



**Yogi Divine Society inspired,
Sarvodaya Kelavani Samaj managed,
Shree Manibhai Virani and Smt. Navalben Virani Science College,
Rajkot**

(Affiliated to Saurashtra University, Rajkot)

Re-Accredited at 'A' Level by NAAC

STAR college Scheme & Status by MST-DBT

UGC- College with Potential for Excellence (CPE)

UGC-DDU KAUSHAL Kendra

GAAA – Highest Grade A-1 by KCG, Government of Gujarat

GPCB-Government of Gujarat approved Environment Audit Center

UGC-Autonomous College

DEPARTMENT OF BIOLOGY

Enclosure - III

**Department of Biology
Part III – SEC III Value Added Course
(For students admitted from 2016 – 2017 & onward)**

16UBLVA01	Aquarium Management Theory	40 hrs Duration	1 Credit
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Course Profile :

This course introduces the freshwater hobbyist to various aspects of successful aquaria management. Rather than being an entertainment guide, which extols the virtues of one or other approach to aquaria management, this course presents the basic principles, themes and steps needed to set-up and maintain

a freshwater aquarium. The course provides the key skills needed to set up and operate the aquarium business. This course also fulfill the requirements in order to maintain fish health, quality water chemistry and nutritional requirements, aquarium plants and ornamental plants. The practical section of the course, taught to built new aquarium house, on how to keep fish and aquatic animals as pets. which fish can live together and those that just don't get along. You will also learn how to look after them including health care and managing water quality.

Unit 1 : Aquarium Tank and setting **04**

- Types of tank
- Tank selection
- Tank setting and position
- Aquascaping

Unit 2 : Aquarium Fishes and plants. **06**

- Characters of Aquarium fishes
- Community Aquarium fishes

Unit 3 : Aquarium Plants **06**

- Introduction to Aquarium plants
- Importance of Aquarium plants
- Types of Aquarium plants
- Arrangement of Aquarium plants.

Unit 4 : Aquarium Equipments and fish food. **06**

- Common Aquarium equipments
- Fish feed and nutrition.

Unit 5 : Aquarium Fish Diseases. **06**

- Common aquarium diseases.
- Types of aquarium diseases.
- Cause, symptoms and cure of aquarium diseases.

Practicals : **16**

1. Study of different types of aquarium tanks.
2. Study to aquarium tank arrangement.
3. Aquarium tank setting.

4. Characteristics of Fish.
5. Study of common aquarium fishes.
6. Study of common aquarium plants.
7. Demonstration to fish feed.
8. Study of some aquarium diseases.

Department of Biology
Part III – SEC III Value Added Course
(For students admitted from 2016 – 2017 & onward)

16UBLVA01	Regional Medicinal plants and Herbal Remedies	40 hrs Duration	1 Credit
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Course Profile

The botanical wisdom accumulated by indigenous people has provided humankind with herbal drugs used in human healthcare for thousands of years. Although ancient texts and ceremonies indicate plants were used as medicine from the dawn of history, antibiotics and vaccinations developed in first half of the 20th century led conventional medicine to shun plant material for chemically synthesized replacements. Concerns about modern medicine and changes in life style and research during the past 20 years, however, have led to increased interest in using plants and plant extracts as medicine. In this course, we will focus on a series of plants used in remedial medicines to treat diseases and improve health. Medicinal plants as

remedy will be explored through class presentation and discussions, looking to the future of medicines from plants.

Unit I Ethnomedicine **03**

- Introduction of medicinal plants,
- history of traditional medicine.
- scope and feature of Ethnomedicinal plants

Unit II Traditional knowledge and utility **03**

- Traditional knowledge and utility of some medicinal plants in Gujarat
- Tribal medicinal plants of Gujarat.
- Methods of disease diagnosis and treatment.

Unit III Medicinal plants and remedies – I **06**

- Cardiovascular diseases and its remedy from medicinal plants.
- Respiratory diseases and its remedy from medicinal plants.
- Kidney stone - remedy from medicinal plants.

Unit IV Medicinal plants and remedies – II **06**

- Skin diseases and its remedy from medicinal plants.
- Asthma and Bronchitis and its remedy from medicinal plants.
- Urinogenital diseases and its remedy from medicinal plants.

Unit V Common Medicinal plants and remedies **04**

- Plants in day to day life.
- Nutritive and medicinal values of fruits and seeds.
- Nutritive and medicinal values of Vegetables.

Practicals : **18**

1. Field study for identification of Medicinal plants.
2. Identification and medicinal values of locally available medicinal plants for Cardiovascular diseases.

3. Identification and medicinal values of locally available medicinal plants for Respiratory diseases.
4. Identification and medicinal values of locally available medicinal plants for Kidney stone..
5. Identification and medicinal values of locally available medicinal plants for Skin diseases and Asthma.
6. Identification and medicinal values of locally available medicinal plants for Urinogenital diseases.
7. Nutritive and medicinal values of fruits and seeds.
8. Nutritive and medicinal values of Vegetables.
9. To prepares powder drug of locally available medicinal plants.

References:

1. Ethnobiology – R.K.Sinha & Shweta Sinha – 2001. Surabhe Publications – Jaipur.
2. Tribal medicine – D.C. Pal & S.K. Jain 1998, Naya Prakash, 206, Bidhan Sarani, Calcutta – 700 006.

Text Books:

1. Kumar, N.C. (1993). An Introduction to Medical botany and Pharmacognosy. Emkay Publications, New Delhi.
2. Rao, A.P. (1999). Herbs that heal. Diamond Pocket Books (P) Ltd., New Delhi.