VELS

INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS)
(Deemed to be University Estd. u/s 3 of the UGC Act, 1956)
PALLAVARAM, THALAMBUR, PERIYAPALAYAM-CHENNAI
ACCREDITED BY NAAC WITH A++ GRADE
INSTITUTION WITH UGC 12B STATUS

STUDENT CENTRIC LEARNING

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1. INTRODUCTION

Student Centric Learning

VISTAS employs a variety of learning strategies, including Experimental Learning, Problem-Based Learning, Blended Learning, Collaborative Learning, Evidence-Based Learning, and Interactive Learning. The focus on student-centric learning revolves around Learning Management Systems (LMS) and Knowledge Management Systems (KMS). Allowing access to MOOC open courses, such as MHRD's SWAYAM, NPTEL, UGC-INFONET Digital Library Consortium, and NDL, through the Vels Knowledge Resource Centre enhances the self-directed learning process. Through the adoption of blended and flipped learning, student engagement in the learning process is ensured. VISTAS boasts facilities such as a Library, Digital Library, Video Conferencing Facility, Smart Classrooms, ICT Enabled Classrooms, Language Laboratory, Business Analytics Lab, Cloud Computing Lab, CADD Lab, 24 x 7 access to Vels Knowledge Resource Centre, and an Open Source Software Lab, all geared towards student-centric learning. Collaborative programs with IBM and iNurture enhance students' hands-on learning experiences. VISTAS provides open and general elective courses in order to encourage interdisciplinary learning. Virtual learning facilitated by IITM and IITK under the Moodle program, along with a local chapter of MHRD-NME-ICT's Virtual Lab channeled through Amirta Vishwa Vidyapeedam, further enrich the learning environment.

The faculties of the School of Pharmacy and Computing Sciences have developed online content through MOOCs, available on e-platforms. Full-fledged WiFi facilities in campus enable access to the central library's e-resources from classrooms. Clinical skill labs and simulators in various schools enhance students' practical experiences. Detailed demonstration sessions for MBBS students offer ample opportunities for learning enhancement. The School of Education employs exclusive teaching methodologies like micro-teaching, evidence-based teaching, and programmed learning. The Faculty of Management utilizes additional learning methodologies such as group discussions, case studies, roleplaying, news hours,

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business plans, AdZap, and brainstorming sessions. Participative learning through MOOT Courts and legal aid camps is conducted by the School of Law. Systematic practical training by the departments of HCM and VISCOM prepares students for industry roles upon graduation. All schools at VISTAS collaborate with industry partners for internships, providing students with hands-on experience. The School of Education offers 80 working days of internships for student teachers in allotted schools, enhancing their employability and entrepreneurial skills. Certain courses involve self-study, seminars, assignments, group discussions, debates, model building, and experiential learning. Through demonstrations, simulations, library hours, workshops, video conferencing, practical and clinical sessions, students from various disciplines evolve in the learning process. Students communicate their learning through seminars, which is also assessed by faculty. Various club activities encourage student participation in scholarly endeavors. High achievers are developed through problem-solving skills, numerical problems in mathematics for physics, chemistry, and engineering students. They are also encouraged to undertake extra internship hours, participate in and present papers at conferences, exhibit their inventions, and apply for patents. Assigning various projects tailored to students' levels ensures the development of problem-solving abilities.

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2. EXPERIENTIAL LEARNING

2.1 Clinical Skill Lab

Clinical Skills Lab at VISTAS provides students with hands-on experience that is crucial for understanding complex medical concepts. Students practice skills in a simulated setting before interacting with real patients.

Figure 1:Hands-on experience in Skill Lab

Figure 2: Various Basic Life Support Adult Mannequin

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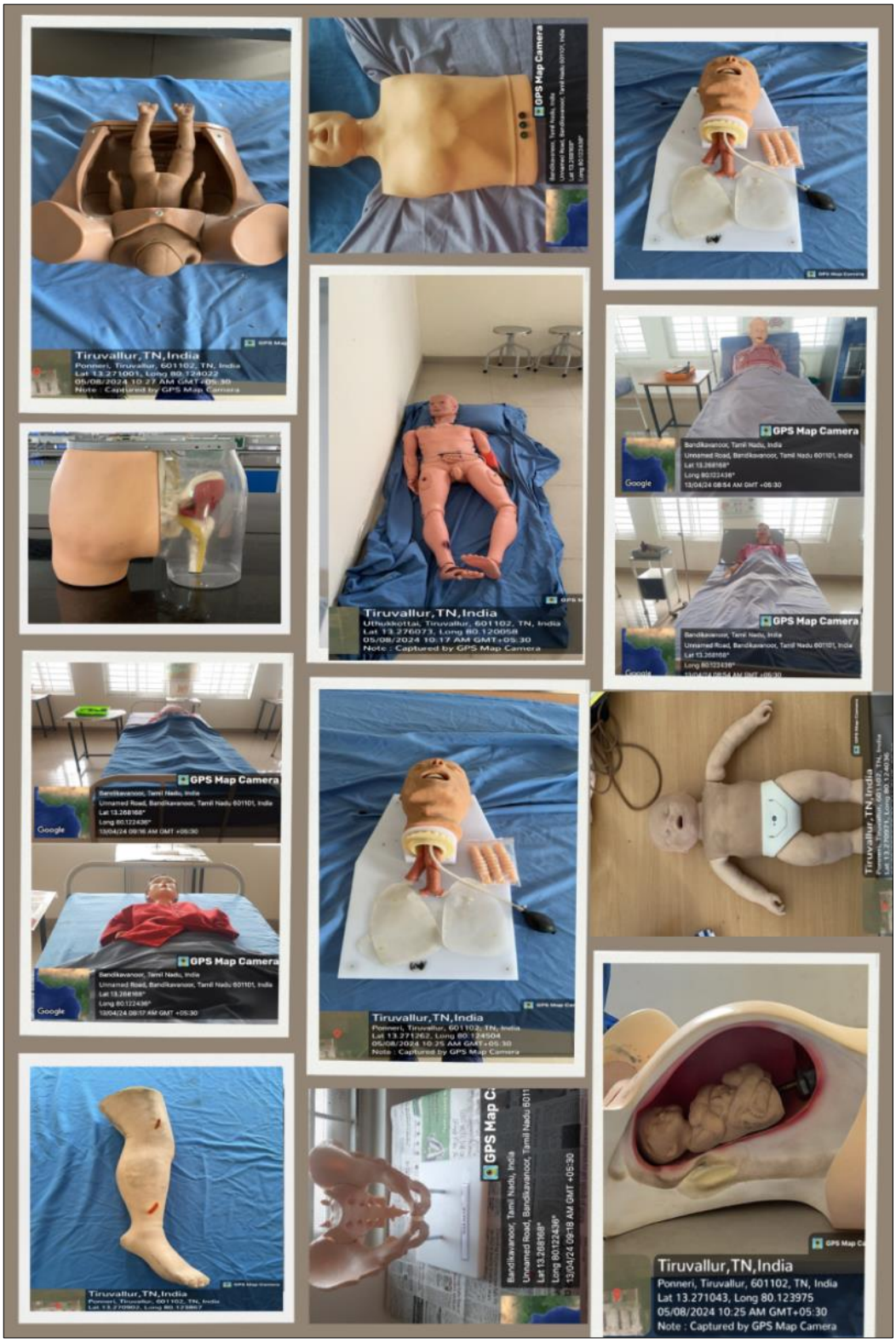

