

Department of Applied Science and Humanities

Invertis University, Bareilly

CIRCULAR

Value Added Course (Phytochemistry and Biological Activities of Medicinal Plants)

Students of BSc (PCM), BSc. (H) Chem. & MSc. (Chem.) are hereby informed that the Value Added Course (VAC) is scheduled from 16-10-18 in your respective classrooms at Academic Block – 1.

Schedule:

- Time Slot: 3 pm – 5 pm
- Key Speaker: Dr. Mohd. Majid
- Duration: 2 hours

Program Overview

The entire objective of this VAC is to develop an orientation regarding specialized course and setting up a comprehensive capacity for building the professional mechanism. The course is committed to produce highly professional human resource by providing them requisite training and education. The idea has been largely to provide perceptive thinking about the dynamics of the discipline for the students willing to join the industry. The curriculum has been carefully crafted to make the technical, theoretical and practical ends meet. With the testimonies and feedback the program developers have been able to evolve a new breed of professionals and set up new benchmarks for achieving newer heights in content development and course delivery.

Dr. Kamlesh Kumar Dubey

(Head of the Department)

Department of Applied Science and Humanities

Invertis University, Bareilly



Dean
Faculty of Science
Invertis University, Bareilly (U.P.)



Registrar
Invertis University
Bareilly



Head
Department of Applied Science
Invertis University, Bareilly (U.P.)

INVERTIS UNIVERSITY

DEPARTMENT OF APPLIED SCIENCES AND HUMANITIES

VALUE ADDED COURSE: Phytochemistry and Biological Activities of Medicinal Plants

Course Code: ASH04

Hours: 60

Course Objectives:

To learn about phytochemistry and biological activities of medicinal plants

Course Outline:

Unit 1:

- Extraction – purification of bio-active compounds from plants
- Cold & hot extraction
- Soxhlet extraction
- Crude extracts purification by various solvents.

Unit 2:

- Isolation of bioactive compounds
- Chromatographic techniques
- Thin layer chromatography
- Liquid chromatography
- HPLC and UPLC

Unit 3:

- Structural analysis of bioactive compounds
- IR spectroscopy
- Mass spectrometry
- NMR spectroscopy

Unit 4:

- Herbal medicine
- History of herbal medicine
- Different types of herbal
- Medicine – Ayurveda, Siddha and Unani – Pharmacological action
- Clinical research and traditional uses of Indian medicinal plants – *Eclipta Alba*, *Gymnema Sylvestre*, *Ocimum sanctum*, *Curcuma longa*.

Course Outcomes:

After the completion of the course the students will be able to

- 1) Understand the concepts of phytochemistry
And be able to appreciate the medicinal values of plants.
- 2) Know the various techniques involved in the phytochemistry
- 3) Familiarize the bio-active components present in the plants.



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**VALUE ADDED COURSE
(PHYTOCHEMISTRY AND
BIOLOGICAL ACTIVITIES OF
MEDICINAL PLANTS)**

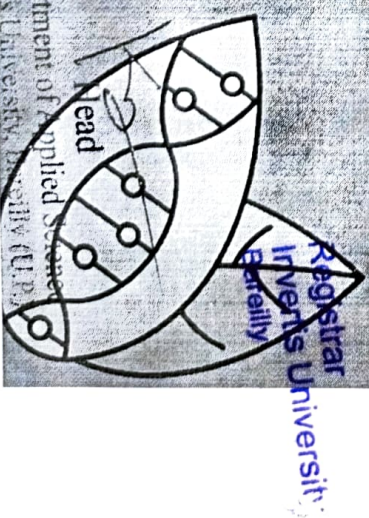
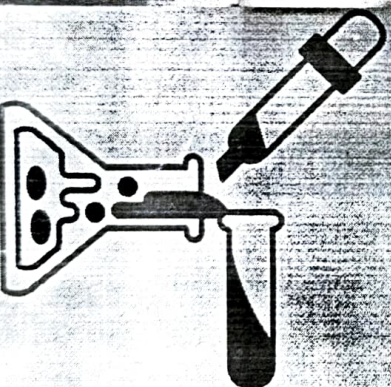
Programs: MSc Chem and BSc (PCM)

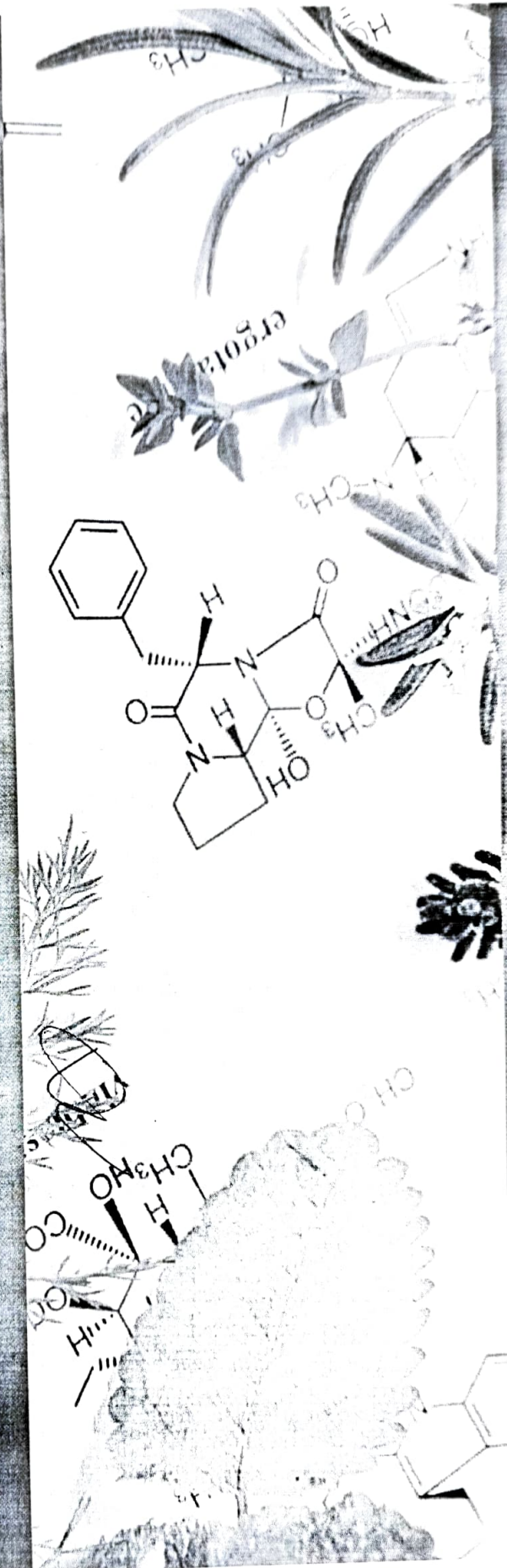
Time: 3:00 PM to 5:00 PM

Dates: October 2019 - December 2019

Course Coordinator: Dr. Mohd Majid

HOD: Dr. KK Dubey





Nature is a unique source of structures of high phytochemical diversity, many of them possessing interesting biological activities and medicinal properties. In the context of the worldwide spread of different diseases such as AIDS, chronic diseases and a variety of cancers, an intensive search for new lead compounds for the development of novel pharmacological therapeutics is extremely important. With the progress of molecular biology and pharmacology, it has become difficult to establish clear structure-activity relationships regarding the effects of

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