

NIRMALA COLLEGE OF PHARMACY



NIRMALA COLLEGE OF PHARMACY MUVATTUPUZHA

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FIRST CYCLE NAAC ACCREDITATION 2023

CRITERION 4



INFRASTRUCTURE AND LEARNING RESOURCES

4.1.1. Availability of adequate infrastructure and physical facilities viz., classrooms, laboratories, infrastructure, facilities for cultural and sports activities, gymnasium, yoga centre etc. in the institution

Submitted to



THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL



List of Physical, Computational, Laboratory Equipments and other Facilities

Room description	Number	shared /exclusive	capacity	Dimension with area	Rooms Lab Equipped With
Teaching and administrative area					
Class room	3	Exclusive	100 each	450.00 sq. m	Chair, Table, Podium, LCD Projector, Black board, Notice board.
	6	Exclusive	30	450Sq.M	Chair, Table, Podium, LCD Projector, Black board, Notice board.
Class room	2	Exclusive	60	150 Sq.M	Chair, Table, Podium, LCD Projector, Black board, Notice board.
Class room	2	Exclusive	15	150sq M	Chair, Table, Podium, LCD Projector, Black board, Notice board.
Tutorial room	1	Shared	60	102.00 sq. m	Table and Chair
Seminar hall	1	Shared	100	104.5 sq. m	Chair, Table, Podium, LCD Projector, Sound, Air condition,
Conference hall/Board room	1	Shared	60	61.64 sq. m	Chair, LCD, LAN, Table
Principal chamber	1	Exclusive	20	38.80 sq. m	Chair, Table, Computer, LAN, Air condition, shelf and cupboard,
Vice principal's chamber	1	Exclusive	10	30.80 sq. m	Chair, Table, Computer, LAN, and shelf
Office	1	Exclusive	6	89.95 sq. m	Chair, Table, Computer with reprographic facility, LAN, Shelf and Cupboard,
Cabin for Head of the department	1	Exclusive	3	20 sq. m	Chair, Table, Computer, LAN, Shelf and Cupboard
Faculty rooms	6	Exclusive	4-10	203.34 sq. m	Chair, Table, Computer, LAN, Shelf and Cupboard
Library	1	Exclusive	100	225.00 sq. m	Chair, Table, Computer, LAN, Shelf and Cupboard
Exam hall	1	Exclusive	120	213 sq. m	Table, Chair, Light, Fan, Mobile Jammer,



Exam control room	1	Exclusive	NA	23.00 Sq. m	Computer, Printer, Fax, LAN, Storage space
Auditorium	1	Shared	250	372.00 sq. m	Podium, Chair, Sound, Green Room
Amenities area					
Guest room	3	Shared	6	125 sq. m	Well furnished
First aid room	2	Shared	2	50.64 sq. m	Patient bed, First aid kit, Toilet,
Chapel	1	Shared	120	156.56 sq. m	Chair
Sports Room	1	Shared	NA	64.64 sq. m	Chess, Caroms,
Central Stores	1	Shared	NA	64.64 sq. m	Storage Rack, First Aid Facility and Fire Extinguisher
Stationary store	1	Exclusive	NA	10 sq. m	Rack
Maintenance	1	Exclusive	NA	12 sq. m	Open space
Housekeeping	1	Exclusive	10	25 sq. m	Table , Chair, Wash Area
Pantry for staff and faculty	1	Exclusive	50	51 sq. m	Table , Chair, Wash Area, Cupboard
Cafeteria	1	Shared	30	144.82 sq. m	Table And Chair
Girls common room	2	Exclusive	2	139.00 sq. m	Bench, Desk and Toilet
Boys common room	2	Exclusive	2	128.00 sq. m	Bench, Desk and Toilet
Toilet facility for boys	14	Exclusive	14	118 sq. m	Toilet wash area
Toilet facility for girls	14	Exclusive	14	150 sq. m	Toilet wash area
Drinking water facility	6	Shared	NA	15 sq. m	Cooler, Normal Water Facility
Laboratories					
Pharmaceutics	3	Shared	20	240.96 sq. m	Equipped with relevant instruments, facility for formulation development , aseptic cabinet first aid box and fire extinguisher
Microbiology with aseptic room	1	Shared	20	125.50 sq. m	Equipped with relevant instruments, Mother culture, first aid box and fire extinguisher, Aseptic room with LAF
Pharmaceutical chemistry	4	Shared	20	365.60 sq. m	Equipped with relevant instruments, fuming cupboard, first aid box and fire extinguisher
Anatomy and physiology	1	Shared	20	85.7 sq. m	Equipped with relevant instruments, Physiological models first aid box and fire extinguisher
Pharmacology	1	Shared	20	85.7 sq. m	Equipped with relevant instruments, Animal house, Smoke room, first aid box and fire extinguisher
Pharmacognosy	1	Shared	20	76.60 sq. m	Equipped with relevant instruments. Sample of crude drugs first aid box and fire extinguisher
Research lab	1	Shared	30	120.35 sq. m	Equipped with relevant instruments, Proper work bench, good ventilation, light, sitting space, first aid box and fire