Figure 3: Photographs of Clinical Skills Lab Facilities, Clinical Skills Models, Patients Simulators

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2.2 Family Adoption Program (FAP)

The Family Adoption Programme (FAP) offers medical students a unique opportunity to gain hands-on experience in community-based healthcare by adopting a family. Students at VMCH are allocated families from the nearby community to support and enable them maintain and practice good health and healthy habits.

Figure 4: Family Adoption Programme (FAP) by students of VMCH

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2.3 Simulator Based Learning

Marine Engine Room Simulator

The Engine Room Simulation System simplifies training by replicating the engine room's complex systems

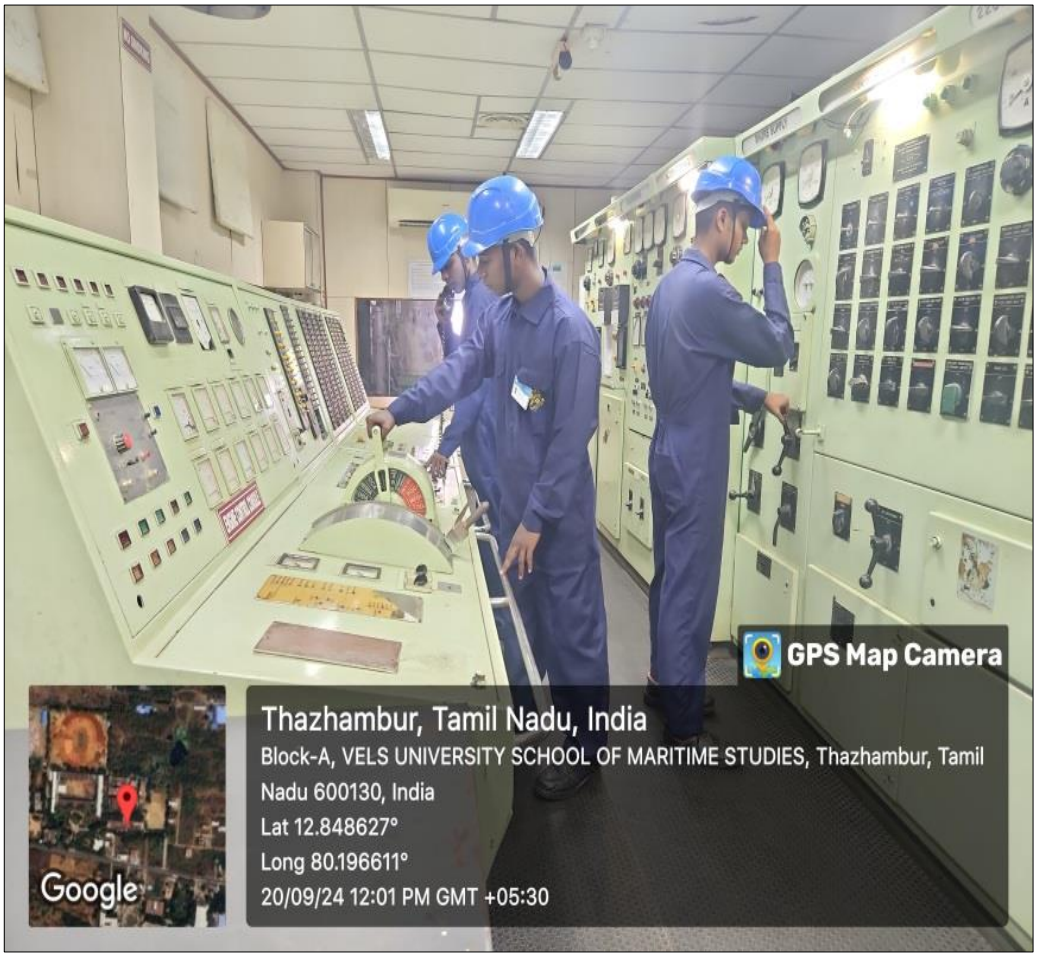

Figure 5: Marine Engine Room Simulator

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Full Machine Bridge Simulator

The Full mission bridge simulator replicates real ship environments, using actual equipment and powerful simulation software.

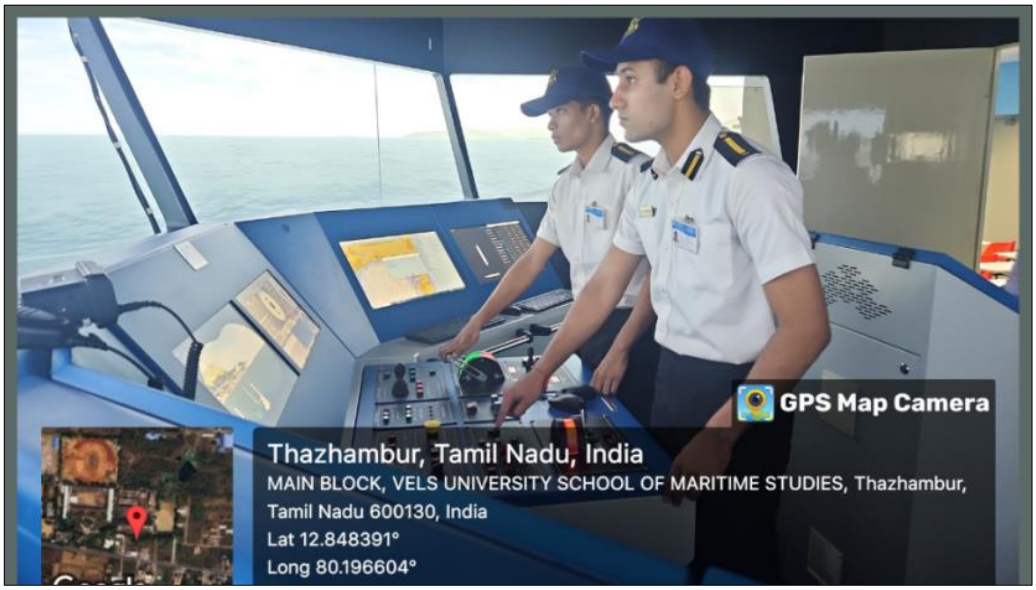

Figure 6: Full Machine Bridge Simulator

Animal Lab Simulator

Animal Lab Simulator in pharmacology provides a virtual platform for studying drug effects and conducting experiments without using live animals.

