22-11-2019 to 27-11-2019, organised by the department of Physics, Holy Cross College (Autonomous), Nagercoil. Totally 25 students were registered and participated in this course. The purpose of this session was to excite young entrepreneurs in the field of computer hardware components. The course instructor was Mr. T. Sahaya Suresh Selvan, Proprietor, Annai Best Care Computer Clinic and Education, Nagercoil. In addition to him, one of our staff Dr. A. Lesly Fathima, Assistant Professor, Department of Physics, Holy Cross College (Autonomous), Nagercoil were also helped him. The course started on 22.11.2019 at 9 am. All the II M. Sc Physics students were preferred to attend this course. The students put on ability to diagnose and repair computer hardware-related issues. This includes understanding error codes, using diagnostic tools, and applying problem-solving techniques to fix hardware problems. Students updated their knowledge on latest technologies. On 27.11.2019, at 3:15 P.M. the course came to an end.

DOMESTIC APPLIANCE AND SERVICE

HOLY CROSS COLLEGE (AUTONOMOUS) NAGERCOIL-4
Affiliated to Manonmaniam Sundaranar University,
Tirunelveli
Accredited with A+ grade by NAAC- IV Cycle (CGPA 3.35)
DEPARTMENT OF PHYSICS
ORGANISES
VALUE ADDED COURSE

Interested Students shall register
their names on or before
20.11.2019 to
Dr. S. Mary Delphine, HOD,
Department of Physics
Holy Cross College
Nagercoil

Domestic Appliance Service
In collaboration with

Spenser & Co,
Refrigeration Electronics &
Hospital Equipment Engineers,
Nagercoil

Date: 22.11.2019 to
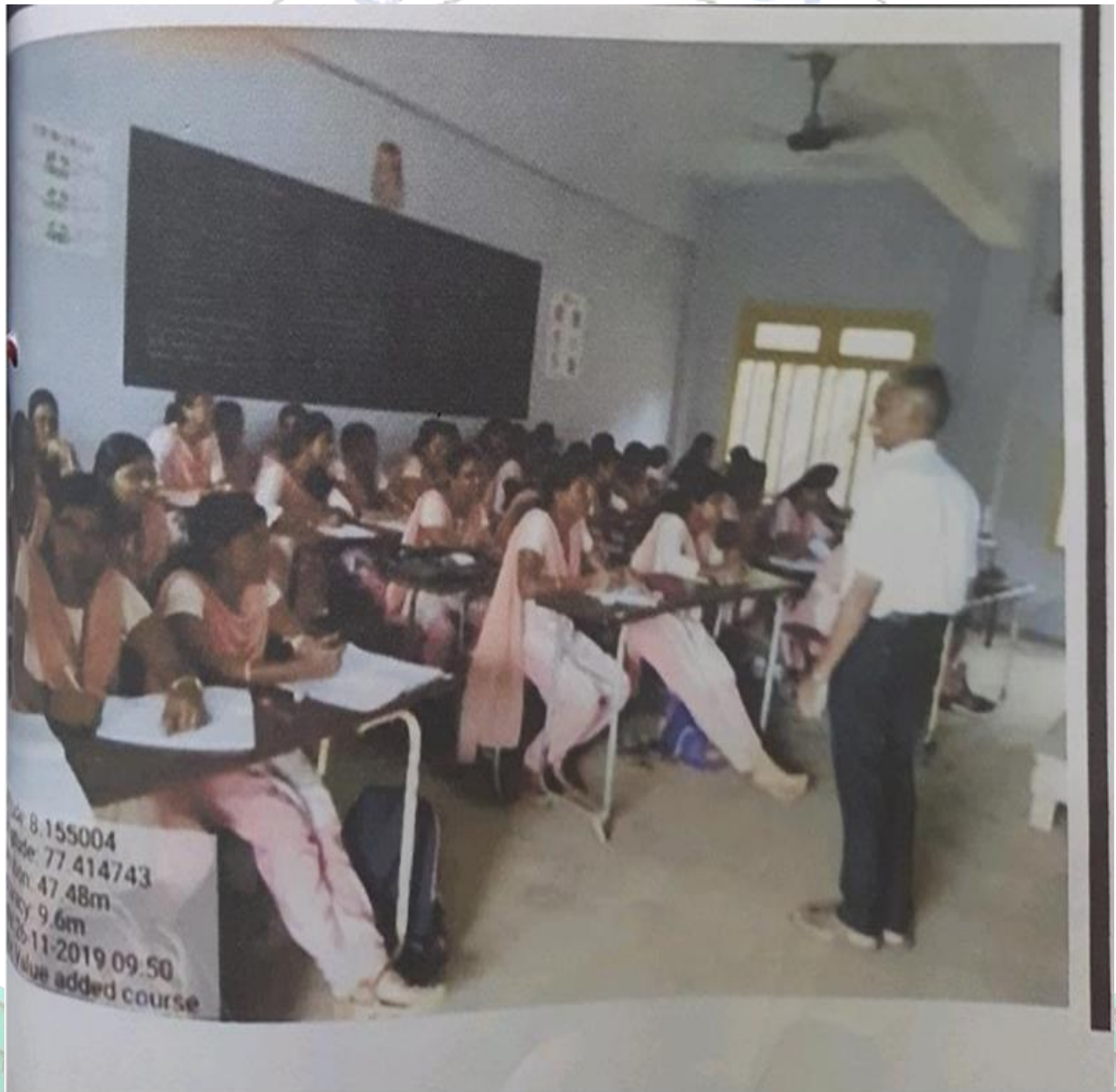27.11.2019
Time: 9.00 am
to 3.15 pm