					extinguisher, Notice board
Machine room	1	Shared	30	310.12 sq. m	Arrangement of instruments in the sequential order of process, , Equipped with relevant instruments for solid, liquid, powder and parenteral dosage form, first aid box and fire extinguisher
Instrument room	1	Shared	20	171.6 sq. m	Equipped with relevant instruments first aid box and fire extinguisher
Computer lab	1	Shared	25	78.18 sq. m	Computer, Power backup, LAN
Museum	1	Exclusive	20	52.4 sq. m	Instruments, accessories, charts, Specimens and models.
Animal house	1	Exclusive	300	53 sq. m	Light, Animal cages, AC,
Herbal garden	1	Shared	20	132.10m2	Shaded and unshaded area 100 plants with varying medicinal property.
Hostel					
Boys (Jeeva Jyothy)	1	Shared	170	2803.44 Sq. m	Coat, Table, chair, Rack in each room and exclusive mess, wash area, chapel, study room, sports facility, 24hr portable water, Security facility
Girls	1	Exclusive	120	3987.009 Sq. m	Coat, table, chair, chapel, Exclusive 24hr portable water, purifier for drinking water, Security facility, exclusive mess
Girls (Assisi)	1	Exclusive	40	280 Sq. m	Coat, table, chair, chapel, Exclusive 24hr portable water, purifier for drinking water, Security facility, exclusive mess
Girls (St Joseph)	1	Shared	40	380 Sq. m	Coat, Rack in each room, study room, Table, chair, chapel, 24hr portable water, Security facility, exclusive mess
Girls (Little Flower)	1	Shared	90	3401.18 Sq. m	Coat, Rack in each room, study room, Table, chair, chapel, 24hr portable water, Security facility, exclusive mess

6.1. Availability of adequate, well-equipped classrooms to meet the curriculum requirements (20)

- Department has sufficient class rooms for conducting lectures for I, II, III and IV B.PHARM students.
- Every batch has dedicated class rooms for the year, fully furnished and exclusive.
- Adequate Sitting, learning, writing and baggage space, is provided for all students in each class room
- Each and every class room is provided with perfect ventilation – windows on two sides and two doors in each class room.
- Class rooms has good ventilation, and are provided with exclusive Black Board, Desks, Chair, podium, fan, lighting, notice board, LCD projector, Power backup and Wi-Fi facility, Audio device & Teachers Table.
- Department conducts the seminars in the class room itself. When batches of different years are to be combined, such seminars will be done at the shared seminar hall which has capacity of 100 seats. Guest lectures and workshops are also conducted here.



6.2. Faculty rooms (11)

- Adequate number of staff rooms (10) with total size of 255.34 sq.m are available to accommodate all faculty members. Faculty rooms are provided with individual cabins.
- Each and every staff room is provided with racks to facilitate the faculty for storing books and files.
- All the staff rooms are equipped with High speed LAN connection, Wi-Fi, power backup and intercom facility.

6.3. Laboratories including preparation room (wherever applicable), instrument/machine room and computer labs along with equipment and relevant facilities (60)

Lab Description	Batch size	Availability of Manuals	Quality of instruments	Safety measures	Remarks
Lab1: Machine Room	20	Available	Working condition	Fire Extinguisher, First Aid	Multi stage compression machine, Disintegration apparatus, Rotek centrifuge, Rotek hot plate, Mechanical stirrer, Vacuum pump, Digital balance, Double cone blender, Manual capsule filling machine, Grinder, Liquid filling machine, Collapsible tube filling machine, Autoclave
Lab 2: Pharmaceutics	20	Available	Working condition	Fire Extinguisher, First Aid	Oven, ball mill, water bath, sieve shaker, digital balance,
Lab 3: Pharmaceutical Chemistry	20	Available	Working condition	Fire Extinguisher, First Aid, fuming cupboard	Equipped with sufficient number of variety of glass ware and instruments like Weighing balance, muffle furnace, deioniser, hot plate, magnetic stirrer, heating mantle, vacuum pump, digital balance
Lab 4: Pharmaceutical Chemistry	20	Available	Working condition	Fire Extinguisher, First Aid	Equipped with sufficient number of variety of glass ware and instruments like Electric water bath, digital balance, hot air oven
Lab 7: Pharmacognosy	20	Available	Working condition	Fire Extinguisher, First Aid	Equipped with sufficient number of variety of glass ware and instruments like Calorimeter, centrifuge, BOD incubator, digital balance, heating mantle, hot plate, pH meter, UV cabinet, water bath, TLC Spreader, TLC Plate, soxhlet apparatus, column, distillation unit, Clevenger apparatus, condenser,
Lab 8: Pharmacognosy	20	Available	Working condition	Fire Extinguisher, First Aid	Equipped with sufficient number of variety of glass ware and instruments like Camera lucida, microscope, grinder, oven, digital balance.
Lab 9: Pharmaceutical Chemistry	20	Available	Working condition	Fire Extinguisher, First Aid, fuming cupboard	Equipped with sufficient number of variety of glass ware and instruments like Bulk densitometer, digital balance, hot air oven, water bath, physical balance,
Lab 10: Pharmaceutics	20	Available	Working condition	Fire Extinguisher, First Aid	Equipped with sufficient number of variety of glass ware and instruments like Incubator, hot air oven, LAF, autoclave, BOD