Figure 7: Animal Lab Simulator

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Aircraft Simulator

The Diamond 42 simulator plays a vital role for students to practice in improving safety, efficiency, and effectiveness in various areas of the industry

Figure 8: Setup of Aircraft Simulator

2.4 Model Based Learning

The School of Maritime Studies uses Ship models, Bulk Carrier and Oil Tanker models for instructional purposes.

Figure 9: Model of Ship and sea map tool

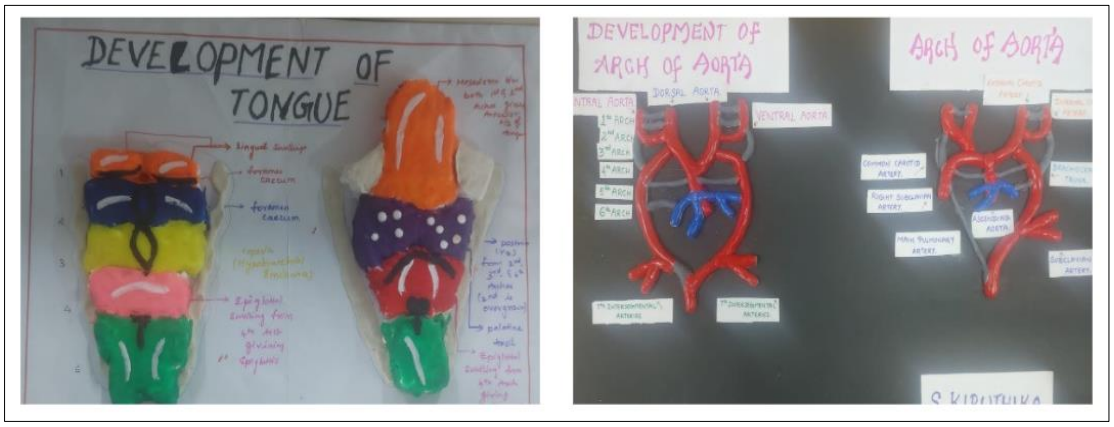


Figure 10: Students from VMCH demonstrating physiology of tongue with models

The Cost-Effective Model-Based Learning (CEMBL) by School of Education optimizes resources by using models to simulate real-world systems, minimizing costs and risks.

Figure 11: Teaching through with Low Cost Model

2.5 Practical Courses and Internships in Curriculum

All the programs at VISTAS contain hands on and practical courses that aid in bridging the gap between theoretical knowledge and real-world application. They allow students to apply concepts learned in lectures to practical situations, which enhances understanding and retention. Similarly, all the programs also have Internships as part of their curriculum.

Table 1: List of Programs with practical courses in the curriculum

Name of the Programme	Availability of Practical Courses
School of Medicine	
M.B.B.S	✓
School of Nursing	
B.Sc. - Nursing	✓

Name of the Programme	Availability of Practical Courses
School of Health Sciences	
B.Sc Operation Theatre and Anesthesia Technology	✓
B.Sc Optometry	✓
B.Sc Radiology and Imaging Technology	✓
B.Sc., Physician Assistant	✓
B.Sc., Cardiac Care Technology	✓
B.Sc., Medical Laboratory Technology	✓
M.Sc., Yoga	✓
School of Pharmaceutical Sciences	
B.Pharmacy	✓
B.Pharmacy (Practice)	✓
M.Pharmacy (Pharmaceutics)	✓
M.Pharmacy (Pharmaceutical Analysis)	✓
M.Pharmacy (Pharmacy Practice)	✓
Pharm.D	✓
Pharm.D (Post Baccalareate)	✓
School of Physiotherapy	
B.P.T	✓
M.P.T (Neuro,Ortho,Sports, Hand, Cardio)	✓
School of Life Sciences and Agriculture	
B.Sc., Biotechnology	✓
B.Sc., Biochemistry	✓
B.Sc., Microbiology	✓
B.Sc., Bio-computing	✓
B.Sc.,(Hons) Agriculture	✓

Name of the Programme	Availability of Practical Courses
M.Sc., Advanced Biochemistry	✓
M.Sc., Immunology & Microbiology	✓
M.Sc., Bioinformatics	✓
M.Sc., Biotechnology	✓
M.Sc., Applied Medical Biotechnology & Clinical Research	✓
School of Management And Commerce	
BBA Digital Marketing	✓
B.Com., Computer Applications	✓
M.B.A. Specialisations in : HR, Marketing, Systems, Finance, Production	✓
M.B.A.,Shipping and Logisticss Mgmt.	✓
M.B.A., Logistics & Supply Chain Mgmt.	✓
M.B.A. Business Analytics	✓
M.B.A. Sports Management	✓
M.B.A. - Innovation, Entrepreneurship and Venture Development(IEV)	✓
School of Engineering and Technology (Including Marine)	
B.E., Marine Engineering	✓
B.Tech., Computer Science Engineering	✓
B.Tech - CSE Artificial Intelligence and Machine Learning	✓
B.Tech - CSE Artificial Intelligence and Data Science	✓
B.Tech.,IT (Cloud and Mobile Based Application Development)	✓
B.Tech., Electronics & Communication Engineering	✓
B.Tech.,Electronics & Computer Engineering	✓
B.Tech., Electrical & Electronics Engineering	✓

Name of the Programme	Availability of Practical Courses
B.Tech., Mechanical Engineering	✓
B.Tech., Automobile Engineering	✓
B.Tech., Civil Engineering	✓
B.Tech., Biomedical Engineering	✓
B.Tech., Biotechnology	✓
B.Tech., Naval Architecture & Off.Shore Engineering	✓
B.Sc., Nautical Science	✓
B.Sc., Maritime Operations	✓
M.E., Computer Science and Engineering	✓
M.E., Computer Integrated Manufacturing	✓
M.E., Construction Engineering & Management	✓
M.E., Automobile Engineering	✓
School of Science & Humanities	
B.Sc., Chemistry	✓
B.Sc., Computer Science	✓
B.Sc.,Computer Science in Cyber Security	✓
B.Sc., Computer Science in Artificial Intelligence and Machine Learning	✓
B.C.A	✓
B.C.A., Cloud Technology and Information Security	✓
B.C.A., Data Science	✓
B.Sc., Information Technology	✓
B.C.A., Block Chain Technology	✓
B.Sc., Aviation	✓
B.B.A., Aviation Management	✓