Course : Domestic Appliance Service
Course Code: VAP 172

Secretary	: Dr. Sr. Gerardin Jeyam
Principal	: Dr. Sr. Anne Perpet Sophy
HOD of Physics	: Dr. S. Mary Delphine

Date	**:** 22-11-2019 to 27-11-2019
Duration	**:** 09:00 A.M – 03:15 P.M.
Mode of session delivery	**:** Offline
Remark	**:** Excellent
Beneficiaries	: 45, II B. Sc Physics
Objective	**:** To make the students to understand the techniques involved in advanced repairing of household equipment's such as refrigerator, TV, Cooler etc.
Benefits	**:** Students able to technical checks with electronic appliances. They are able to repair and maintain the basic electrical and electronics appliances.

The value added course on the topic Domestic Appliance service was held from 22.11.2019 to 27.11.2019, organised by the department of Physics, Holy Cross College (Autonomous), Nagercoil. Totally 45 students were registered and participated in this course. The purpose of this session was to excite young entrepreneurs in the field of electrical appliances. The course instructor was Mr. John, Managing Director, Spenser & Co, Refrigeration Electronics & Hospital Equipment Engineers, Nagercoil. In addition to him, one of our staff Dr. R. Krishna Priya, Assistant Professor, Department of Physics, Holy Cross College (Autonomous), Nagercoil were also helped him. The course started on 22.11.2019 at 9 am. All the II B. Sc Physics students were preferred to attend this course. There was great eagerness among the students and they were highly resolute. On 27.11.2019, at 3:15 P.M. the course came to an end.

MULTIMEDIA TRAINING

HOLY CROSS COLLEGE (AUTONOMOUS) NAGERCOIL-4
Affiliated to Manonmaniam Sundaranar University,
Tirunelveli
Accredited with A+ grade by NAAC- IV Cycle (CGPA 3.35)
DEPARTMENT OF PHYSICS
ORGANISES
VALUE ADDED COURSE

Interested Students shall register their names on or before 20.11.2019 to
Dr. S. Mary Delphine, HOD,
Department of Physics
Holy Cross College
Nagercoil

Multimedia Training
In collaboration with

Oasis Grace Multimedia Centre,
Nagercoil

Date: 22.11.2019 to 27.11.2019
Time: 9.00 am to 3.15 pm

Course : Multimedia Training
Course Code: VAP 171

Secretary   : Dr. Sr. Gerardin Jeyam
Principal   : Dr. Sr. Anne Perpet Sophy
HOD of Physics : Dr. S. Mary Delphine

Date	: 22-11-2019 to 27-11-2019
Duration	: 09.00 A.M – 03.15 P.M.
Mode of session delivery	: Offline
Remark	: Excellent
Beneficiaries	: 45, I B. Sc Physics
Objective	: Develop the ability to create graphics for various purposes, including social media, websites, print materials. Explore creative aspects of Photoshop for digital art creation.
Benefits	: Students able to get the necessary skills to create digital illustrations, paintings, and other forms of visual art. Gain confidence in their abilities to tackle design challenges and bring their creative ideas to execution.

The value added course on the topic Multimedia Training was held from 22.11.2019 to 27.112019, organised by the Department of Physics, Holy Cross College (Autonomous), Nagercoil. Totally 45 students were registered and participated in this course. The purpose of this session was to excite young entrepreneurs in the field of photoshop, website design, graphics etc. The course instructor was Mr. Aathi Managing Director, Oasis Grace Multimedia Centre, Nagercoil. In addition to him, one of our staff Dr. R. Krishna Priya, Assistant Professor, Department of Physics, Holy Cross College (Autonomous), Nagercoil were also helped him. All the I B.Sc Physics students were preferred to attend this course Multimedia Training. There was great eagerness among the students and they were highly determined. Training helps the students to understand how different hardware components work together and the importance of compatibility. On 27.11.2019, at 3:15 P.M. the course came to an end.

WEB DESIGNING

COMPUTER LITERACY

Holy Cross College (Autonomous), Nagercoil, launched a computer literacy course for students. This course aimed to teach first-year students the basic concepts of using computers. The program included theoretical classes and practical sessions, providing students with a comprehensive understanding of computer usage. A total of seven hundred and eighteen students benefited from this initiative. It equipped them with essential computer skills, helping them to thrive in the digital era and enhancing their overall knowledge related to computers.