					incubator, Microscope, binocular microscope, pH meter, colony counter, mechanical shaker, zone reader, centrifuge
Lab 12: Pharmaceutical Chemistry	20	Available	Working condition	Fire Extinguisher, First Aid, fuming cupboard	Equipped with sufficient number of variety of glass ware and instruments like Oven, digital balance, melting point apparatus
Lab 13: Pharmacology	20	NA	NA	NA	Lab facility available for proper functioning of pharmacology lab
Lab 14: Pharmaceutics	20	Available	Working condition	Fire Extinguisher, First Aid	Equipped with sufficient number of variety of glass ware and instruments like Magnetic stirrer, digital balance, calorimeter
Lab 15: Research Lab	30	Available	Working condition	Fire Extinguisher, First Aid	Equipped with sufficient number of variety of glass ware and instruments like Humidity chamber, dissolution apparatus, brook field viscometer, high speed centrifuge, homogenizer, magnetic stirrer, mechanical stirrer.
Lab 16: Instrument Room	10	Available	Working condition	Fire Extinguisher, First Aid	FTIR, HPLC, Pellet press. , Drug design software UV Spectrophotometer, Electronic balance, Flame photometer Polari meter, Auto karl fisher titrimeter, Digital potentiometer Refractometer, Magnetic stirrer Conductivity meter, Fluorimeter Digital ultrasonic cleaner Micro centrifuge, Tissue culture rack, Calorimeter, Digital nephelo turbidity meter, Electrophoresis horizontal BOD incubator
Lab 17: Industrial Pharmacy Lab	20	Available	Working condition	Fire Extinguisher, First Aid	Equipped with sufficient number of variety of glass ware and instruments like hardness tester, Clarity tester, Friability test apparatus,
Lab 18: Pharmacology	20	Available	Working condition	Fire Extinguisher, First Aid	Equipped with sufficient number of variety of glass ware and instruments like Equipped with actophotometer, digital balance, electroconvulsimeter, eddy's hot plate, pole climbing apparatus, kymograph 24 nos, rota road apparatus, clinical centrifuge, digital thermometer, water bath, refrigerator
Lab 19: Human Anatomy & Physiology	20	Available	Working condition	Fire Extinguisher, First Aid	Equipped with sufficient number of variety of glass ware and microscope,
Lab 20: Biochemistry	20	Available	Working condition	Fire Extinguisher, First Aid	Equipped with sufficient number of variety of glass ware, Calorimeter,



Preparation room:

Room Description	Facility available	Subjects	Type of work done
Preparation Room 2-A: Pharmaceutics	Room is equipped with chemicals, glassware, weighing balance, water supply, table chair,	Dispensing pharmacy	Preparation of reagents, solutions and samples
Preparation Room 3-A Pharmaceutical Chemistry	Room is equipped with chemicals, glassware, weighing balance, water supply, table chair,	Pharmaceutical chemistry and biochemistry, Analysis	Preparation of reagents, solutions and samples
Preparation Room 12-A Pharmaceutical Chemistry	Room is equipped with chemicals, glassware, weighing balance, water supply, chair, gas supply, distillation unit	Pharmaceutical chemistry and Analysis, Biopharmaceutics, physical pharmacy	Preparation of reagents, solutions and samples
Preparation Room 13-A Pharmacology	Room is equipped burner and smoker	Biopharmaceutics & Pharmacology	Buffer and drug sample preparation
Preparation Room: 17-A Industrial Pharmacy Lab	Room is equipped with chemicals, glassware, weighing balance, water supply	Industrial pharmacy	Preparation of solutions and samples
Preparation Room: 18-A Pharmacology /HAP	room is equipped with rack, water supply, table chair, weighing balance	Pharmacology,	Salt solution and drug sample preparation
Preparation Room: 20-A Biochemistry	room is equipped with rack, water supply, table chair, weighing balance	Biochemistry	Reagent, standard and test solution preparation

Weighing room:

Sl.No	Facility available	Subjects	Type of work done
1	Room equipped with 15 number of analytical balance, chair,	Pharmaceutical chemistry	Weighing and dispensing of samples
2	Room equipped with 20 number of analytical balance, chair,	Pharmaceutical chemistry	Weighing and dispensing of samples
3	Room equipped with 10 number of analytical balance, chair,	Medicinal chemistry	Weighing and dispensing of samples



List of Equipment In Machine Room							
Name of equipment	Number of equipments	Make	Model	Sop	Log book	Purpose	Remarks
Multi stage compression machine	1	Ridhipharma machinery ltd	RDD4 -"D"	available	Available	Tablet manufacturing	Working condition
Disintegration apparatus	1	Esico International	901	available	Available	Test disintegration time	Working condition
Rotek centrifuge	1	B &C industries	RCH-6	available	Available	Separation purpose	Working condition
Rotek hot plate	1	B &C industries	RHP-2-ER	available	Available	Heating	Working condition
Mechanical stirrer	1	KEMI	KLS-107-4-B	available	Available	Stirring	Working condition
Mechanical stirrer	2	KEMI	KLS-102-A	available	Available	Stirring	Working condition
Vacuum pump	1	High speed appliances-Mumbai	HSV-1	available	Available	Filtration and sucking	Working condition
Digital balance	1	Infra Digital Chennai	IN-200	available	Available	weighting	Working condition
Double cone blender	1	assembled/reburfurshied	NA	available	Available	Granulation	Working condition
Manual capsule filling machine	1	NA	NA	available	Available	Capsule filling	Working condition
Single punch tablet press	1	NA	NA	available	Available	Tablet compression	Working condition
Grinder	4	MAI	NA	available	Available	Size reduction	Working condition
Extractor	1	NA	NA	available	Available	Extraction	Working condition
Autoclave	1	NA	NA	available	Available	sterilization	Working condition
Collapsible tube filling machine	1	NA	NA	available	Available	Packing	Working condition
Liquid filling machine	1	NA	NA	available	Available	Packing	Working condition
All-purpose equipment with Coating pan, compressor, v cone blender, double cone blender, cube mixer, triple roller mill	1 Each	Orchid Scientifics	NA	available	Available	For solid oral preparation	Working condition