Name of the Programme	Availability of Practical Courses
B.Sc.-Aeronautical Science	✓
B.Sc., Visual Communication	✓
B.Sc., Animation	✓
B.A., Bharatanatiyam	✓
B.A., Western Classical Music	✓
B.Sc., Hotel & Catering Management	✓
M.Sc., Chemistry	✓
M.Sc., Pharmaceutical Analytical Chemistry	✓
M.Sc., Computer Science	✓
M.Sc., Information Technology	✓
M.Sc., Data Science & Business Analytics	✓
M.C.A.	✓
M.Sc., Visual Communication	✓
M.A., Bharata Natyam	✓
M.Sc., Hotel & Catering Management	✓
School of Legal Studies	
B.A., LL.B (Hons.)	✓
B.B.A., LL.B.,(Hons)	✓
B.Com., LL.B.,(Hons)	✓
LL.B	✓
LL.M., Constitutional Law and Administrative Law	✓
LL.M., Corporate and Commercial Law	✓
LLM Criminal Law and Criminal Justice Administration	✓
LLM Law relating to Intellectual Property rights	✓

3. INTEGRATED AND INTERDISCIPLINARY LEARNING

Integrated And Interdisciplinary Learning refers to educational approaches that blend knowledge and skills from multiple subject areas to provide students with a more holistic understanding of complex topics.

3.1 Continuing Professional Education (CPE)

CPE programs integrate real time application with a wide range of topics, integrating new knowledge, skills, and updates relevant to a professional's field, such as technical skills, regulatory updates, ethics, and communication.

Figure 12: Professional Education (CPE) Programme titled "PCOS" on 10.02.2023 in Department of Pharmacy Practice, School of Pharmaceutical Sciences, VISTAS

3.2 Continuing Medical Education (CME)

Continuing Medical Education (CME) is educational activities that serve to maintain, develop, or increase the knowledge, skills, and professional performance of healthcare professionals.

Figure 13: Department of Orthopedics conducted a CME on 24.07.2024

Figure 14: Department of Ophthalmology conducted CME on Dry Eye Disease & Computer Vision Syndrome on 27.07.2023

3.3 Open Electives, General Electives and Project courses

VISTAS offers Open and General Elective courses to students in order to cater the need of the academic interest and encourage students to explore subjects outside their core discipline, fostering connections between various fields of study. These courses are interdisciplinary and provides flexibility to students by broadening the understanding of related areas within their field, or providing foundational knowledge in other disciplines that complement their major. About 15% of Courses across the programs pertain to generic and open electives.

In addition, all the programs have mini projects and major projects that needs to completed by students. These projects are interdisciplinary in nature and involve the collaboration of students or professionals from different academic or professional disciplines to solve complex problems, conduct research, or create innovative solutions.

Table 2: Interdisciplinary Projects by School of Engineering and Technology (Sample)

S.No	Name of the Department	Project Title
1.	Department of Electronics and Communication Engineering	IOT Based Automation System For Efficient Production of Vermicompost Manure
2.	Department of Electronics and Communication Engineering	Lifi -How to Transmit Data With Laser
3.	Department of Electronics and Communication Engineering	Bluetooth Enabled Covid Sample Collection Robot
4.	Department of Mechanical Engineering	Ultrasonic Sensor Obstacle-Avoiding Robot Car using Arduino
5.	Department of Bioengineering School of Engineering	Bioelectricity Generation Using Microbial Fuel Cell
6.	Department of Bioengineering	Algae Medical Oxygen Concentrator
7.	Department of Bioengineering	Remediation of Waste-Water Generated From Pesticide Industry By Using Gac Filters

S.No	Name of the Department	Project Title
8.	Department of Computer Science Engineering	Their Heavy Metals using Machine Learning Approach
9.	Department of Computer Science Engineering	Predicting Stock Market Trends using Machine Learning and Deep Learning Algorithm
10.	Department of Computer Science Engineering	Prediction and Classification Of Chronic Kidney Diseases Using Machine Learning Algorithms
11.	Department of Computer Science Engineering	Image Reconstruction using Electrical Impedance Tomography to Measure The Ph. of Leather using Inverse Solution
12.	Department of Automobile Engineering	Parking slot detection system
13.	Department of Automobile Engineering	Development of Smart Helmet with Safety Alerts
14.	Department of Computer Science Engineering	Restaurant food recommendation system
15.	Department of Computer Science Engineering	The impact of climatic change on birds
16.	Department of Computer Science Engineering	Infant weight estimation using machine learning
17.	Department of Computer Science Engineering	Local crime rate trends using data analytics
18.	Department of Computer Science Engineering	Infant weight estimation using machine learning
19.	Department of Civil Engineering	Modelling new pedestrian level of service for the evergrowing population of chennai city
20.	Department of Civil Engineering	A synergistic ai framework for modelling carbonation depth in flyash enriched sustainable concrete
21.	Department of Civil Engineering	Study and effectivess of monitoring and managing construction site safety using with artificial intelligence

S.No	Name of the Department	Project Title
22.	Department of Information technology	Crypto currency price prediction and exploratory analysis with ml and data analysis
23.	Department of Computer Science Engineering	Face recognition based attendance system
24.	Department of Computer Science Engineering	Stock market prediction using machine learning long short-term memory algorithm
25.	Department of Computer Science Engineering	Web application-driven iot based efficient parking management
26.	Department of Computer Science Engineering	Infant weight estimation using machine learning
27.	Department of Biomedical Engineering	Self-stabilized gyro toothbrush for parkinson's disease with real time motion compensation
28.	Department of Biomedical Engineering	Facial emg based mobilization device for quadriplegia
29.	Department of Biomedical Engineering	Ventilating Two Patients with a Single Device
30.	Department of Computer Science Engineering	Speech to sign language

4. PARTICIPATORY LEARNING

4.1 Community Engagement and Practical Exposure

Active participation in real-world settings enhances students' learning by allowing them to apply theoretical knowledge in practical situations. Students, guided by faculty participate in enhancing the health conditions of the community.

Figure 15: Building Connections: Empowering Students through Community Engagement and Social Impact

Similarly various interactive approaches to education that actively involve students in the learning process, encouraging them to collaborate, and take responsibility for their own learning are practiced at VISTAS. These methods focus on experiential, collaborative, and student-centered learning, moving away from passive absorption of information to a more dynamic, hands-on experience.

Figure 16: Bridging Theory and Practical using various participative teaching learning methods

4.2 MOOT Court

MOOT Courts are regularly conducted by the School of Legal Studies to provide students with a platform to engage in mock trials or appellate court hearings, allowing them to argue fictional cases before a panel of judges. Students participate to practice legal argumentation, case analysis, and advocacy skills.

Figure 17: Students from School of Legal Studies engaged in MOOT Court

4.3 Learning from Alumni

VISTAS students are enriched in their learning experience by Alumni who visit the Institution and share their experiences, insights, and expertise with current students. These lectures offer valuable real-world perspectives, inspire students through success stories, and provide networking opportunities. Alumni often interact with students, mentor them and discuss career paths, industry trends, and lessons learned, contributing to the professional development and motivation of students.

Table 3: Alumni Lectures during the AY 2023-24

SI. No	DATE OF THE EVENT	TITLE OF THE EVENT	NAME OF THE ALUMNI, PROGRAM AND PASSED OUT YEAR
1.	20-11-2024	Higher educational opportunities	G. Nagalakshmi, Mba, 2017
2.	19-08-2024	Building the Foundation : Preparation for a Career in Bio Informatics	Dr. Jaswanth Jenny, School Of Life Sciences, 2014
3.	01-03-2024	Opportunities for MBA In Tourism Industry	Ms. Priyanka D, Mba, 2018
4.	24-02-2024	Role of NGO	Mtr Barnabas Immanuel P, Mba, 2019
5.	24-02-2024	Data science and decision making	Ms. Lakshita M Bhandari, Mba, 2023
6.	10-02-2024	Capacity development and skill enhancement initiatives in logistics	Finto.U, A.Yalini, Rkarthick Raja, Sudhirt, Mba,
7.	08-02-2024	Career perspectives in shipping and logistics	Praveen Raju T, Mba, 2023
8.	01-02-2024	Biotechnology study in global context	Mr. S. Sharath, B.Tech Bio Technology, 2022
9.	20-11-2023	Business communication	Lakshmanan, Mba, 2019
10.	09-11-2023	Embedded security	Mr.Chmiata Mahesh, Ms. Meenakshi, B.Tech Ece, 2019
11.	07-11-2023	Unlocking business insights with zoho analytics	Sinduja Santhosh, Mba, 2009
12.	07-11-2023	Career opportunity in sports industry	Ms.Preeti Sri Jain, Mba, 2011
13.	02-11-2023	Role of data visualization in communicating insights	Prasanth R, Mba, 2023
14.	30-10-2023	Content management system	Mr.J. Rohit, Mba, 2023
15.	27-10-2023	Human resource management	S Vaishnavi Devi, Mba, 2023
16.	21-10-2023	Empowering your career and employability skills	Dr.Abilash Surendran, Pharmaceutical Sciences, 2022
17.	21-10-2023	Empowering your career and employability skills	Dr. Abilash Surendran, Mba, 2022
18.	16-10-2023	Unlocking data science excellence: your road map to success	Raghul J, Mba, 2023

SI. No	DATE OF THE EVENT	TITLE OF THE EVENT	NAME OF THE ALUMNI, PROGRAM AND PASSED OUT YEAR
19.	14.10.2023	Global opportunities in logistics	Mr.Asim, Mr.Dinesh, Mohameed Abrar, Mba, 2018
20.	13-10-2023	Alumni talk - future of physiotherapy	Dr.Premanand, Physiotheraphy, 2008
21.	11-10-2023	Career in physiotherapy	Dr. Rajesh, Physiotheraphy, 2005
22.	09-10-2023	Impressive transformation of india's economy	Dr.R.M.Shanmugam, Mba, 2023
23.	09-10-2023	Impressive transformation of india's economy	Dr.Rm Shanmugam, Mba, 2023
24.	06-10-2023	Kickstarting a career with sql	T.Vignesh, Computer Applications, 2020
25.	30-09-2023	A green initiative new construction material	N.Vanitha, M.Sc Chemistry, 2019
26.	27.09.2023	Career opportunities in warehousing	Lohith Udhayakumar, Mba, 2023
27.	25.09.2023	Challenges in shaping one's career	Ranjith Kumar, Mba, 2020
28.	21.09.2023	Warehouse management	Mr. Edison. S, Mba, 2021
29.	07.09.2023	E-business	Sheik Abdul Niyaz, Mba, 2012
30.	28-08-2023	Career prospects for mba business analytics	Ms.Swetha .K, Mba, 2023
31.	27-08-2023	Corporate expectations and role of analytics in the financial markets	Mr.Balaji Swaminathan, Mba, 2018
32.	25-08-2023	Career opportunities in dubai for logistics	Swathi Krishna, Mba, 2020
33.	22-08-2023	Quality management in business	R. Bala Murugan, Mba, 2019
34.	19-08-2023	Education is a key: gender equality and gender equity	Mrs.R.Rajeswari, Commerce, 2007
35.	18-08-2023	Developing a successful business plan for pharmaceutical entrepreneurship	P.Yuvanesh, Civil Engineering, 2021
36.	17-08-2023	Career opportunity for pharmacy professionals	Dr.S. M. Shaheedha, Pharmaceutical Sciences, 2016
37.	17-08-2023	Career opportunity in biotechnology	Ms. Akshata Sharma, B.Tech Bio Technology, 2021
38.	16-08-2023	Prospects and prespectives of Pharm D	Dr. K. Bhaskar Reddy,

SI. No	DATE OF THE EVENT	TITLE OF THE EVENT	NAME OF THE ALUMNI, PROGRAM AND PASSED OUT YEAR
			Pharmaceutical Sciences, 2009
39.	14-08-2023	Overview of memory enhances from neutraciticals	Dr.S.Nirmala, Pharmaceutical Sciences, 2018
40.	04-08-2023	Role of biomedical engineer in hospital	Sivanesh K, Biomedical Engineering, 2021
41.	24-07-2023	Indian contract act , legal and illegal contracts	Mr.B.Leo Christo, Law, 2014

Figure 18: Alumni Interactions at VISTAS

5. PROBLEM SOLVING METHODOLOGY

5.1 Small Group Learning

Small Group Learning (SGL) encourages problem-solving, as students are often required to identify structures and discuss their functions in the context of the human body.

Figure 19: Hands-On Discovery: Empowering Students through Small Group Learning to Master Anatomy and Problem-Solving

5.2 Case Studies

Case studies involve an in-depth examination of specific clinical cases that provide valuable insights into patient care, disease processes, treatment strategies, and outcomes. Detailed analysis and documentation of the patient's history, symptoms, diagnosis, treatment, and follow-up, offering a comprehensive view of real-life medical scenarios.

Figure 20: Case Studies real-life medical scenarios

5.3 Hackathons

Hackathons are conducted to examine the Problem-solving capabilities of the students. Participants work in teams to create functioning software or hardware prototypes, usually with a specific theme or challenge in mind. Hackathons encourage creativity, collaboration, and rapid problem-solving.

Figure 21: Smart India Hackathon organized at VISTAS

5.4 Legal Aid Camps

Legal aid camps are conducted by VISTAS to provide free legal support to marginalized communities. Students identify common legal problems, addresses their root causes, and offers practical solutions such as legal consultations, documentation help, and mediation. In addition to promoting access to justice, these camps give law students essential practical experience in applying their legal knowledge to real-world issues.