List of Instruments In Central Instrument Room							
Name of Instrument	No of instruments	Make	Model	SOP	Log book	Purpose	Remarks
UV Spectrophotometer	1	Shimadsu Japan	UV-1900	Available	Available	To measure the absorbance	Working condition
FTIR	1	Shimadsu Japan	IR affinity I	Available	Available	To take spectrum	Working condition
Electronic Balance	1	Shimadsu Japan	ATY 224	Available	Available	Weighing	Working condition
HPLC	1	Shimadsu	SHIMADSU-LC-20AD/SPD-20A	Available	Available	To separate mixture	Working condition
Analytical Balance	1	Citizen	CY-104	Available	Available	Weighing	Working condition
Flame photometer	1	Systronic s	128-151280	Available	Available	Quantify alkali metal	Working condition
Polarimeter	1	Sipcon optical industries	9711 sipcon	Available	Available	To determine the OR	Working condition
Digital potentiometer	1	Systronic	318	Available	Available	Titration	Working condition
pH meter	1	Systronic	MKVI	Available	Available	pH determination	Working condition
Refractometer	1	Sipcon instrument industries	Sipcon	Available	Available	Refractive index	Working condition
Magnetic stirrer	1	kadavil electro mechanical	KM6 450	Available	Available	stirring	Working condition
Conductivity meter	1	Systronic s	304	Available	Available	Titration	Working condition
Fluorimeter	1	Systronic S	152	Available	Available	Fluorescence	Working condition
Digital ultrasonic cleaner	1	Equitron	84-25E-025	Available	Available	Sonication	Working condition
Mechanical stirrer	1	Kemi	KLS 102	Available	Available	Stirring and particle size reduction	Working condition
Micro centrifuge	1	Trsons	cat-1010	Available	Available	Separation	Working condition
Calorimeter	1	Systronic s	112	Available	Available	Sample analysis	Working condition
Calorimeter	1	Systronic s	113	Available	Available	Sample analysis	Working condition
Digital nephelometer	2	Systronic s	132413 2	Available	Available	To determine the	Working condition



						concentration in PPM	
Electrophoresis horizontal	1	Adarsh	NA	Available	Available	Electrophoresis	Working condition

Availability of computing facility exclusively for the program:

The college has well equipped infrastructure in terms of hardware and software facilities to use ICT (Information and communication technology) solutions in pharmacy. The details of IT infrastructure are given as under:

Details of IT infrastructure:

Sl. No	Specifications	Available Numbers
1	Acer Desktop PC	31
2	ASUS Desktop PC	22
3	Desktop PC	7
4	LAPTOP	02
5	LCD Projector	12
6	Printer	06
7	Scanner	04
8	DVD Drive	04
9	UPS	17
10	Software	12
11	CCTV Camera	100

Virtual Lab/Language Lab

Sl No.	Item	Item Nos.	Specifications
1	Acer Desktop Computer	31 No	OS- Windows 10 Pro Processor- Intel Core i3 RAM- 4 GB HDD- 500 GB
2	UPS with Batteries	3 No	3000 VA 3 UPS with 3 batteries each (Total 9 batteries)

Library

Sl No.	Item	Item Nos.	Specifications
1	Desktop Computer	1 No	OS- Windows 10 Pro Processor- Intel Core i3 RAM- 4 GB HDD- 500 GB
2	Desktop Computer	1 No	OS- Windows 7 Pro Processor- Intel Pentium 3240 RAM- 4 GB HDD- 500 GB
3	UPS with 1 Battery	1 No	100 Ah Battery

Digital Library

Sl No.	Item	Item Nos.	Specifications
1	Desktop Computer	14 No	OS- Windows 10 Pro Processor- Intel Core i3 RAM- 4 GB HDD- 500 GB
2	UPS with 4 Batteries	1 No	100 Ah 4 Batteries

Placement Cell



Sl No.	Item	Item Nos.	Specifications
1	Asus Desktop Computer	1 No	OS- Windows 10 Pro Processor- Intel Pentium 3250 RAM- 2 GB HDD- 500 GB
2	UPS	1 No	12 V UPS

Examination Control Room

Sl No.	Item	Item Nos.	Specifications
1	HP Desktop Computer	1 No	OS- Windows 10 Pro Processor- Intel Core i3 RAM- 8 GB HDD- 500 GB
2	Asus Desktop Computer	1 No	OS- Windows 10 Pro Processor- Intel Pentium 3250 RAM- 6 GB HDD- 500 GB
3	Canon Laser Printer	1 No	LBP 6750
4	Toshiba Laser Printer Scanner + Printer + Copier + Fax	1 No	Multifunctional
5	UPS with 2 Batteries	2 No	100 Ah 4 Batteries

Office

Sl No.	Item	Item Nos.	Specifications
1	Asus Desktop Computer	3 No	OS- Windows 10 Pro Processor- Intel Core i3 RAM- 4 GB HDD- 500 GB
2	Desktop Computer	1 No	OS- Windows 7 Pro Processor- Intel Pentium 2020 RAM- 2 GB HDD- 500 GB
3	Toshiba Laser Printer Scanner + Printer + Copier + Fax	1 No	Multifunctional
4	UPS	4 No	12 V UPS