Figure 22: Legal Aids Camps conducted by School of Legal Studies

6. SELF DIRECTED LEARNING

6.1 Vels Knowledge Resource Centre

The Vels Knowledge Resource Centre has been set up to provide students with the opportunity to gain additional knowledge through online courses offered by platforms such as EDX, TED, NPTEL, Khan Academy, MIT, and Coursera. Access to these resources is available inside and outside the campus.

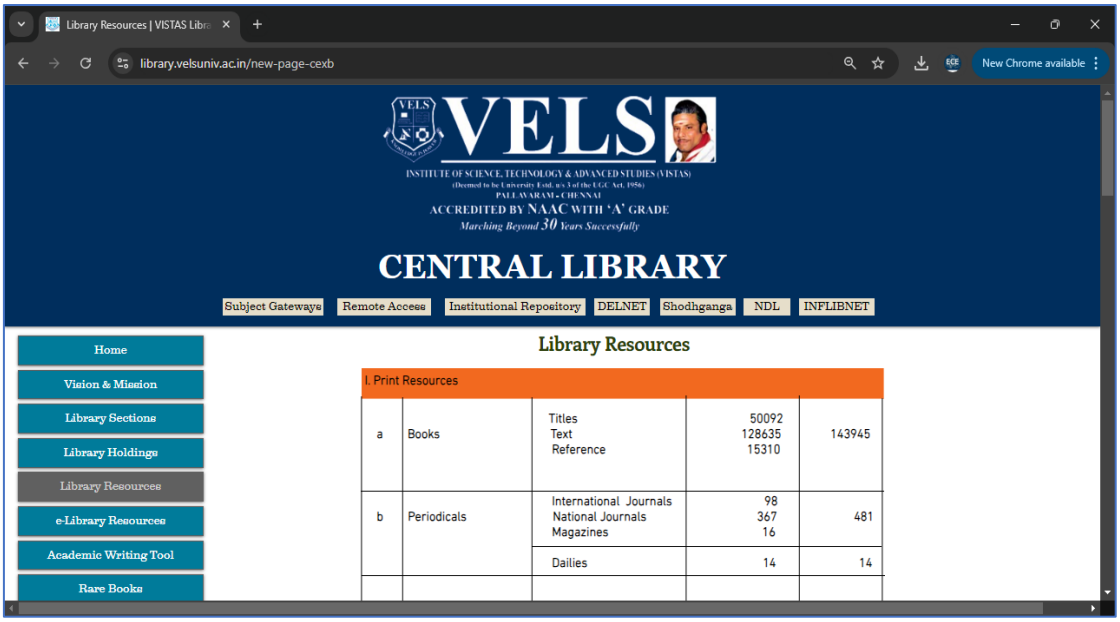


Figure 23: Vels Knowledge Resource Center

Figure 24: Self Directed Learning

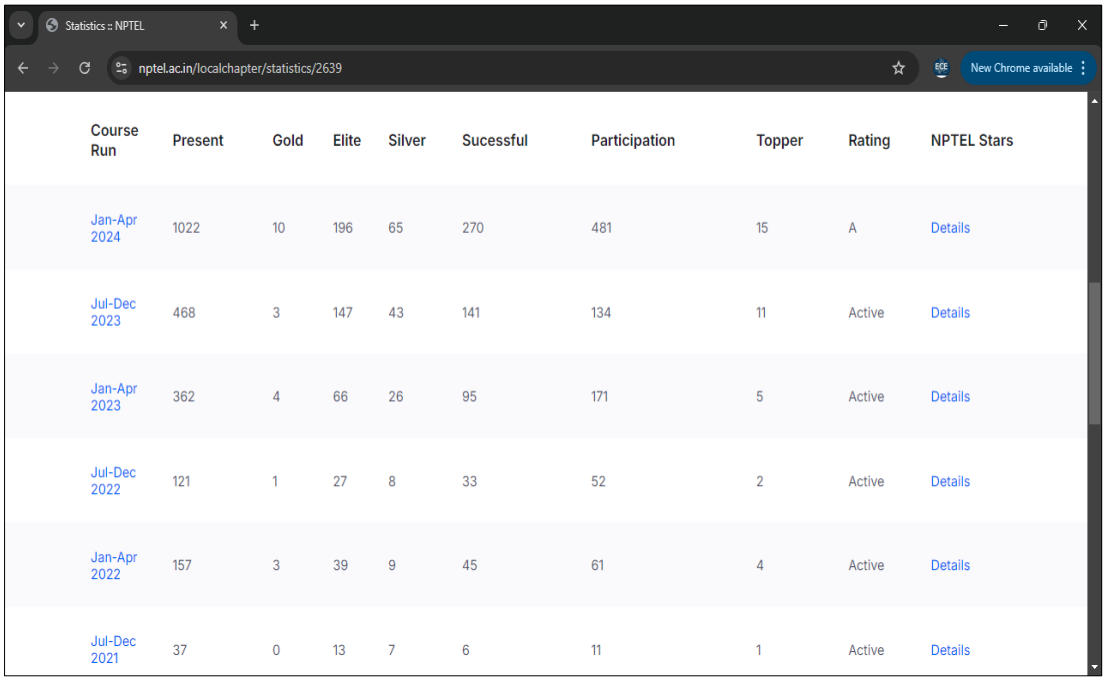
Figure 25: Learning in Digital Library

6.2 Massive Open Online Courses

The faculty and students of VISTAS update themselves with knowledge by learning from experts via the SWAYAM and NPTEL Platforms. Students and faculty successfully complete the courses and add laurels to the Institution.

Table 4: Details of Students who have completed SWAYAM/NPTEL Courses

S. No	SWAYAM/ NPTEL	AY 2021-22	AY 2022-23	AY 2023-24
1	Total Number of Enrolments	4039	5180	8317
2	Total no. of registrations	314	587	1799
3	Total no. members passed	123	294	986
4	Total no. of Credit Transfer	34	100	432



Course Run	Present	Gold	Elite	Silver	Sucessful	Participation	Topper	Rating	NPTEL Stars
Jan-Apr 2024	1022	10	196	65	270	481	15	A	Details
Jul-Dec 2023	468	3	147	43	141	134	11	Active	Details
Jan-Apr 2023	362	4	66	26	95	171	5	Active	Details
Jul-Dec 2022	121	1	27	8	33	52	2	Active	Details
Jan-Apr 2022	157	3	39	9	45	61	4	Active	Details
Jul-Dec 2021	37	0	13	7	6	11	1	Active	Details

Figure 26: Statistics from SWAYAM/ NPTEL Portal

Figure 27:NPTEL certificate of Best Performers

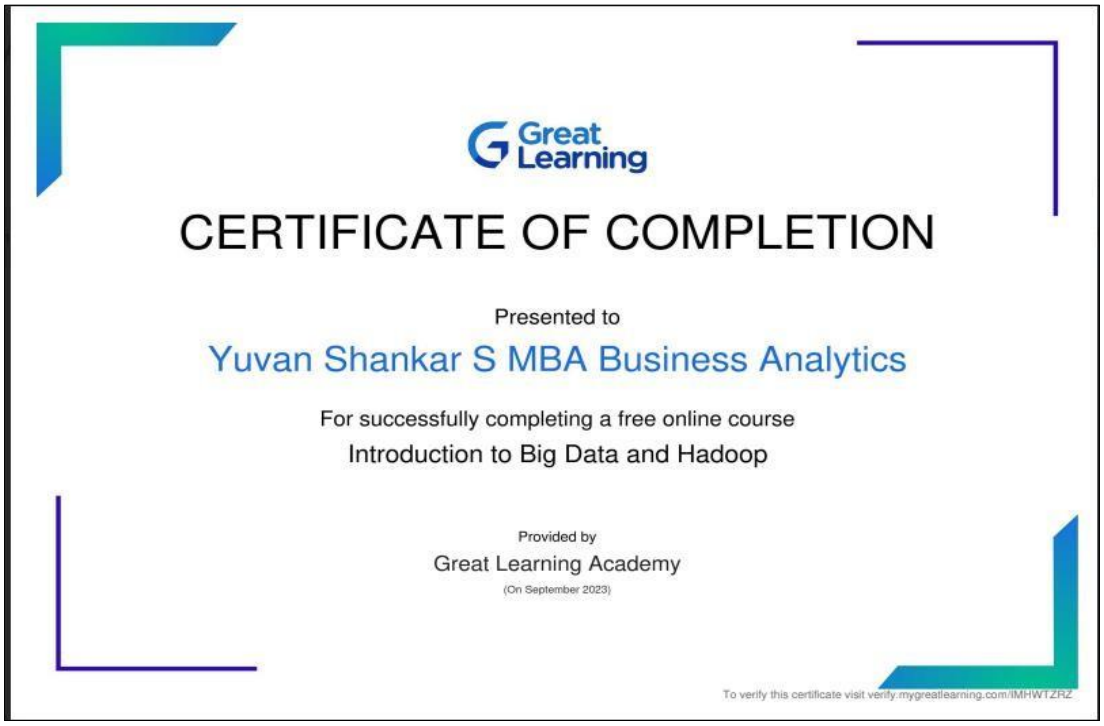


Figure 28: Sample Certificate of Great Learning Platform

Figure 29: Sample Certificate from MATLAB Academy (Online)

7. PATIENT-CENTRIC AND EVIDENCE-BASED LEARNING

7.1 Clinical Skill Training

The MBBS students are regularly assigned to clinical postings, where they are trained in bedside manners, history taking, and identifying clinical signs. This hands-on training is crucial for developing the skills needed for effective patient care.

Figure 30: Training on intravenous drips in a simulated environment on 16.02.2023

Figure 31: Routes of Drug Administration Using Mannequins

7.2 Demonstration of Course Topics

Faculty use lab equipment to demonstrate course topics with real-world applications. Biological models and charts simplify concepts.

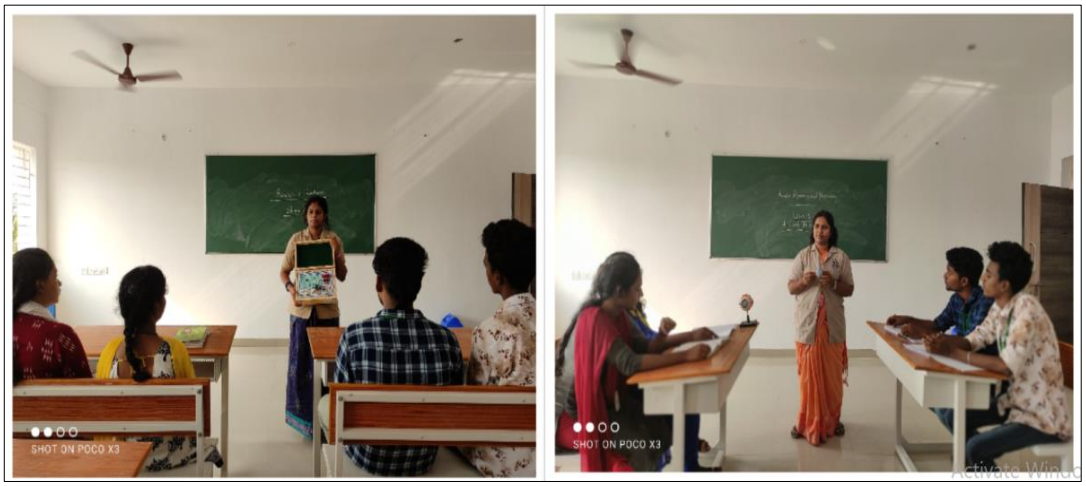


Figure 32: Live Demonstration of Various course topic

Figure 33: Demonstration of Flower Arrangement in School of HCM

7.3 Medical Practicum in Health Sectors

The Clinical postings and internships are offered to 3rd/4th-year students for one month and include a compulsory six-month internship after the 8th semester, with 10 credits allocated for clinical supervision and 20 credits for the internship.

Table 5: Clinical Postings

Training take place in others specialized hospitals in the following departments	Our clinical training hospitals
Department of Orthopedics	Bone and Joint, Anna Nagar
Department of Neurology and Pediatrics	Sundaram Medical Foundation, Anna Nagar
Department of Cardiology	Noble Hospital, Purasaiwalkam
ICU training	St Isabel Hospital, Mylapore
Geriatric and Pediatrics rehabilitation	Indian Red Cross, Egmore
Oncology and palliative care	IshariVelan Mission Hospital, Thalambur
Department of Plastic surgery and Burns	Right Hospital, Kilpauk
Department of Orthotics and Prosthetics	NIPMED, Kovalam

7.4 Evidence Based Learning

Source method is employed by School of Education to use original material and sources in the teaching and learning of any subject.

Figure 34: Original Material of Ancient Stones

Evidence-based study conducted in the Department of Electrical and Electronics Engineering to enable students understand the concepts of Solar Power Plants.

Figure 35: Dr.S.Vijayaraj demonstrating about the Solar panel

8. THE HUMANITIES

8.1 Field Trips

Field Trips includes market survey and other field training programs conducted by VISTAS. They can offer insights into human experiences, values, and contexts, enriching students' understanding of broader human perspectives.

Figure 36: Field Trips by Nursing Students

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Figure 37: Field Trips by Commerce Students

Figure 30: Field Trips by Engineering Students

8.2 Legal Awareness Programme

A Legal Awareness Programme conducted by the School of Legal Studies to educate individuals or communities about their legal rights, responsibilities, and the legal system. They aim to enhance understanding of laws and legal processes, promote access to justice, and empower individuals to navigate legal issues effectively.