Principal Room

Sl No.	Item	Item Nos.	Specifications
1	Desktop Computer	1 No	OS- Windows 10 Pro Processor- Intel Core i3 RAM- 4 GB HDD- 500 GB
2	HP Laser Printer cum Scanner	1 No	Multifunctional Printer with colour Scanner
3	UPS	1 No	12 V UPS

Vice Principal Room



Sl No.	Item	Item Nos.	Specifications
1	Asus Desktop Computer	1 No	OS- Windows 10 Pro Processor- Intel Pentium 3250 RAM- 2 GB HDD- 500 GB
2	UPS	1 No	12 V UPS

IQAC

Sl No.	Item	Item Nos.	Specifications
1	Asus Desktop Computer	1 No	OS- Windows 10 Pro Processor- Intel Pentium 3250 RAM- 2 GB HDD- 500 GB
2	UPS	1 No	12 V UPS
3	Scanner	1 No	Colour Scanner
4	Canon Laser Printer	1 No	Canon LBP 2900B Laser Printer

Instrument Room

Sl No.	Item	Item Nos.	Specifications
1	Desktop Computer	1 No	OS- Windows 10 Pro Processor- Intel Core i3 RAM- 6 GB HDD- 500 GB
2	Desktop Computer	2 No	OS- Windows XP Processor- Intel Pentium 6600 RAM- 2 GB HDD- 500 GB
3	UPS	2 No	UPS with 2 and 4 Batteries each
4	Canon Laser Printer	1 No	LBP 2900 B Laser Printer

List of Projectors

Sl No	Location	Brand
1	I B.Pharm (Grond Floor)	Epson HDMI, USB, AUX, and VGA connectivity
2	II B.Pharm (Near Library)	Optoma HDMI, USB, AUX, and VGA connectivity
3	III B.Pharm (Near Auditorium)	Vivitec VGA only
4	IV B.Pharm (Near Seminar Hall)	Epson HDMI, USB, AUX, and VGA connectivity
5	I Pharm D	Optoma HDMI, USB, AUX, and VGA connectivity
6	II Pharm D	Epson HDMI, USB, AUX, and VGA connectivity
7	III Pharm D	Vivitec HDMI, USB, AUX, and VGA connectivity
8	IV Pharm D	BenQ HDMI, USB, AUX, and VGA connectivity
9	Seminar Hall	Epson HDMI, USB, AUX, and VGA connectivity



10	Auditorium	Epson HDMI, USB, AUX, and VGA connectivity
11	Conference Hall	Hitachi HDMI, USB, AUX, and VGA connectivity
12	Presentation Room	Vivitec VGA only
13	Interactive Board	BenQ



Internet provider:

BSNL, Asianet

No. of connections: 2 (OFC Connection and Portable Device)

Basic Software

WINDOWS, LINUX, MS Office. Adobe Acrobat Reader and Kaspersky Internet Security

Software for Instruments

IR Spectrophotometer, UV Spectrophotometer, HPLC, High Speed Centrifuge, Humidity chamber, Brookfield Viscometer, Digital Disintegration tester and Tablet Compression Machine

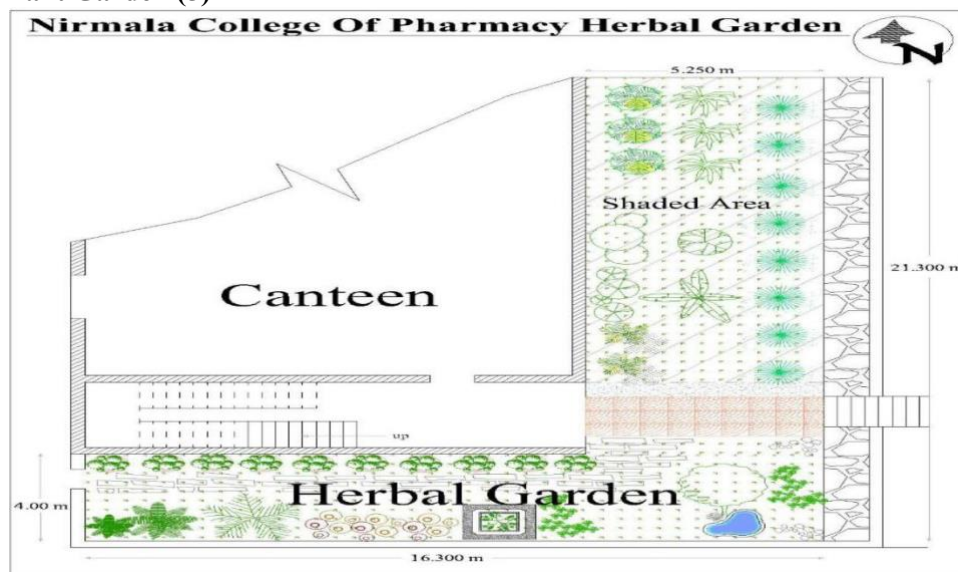
Pharmacy Software

Desihn Expert , SigmaPlot, Micromedex

Drug Museum

Name of the product and Description	
Natural drugs Cinnamon, Clove, Eucalyptus, Ginger, Cardamom, Dill, Bavchi, Ghokru, Asafoetida, Bees wax, Turmeric, Asparagus, Rhubarb, Kurchi, Nx vomica, Coriander, Vasaka, Isabgol, Senna, Rauwolfia, Black catechu, Valerian, Nutmeg, Myrobalan, Benzoin, Myrrh, Colophony, Fennel	
Description Natural drugs are the treasure for pharmaceutical formulation and they are used to evaluate the pharmacognostical, phytochemical and phytochemical studies.	
Anatomical models Ear, Male reproductive system, Female reproductive system, Kidney with bladder.	
Description They are useful to understand the shape structure and orientation of different body organs especially useful in anatomy and physiology lab.	
Dosage form Tablets , Soft gelatin capsules, Hard gelatin capsules, Creams, Ointments, Emulsions, Liniments, Suspensions, Cough syrups, Tonic, Inhalations, Powders, Granules	
Description All thee dosage forms are displayed on the model pharmacy which make awareness among the students about the physical nature, packing, mode of labelling.	
Cosmetics Nail lacquers, Creams, Lotions, Shampoos, Gels, Face wash and scrubs, Talcum powders and Sun screens	
Description All thee cosmetics are displayed on the model pharmacy which make awareness among the students about the various dosage forms available in cosmetics, its physical nature , packing, mode of labelling.	
Charts& Models	Various Charts and models of body physiology are displayed.
Atomic model set	Students are educated with 3 dimensional molecular structure of various drugs
Instruments 1. Water Distillation unit 2. Weighing Balance	Demonstration purpose
Apparatus 1. Distillation apparatus 2. Desiccator	Description Distillation apparatus is used in regular laboratory practice.
Industrial appliances 1. Filters 2. Thermal resisters	Description Provides practical knowledge about pharmaceutical engineering

Medicinal Plant Garden (5)



- The medicinal plant garden maintained in the prominent part of the campus having adequate sunlight with a total area of 132.10m².
- A permanent shade for 75.00m² area is maintained and 57.10 m² of open area also provided.
- All plants are provided with signage.
- Provided with a team of teaching staff and non-teaching staff for overall maintenance of garden

List of medicinal plants in botanical garden	
Total No. of plants	110
Monocot herbs	15
Dicot plants	
Herbs	30
Shrubs	18
Trees	27
Climber	13
Magnoliopsida	4
Grass	3



MONOCOT HERBS				
Sl no.	Biological source	Vernacular name	Family	Uses
1)	Acorus calamus	Vayambu	Acoraceae	Aromatic Anthelmintic
2)	Aerva lanata	Orakhbuti, Cherula	Amaranthaceae	For eye problems
3)	Aloe vera	Aloe (Eng), Kattarvazha (Mal) Ghrit kumari (Hin),	Liliaceae	Headache, Burns, Blackheads, Wart
4)	Alpinia calcarata	Chittaratha	Zingiberaceae	Gastroprotective, Astringent, Antifungal
5)	Asparagus racemosus	Shatavari,, Asparagus	Asparagaceae (liliaceae)	Urinary Stones And Dysurea
6)	Cheilocostus speciosus	Insulin plant, Keukand, Narum Canna	Zingiberaceae	Fever, Skin Diseases And Inflammation.
7)	Coleus aromaticus	Panikoorka, Indian Borage	Lamiaceae	Cough, Sore Throats, Infections
8)	Coleus rotundifolius	Chumakoorkka, Eru veli	Lamiaceae	Antidiarrhoeal, Cough, Sore Throats
9)	Curcuma longa	Turmeric Haldi, Manjal,	Zingiberaceae	Spice, Antiseptic, Anti-Inflammatory

10)	Curcuma amada	Manga inji	Zingibaraceaea	Spice Anticancer
11)	Cyperus rotundus	Muthanga, Nut Grass, Kavimuttan	Cyperaceae	Dysentery. Weakness and Giddiness
12)	Elettaria cardamomum	Elaykka	Zingibaraceaea	Spice, stomachic
13)	Gloriosa superba	Menthoni, Karthikapooovu	Colchicaceae	Antiulcer antileprotic
14)	Ricinus communis	Castor plant Avanakku	Euphorbiaceae	Relieves constipation
15)	Zingiber officinale	Inji	Zingibaraceaea	Spice , antiemetic
MONOCOT GRASS				
16)	Cynodon dactylon	Karuvapullu, Bermuda grass	Graminae	Improve digestion,Cures skin problems.
17)	Cymbopogon flexuosus	Lemon grass, Inchipullu, Gandhatrina.	Graminae /Poaceae	Antifungal, Antimicrobial Action.
18)	Vetiveria zizanioides	KhasKhasGrass, Ramaccham	Graminae /Poaceae	Ringworm treatment and loss of appetite.
DICOT HERBS				
19)	Amaranthus spinosus	mullancheera	Amaranthaceae	Diuretic, skin treatment
20)	Biophytum sensitivum	Mukkutti	Oxalidaceae	antibacterial, anti- inflammatory, antioxidant, antitumor
21)	Boerhavia diffusa	Punarnava, Thazhuthama	Nyctaginaceae	Anthelmintic,Purgat ive, Diuretic
22)	Centella asiatica	Kudangal,Vallaarai	Apiaceae	Fatigue, Anxiety, Depression
23)	Clitoria ternatea	SanguPushpam, Butterfly Pea	Fabaceae	Antidepressant, Antistress,Anxiolyti c
24)	Capsicum annuum	Mulaku	Solanaceae	Spice Stomachic
25)	Catharanthus roseus	Shavamnari	Apocynaceaea	Anticancer
26)	Drynaria quercifolia	Mathilpanna	Polypodiaceae	Laxative
27)	Datura metel	VeluthaUmmam ,Dhutra	Solanaceae	Antiasthmatic, Antispasmodic, Hypnotic
28)	Eclipta alba	kayyunyam	Asteraceae	Hair growth supplement
29)	Emilia sonchifolia	Tassel Flower, Muyalchevian	Compositae/ Asteraceae	Sorethroat,Diarrhea, Eczema,Antidote
30)	Indigofera tinctoria	Neelayamari	Fabaceae	Dye
31)	Leucas aspera	Thumba	Lamiaceae	Antifungal, antimicrobial
32)	Mussaenda frondosa	Vellila	Rubiaceae	Antiasthmatic anti- inflammatory
33)	Mimosa pudica	Thottavadi	Mimosaceae	Antioxidant antimicrobial
34)	Mirabilis jalapa	Nalumani chedi	Nyctaginaceaea	Diuretic, purgative
35)	Naregamia alata	Nilanarakam, Goaneselpecac	Meliaceae	Antipyretic,Emetic, Anti Asthmatic
36)	Oxalis corniculata	She-Patti, Poliyarala,Indian Sorrel	Oxalidaceae	Influenza,Fever,Spr ains,Diarrhea,UTI
37)	Ocimum americanum	Kattuthulasi	Lamiaceae	Cough, respiratory problems