Figure 39: Legal Awareness Program to School Students on usage of Mobile Phones

Figure 40: Legal awareness program on the topic Anti-Corruption Mechanisms

9. PROJECT BASED LEARNING

9.1 Student Projects

Students at VISTAS are encouraged to submit project proposals to various funding agencies such as the Tamil Nadu State Council for Science and Technology (TNSCST), Indian Council for Medical Research (ICMR), Entrepreneurship Development Institute (EDI) etc., The details of student projects selected are as listed below,

Table 7: List of Student Projects Approved by TNSCST

S. No.	Student's name	Name of the Project/ Clinical Trial/ Endowment/ Chairs	Name of the Principal Investigator/Co Investigator	Department of Principal Investigator/ Co Investigator
1	R.Punithavalli	Bacterial chitinase as a new,target specific biopesticide	Dr.M.Suganthi	Biotechnology
2	T.Vinoth Kumar	Fabrication of gelatin encapsulated zinc oxide nanoparticle prepared using poly herbal extract for wound healing applications	Dr.R.Padmini	Biochemistry
3	S Bhuvaneswari	A compartive study of Phytoremediation of heavy metals in wastewater and soil using Andorhraphis paniculata, Chrysopogonzizanoids, and Brassica juncea and production of Biogas	Dr.P. Sakthiselvan	Biotechnology

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S. No.	Student's name	Name of the Project/ Clinical Trial/ Endowment/ Chairs	Name of the Principal Investigator/Co Investigator	Department of Principal Investigator/ Co Investigator
4	Vismaya.K.V, Vishnu Priya.R, Bharath.K, Sivabalan.S	Development of Hydroquione free Herbal gel for the Management of Melasma	Dr.A. Vijayalakshmi	Pharmaceutical Sciences
5	K.V.Srinija, E.Aravinthan	Visual background elimination with singular value decompositions	Ms.S. Vijitha	CSE
6	K.Karthik, S.Bhuvaneshwaran, C.Hariharan	Design and prototyping of a low cost ventilator to support breathing	Dr.Vijayaraj.S	EEE
7	R.Varsha, Shivanshi Yadav, Muthazhagan, P.Venkatesh	Oxymel possessing antiobesity property with natural medicinal herbs	Dr. Malarkodi Velraj	Pharmacognosy
8	Ajith.K	Development of Paper based pesticide Diagronostic tool using polymer bearing chemiluminescent luminal functionality	Dr.S. Deepa	Chemistry
9	Ajay Hariharan	Development of internal sewage pipe cleaner	Dr.M.Chandrasekaran	Mechanical Engineering

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S. No.	Student's name	Name of the Project/ Clinical Trial/ Endowment/ Chairs	Name of the Principal Investigator/Co Investigator	Department of Principal Investigator/ Co Investigator
10	SM.Shivbalan	Synthesis of Cu based metal organic framework (MOF)/g-C3N4 composite and investigation of its biological actitity	Dr.Kosiha A	Chemistry
11	Suren, Sowmya, TimothyRahul, Thenmozhi	Identification of antioxidant and antimicrobial compounds of Selected Plants by TLC Bioautography for Acne treatment	Dr.Vijayalakshmi	Pharmacy
12	Subalakshmi R	Vermicompost Production from Banana waste amended with Biochar using epigeic earthworm eudrillus eugeniae	Dr K Ashok Kumar	Biotechnology
13	Brindha	Natural hair dye from melanin producing actinomycetes	Dr.G.Abirami	Biotechnology
14	Aarthi A	Unveiling the Efficiency of Vermicompost Derived from Different Excreta Wastes on Vigna unguiculata Growth and Soil Health	Dr.M.Thenmozhi	Biotechnology

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S. No.	Student's name	Name of the Project/ Clinical Trial/ Endowment/ Chairs	Name of the Principal Investigator/Co Investigator	Department of Principal Investigator/ Co Investigator
15	Yashi Asthana	Extraction of eugenol from bay leaf ,nutmeg and betel leaf and determining it's antibacterial activity	Dr.G.N.Nirmala	Biotechnology
16	Arun	Development of amperometric sensor using two dimensional mos2/cnt composite for the determination of acetaminophen and caffeine	Dr.M.Devendiran	Chemistry
18	Mary Caroline Jeevitha. APreethi Ohjo	Detecting fake reviews on online consumer products using machine learning techniques	Dr.K.Kalaivani	Computer Science Engg.
19	Jenkinz Albert.A	Design and Development of 3D printed prosthetic socket for Lower Limb Amputees	Mrs. Keerthana. A	Biomedical
21	Shweta Ashok, Syed Uzma Farheena	Intelligent walking stick for deaf-blind people	Ms.A.Keerthana	Dept. of Biomedical Engineering
22	Kanieswari.B, Salma Fathima.T	Cognetive home automation system with sensor network and its implementation using FPGA controller	Mrs. Meena .M	Department of Electronics and Communication Engineering

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S. No.	Student's name	Name of the Project/ Clinical Trial/ Endowment/ Chairs	Name of the Principal Investigator/Co Investigator	Department of Principal Investigator/ Co Investigator
23	Ananth Vikranth D, Krishnaveni M	Nanoparticle synthesis from Olea Europaea(Fruit) and its activity against oral pathogens	Dr.S.S. Meenambiga	Department of Bio Engineering
24	Jayashree P, Shalini M	A studey of the anti bacterial activity of Epiphyium Oxypentalum Flower and its applications	Dr. S.S, Meenambiga	Department of Bio Engineering

9.2 Avishkar – A Project Expo

Every year VISTAS organizes AVISHKAR an Intra Institutional Technical Project Expo. Various projects form disciples like School of Engineering, Basic Sciences, Life Sciences and Pharmaceutical Sciences are displayed on the day of Project Expo. Selected projects are further progressed to patents and publications.

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Figure 41: Projects Displayed at AVISHKAR

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10. ROLE PLAY

10.1 Role Play on Medical Conditions

Learning through role play is a powerful educational technique and it involves students acting out specific roles in simulated scenarios. Students at VMCH enact various clinical conditions that broadens their understanding of patients and cases.

Figure 42: Role Play on Myocardial Infarction

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Figure 43 : Role play on Various Clinical Conditions

10.2 Events

The departments of the Institution conduct events where students enact different characters. Students enacted the iconic characters such as Hamlet, Claudias, Lady Macbeth on Shakespeare Day. Similarly, during Independence day celebrations, students enacted the role of freedom fighters that helped the audience remember the patriotic deeds of the leaders.

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Figure 44: Shakespeare Day

Figure 45: Independence Day

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