38)	Piper longum	Long Pepper, Tippaliveru	Piperaceae	Asthma, Cough, Aphrodisiac
39)	Phyllanthus niruri	Jangiliamli, Keezharnelli	Euphorbiaceae	GenitoUrinary System, Liver, Kidney
40)	Plumbago zeylanica (white)	Ceylon Leadwort, Chatawar	Plumbaginaceae	Skin Problems, Carminative, Anti Aging
41)	Biophytum sensitivum	Better Stud, Mukkuti, Lajalu	Oxalidaceae	Inflammation, Arthritis, Wounds, Tumors .
42)	Saraca indica	Ashokam	Fabaceae	Uterine stimulant
43)	Sida rhombifolia	Kurunthotti	Malvaceae	Antiarthritic Antiasthmatic
44)	Scoparia dulcis	Kallurukki	Plantaginaceae	Antidiabetic Antihypertensive
45)	Tabernaemontana divaricata	nandhyarvattom	Apocynaceae	Febrifuge, analgesic
46)	Vernonia cinerea	Sahadevi, Purple Fleabane, Poovamkurunnal	Compositae	Febrifuge, Diaphoretic
47)	Coriandrum sativum	Malli	Umbelliferae	Spice
48)	Leucus aspera	Thumba, Gooma, Dumpy	Lamiaceae	Fragnance To Food.
49)	Vernonia cineria	Poovamkurunthala, Purple Fleabane	Asteraceae	Anti Diabetes, Analgesic
Dicot Shrubs				
50)	Adhatoda vasaca	Adosa, Adalodakam	Acanthaceae	Expectorant, Dysentery, Skin Diseases
51)	Bauhinia purpurea	Mantharam, Tapak, Kota	Fabaceae	Analgesic, Nutritive, Antibacterial
52)	Citrus limonis	Lemon, Cherunarakam	Rutaceae	Spice, In Cooking, Antioxidant
53)	Calotropis Gigantea (Linn)	Madara, Pellerukku, Madar	Asclepiadaceae	cough, cold and constipation.
54)	Desmodium gangeticum	Orilla, Sarivan, Pullati,	Leguminosae	Sedative, Fever, Inflammation Control
55)	Chromolaena odorata	Communist pacha	Asteraceae	Fungicidal Nematicidal
56)	Chrysanthemum	Jamanthi	Asteraceae	Antibacterial antihypertensive
57)	Colocasia esculenta	Chembu	Araceae	Stimulant Laxative
58)	Hibiscus rosa sinensis	Chemparrathi	Malvaceae	Hair growth anti solar agent
59)	Ixora coccinea L.	Cetti, Jungle Geranium, Rugmini	Rubiaceae	Anti Inflammatory, Antimicrobial
60)	Lawsonia innermis	Mehendi, Camphire, Mailanchi	Lythraceae	To Dye, Skin and Hair and Finger Nails
61)	Ocimum sanctum	Krishna tulasi	Labiatae	Cough, Asthma
62)	Ocimum kilimandscharium	Camphor Basil, Karppurattulasi	Labiatae	Mosquito Repellant
63)	Pseudarthria viscida	Moovilla	Fabaceae	Treatment of Asthma, Nervous disfunction.
64)	Plumbago rosea	Chethikoduveli, Cekkikotiveri, Scarlet Leadwort	Plumbaginaceae	Antiseptic, Antipyretic, Antibacterial
65)	Rauwolfia serpentine	Sarpagandhi	Apocynaceae	Antihypertensive

66)	Strobilanthes alternata/Hemigraphis colorata	Murivootti	Acanthaceae	Wound healing activity
67)	Strobilanthes heiniyanus	Karimkuringji	Acanthaceae	Rheumatism
68)	Tabernaemontana divaricata	Kuttampala, Karuduppalai,	Apocynaceae	Eye Disease, Ascaris and Cancer
69)	Thevetia nerifolia	Arali	Apocynaceae	Treat jaundice, fever and purgative
70)	Wrightia tinctoria	Dandhapala	Apocynaceae	Antidiarrhoeal Anthelmintic
DICOT TREE				
71)	Annona muricata	Mullatha, Soursop	Annonaceae	Anticancer
72)	Azadirachta indica	Ninb, Neem, Aryaveppu, Arulupati	Meliaceae	Anthelmintic, Antifungal, Antidiabetic,
73)	Caesalpinia sappan	Pathimukkam	Leguminosae	Water purifier
74)	Cassia fistula	Conna, goldenshower, acartti	Fabaceae	Constipation, Laxative
75)	Syzygium aromaticum	Grampus, Clove Pink, Kiraambu	Myrtaceae	Mosquito Repellent, Dental Plaque
76)	Coffea arabica	Kappi	Rubiaceae	Cns stimulant
77)	Cocus nucifera	Coconut tree	Arecaceae	Cosmetics, Skin disease
78)	Chrysophyllum cainito	Star apple	Spotaceae	Anti-inflammatory
79)	Clerodendrum paniculatum	Krishnakireedam	Verbenaceae	Purgative
80)	Cinnamomum cassia	Chinese Cinnamon, Karuvappatta	Lauraceae	Carminative, Mild Astringent, Stomachic
81)	Croton oblongifolius	Nagadanthi	Euphorbiaceae	Laxative, snake poisoning.
82)	Michelia champaca	Champakam	Magnoliaceae	Fragrant
83)	Mimusops elengi	Elengi	Sapotaceae	Astringent, Anthelmintic, Febrifuge.
84)	Murraya koenigii	Kariveppilei, Curry Leaves	Rutaceae	Anti-Periodic, Antiemetics, Blood Purifier
85)	Myristica fragrans	Nutmeg, Jatikkai, Jai phal, Jatikkai	Myristicaceae	Anti-Inflammatory, Diuretic, Lactagogue
86)	Morinda citrifolia	Noni	Rutaceae	Antiulcer, Anti-inflammatory
87)	Strychnos nux-vomica	Kanjiram, Nux Vomica, Amati	Loganiaceae	Atonic Dyspepsia
88)	Carica papaya	Papaya	Caricaceae	Source of Papain Antimalarial
89)	Pimento dioica	Sarvasugandhi	Myrtaceae	All spice
90)	Prunus dulcis	Badam	Rosaceae	Nutrient aphrodisiac
91)	Psidium guajava	Guava	Myrtaceae	Antidiabetic
92)	Phyllanthus emblica	Nellikka	Phyllanthaceae	Source of vit.c
93)	Syzygium samarangense	Champaykka	Myrtaceae	Nutrient
94)	Tamarindus indica	Vallan puli	Fabaceae	Antioxidant, Lower cholesterol
95)	Terminalia arjuna	Neermaruthu	Combretaceae	Cardiotonic, Anti-inflammatory.
96)	Mangifera indica	Mango tree	Anacardiaceae	Anti-inflammatory, Antioxidant



97)	<i>Garcinia mangostana</i>	Mangosteen	Clusiaceae	Antioxidant Antiinflammatory
98)	<i>Embellica officinalis</i>	Goosbery	Phyllanthaceae	
DICOT CLIMBER				
99)	<i>Hemidesmus indicus</i>	Naruneendi,Nannari , Kapuri	Asclepeae	Diuretic And Emetic, Anti- Inflammatory
100)	<i>Piper nigrum L.</i>	Black Pepper,KurumuLagu, Milagu	<i>Piper nigrum L.</i>	Aromatic , Stimulant ,Dyspepsia
101)	<i>Piper betle</i>	Vettila	Piperaceae	Antimicrobial
102)	<i>Cissus quadrangularis</i>	Veld Grape,Hadjora,Pirandai	Vitaceae	To heal broken bones
103)	<i>Hygrophila auriculata</i>	Vayalchulli	Acanthaceae	Diuretic
104)	<i>Jasminum officinale</i>	Mulla	Oleaceae	Fragrant
105)	<i>Bacopa monnieri</i>	Brahmi	Plantaginaceae	Antiepileptic antiasthmatic
106)	<i>Passiflora edulis</i>	Passion fruit	Passifloraceae	Nutrient, taste maker
107)	<i>Dioscorea alata</i>	Kachil	Dioscoreaceae	Diuretic, anthelmintic
108)	<i>Ipomoea muricata</i>	Nithyavazhuthana	Convolvulaceae	Nutrient
109)	<i>Cyclea peltata</i>	Padavalli	Menispermaceae	Anthelmintic
110)	<i>Rhynchosstilis retusa</i>	Annanthali	Orchidaceae	Antiasthmatic
111)	<i>Tinospora cordifolia</i>	Chittamruthu	Menispermaceae	Fever,skin diseases.
112)	<i>Bougainvillea spectabilis</i>	Kadalas poovu	Nyctaginaceae	Antidiarrheal
MAGNOLIOPSIDA HERB				
113)	<i>Justicia paniculata</i>	Kirayat, Nilavepp,GreenChirayta	Acanthaceae	Immunostimulant in HIV and URTI
114)	<i>Indigofera tinctoria</i>	Neela,Lita, Indigo,Neelam	Fabaceae	Febrifuge, anticephalalgic, antitumour,
115)	<i>Achyranthus aspera</i>	Kadaladi,Apang,Chaff Flower	Amaranthaceae	Treat depression and forms of anxiety.
116)	<i>Asparagus racemosus</i>	Shakakul,Shatavali, Asparagus	Asparagaceae	Urinary stones and dysurea

Overall look and maintenance of the medicinal plant garden

- The medicinal plant garden is demarcated with area of 156.02 sq. m
- The garden is well maintained, an individual staff with job card is on duty for the maintenance of garden.
- Removal of dead plants and debris (fallen leaves, litter), sufficient irrigation, weeding, pruning and fertilization is done time to time.
- Permanent irrigation facility is provided.
- Replanting is conducted whenever necessary
- Proper plant density maintained

