Yashoda Shikshan Prasarak Mandal's
Yashoda Technical Campus,
Faculty of Pharmacy Wadhe, NH-4, Satara – 41501

NAAC- B^+

Course outcomes

Name of the course: Pharmacognosy & Phytochemistry II [TH] **Course Code: BP504T**

Semester: V **Class: -Third Yr.B.Pharm**

After completion of course students will be able to

CO	Course Outcomes
BP504TCO1	Summarize metabolic pathways in higher plants and procedure for determination of metabolites.
BP504TCO2	Discuss in detail about secondary metabolites with their uses & commercial applications.
BP504TCO3	Explain the process of isolation, identification and analysis of phytoconstituents
BP504TCO4	Describe the industrial production, estimation and utilization of the phytoconstituents.
BP504TCO5	Describe basics of phytochemistry, modern methods of extraction, spectroscopy & chromatography.

CO-PO mapping

	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11
Code											
BP504TCO1	3	2	2	2	1	1	3	1	1	1	3
BP504TCO2	3	3	3	1	1	1	3	1	1	3	3
BP504TCO3	3	3	3	3	2	3	3	3	3	2	3
BP504TCO4	3	2	3	2	3	3	3	2	3	2	3
BP504TCO5	3	3	3	3	3	3	3	3	3	3	3
Average	3	2.6	2.8	2.2	2	2.2	3	2.2	2.2	2.6	3
Average Roundup	3	3	3	2	2	2	3	2	2	3	3

Correlation level 1, 2, 3 as defined below

1- Slight 2- Moderate 3 High

Course co-ordinator HOD Principal

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CO-PO mapping Justification

Name of the course: Pharmacognosy & Phytochemistry II [TH] Course Code: BP504T

Semester: V Class: Third.Yr.B.Pharm

CO No.	PO's Mapped	Level	Justification
BP504TCO1	**PO1**	**3**	Highly mapped as the students will acquire the detailed knowledge about metabolites formation in plants along with the pathway.
	PO2	**2**	Moderately mapped as planning abilities of students will be developed while studying,
	PO3	**2**	Moderately mapped as problem analysis abilities will be developed while determining the secondary metabolites.
	PO4	**2**	Moderately mapped as there is moderate use of modern tool usage while studying Secondary metabolite formation & determination like grafting, usage of radioactive isotopes.
	PO5	**1**	Slightly mapped as leadership skill can be least developed.
	PO6	**1**	Slightly mapped as use of secondary metabolites being reflects professional identity.
	PO7	**3**	Strongly mapped as ethics should be followed while studying different secondary metabolites formation & determination.
	PO8	**1**	Slightly mapped as students will develop communication skills through seminar, group discussion.
	PO9	**1**	Slightly mapped as role of secondary metabolites enhances of activity of drug will benefit society can be concealed by pharmacist.
	PO10	**1**	Slightly mapped as environmental sustainability can be slightly maintained with the use secondary metabolites.
	PO11	**3**	Strongly mapped as lifelong learning is highly achievable.
BP504TCO2	**PO1**	**3**	Strongly mapped as the students will acquire the detailed knowledge about metabolites formation in plants along with their uses, applications.
	PO2	**3**	Strongly mapped as planning is required for studying secondary metabolites formation.
	PO3	**3**	Strongly mapped as problem analysis abilities will be developed while studying different crude drugs contain secondary metabolites.
	PO4	**1**	Slightly mapped as there is moderate use of modern tool usage while studying application & uses phytoconstituents.
	PO5	**1**	Slightly mapped as leadership skill can be least developed while studying applications of secondary metabolites.
	PO6	**1**	Slightly mapped as applications of secondary metabolites being reflects professional identity.

	PO7	**3**	Strongly mapped as ethics should be followed while studying applications of different secondary metabolites
	PO8	**1**	Slightly mapped as students will develop communication skills through seminar, group discussion
	PO9	**1**	Slightly mapped as role of secondary metabolites enhances of activity of drug will benefit society can be concealed by pharmacist.
	PO10	**3**	Strongly mapped as environmental sustainability can be maintained with knowing need of secondary metabolites.
	PO11	**3**	Strongly mapped as lifelong learning is highly achievable.
BP504TCO3	**PO1**	**3**	Strongly mapped as students will acquire the detailed knowledge about isolation, identification of phytoconstituents.
	PO2	**3**	Strongly mapped as prior planning is essential for isolation of phytoconstituents, for confirming that constituent's identification tests are essential so making reagents planning is required.
	PO3	**3**	Strongly mapped as problem analysis abilities will be developed while isolating the phytoconstituents from crude drug , according to nature of drug
	PO4	**3**	Strongly mapped as there will usage of modern methods isolation, analysis of phytoconstituents from crude drugs.
	PO5	**2**	Moderately mapped as leadership skill will developed while discussing the different modern methods of isolation of phytoconstituents, solvent used & methods of analyzing the crude drugs.
	PO6	**3**	Strongly mapped as professional identity reflects by isolating the phytoconstituents from crude drug, according to nature of drug, analyzing & confirming drug by performing chemical test.
	PO7	**3**	Strongly mapped as ethics should be followed while isolating the phytoconstituents from crude drug confirming drug by performing chemical test.
	PO8	**2**	Moderately mapped as communication skills will through seminar, making discussion on different modern methods of isolation of phytoconstituents, solvent used & methods of analyzing the crude drugs.
	PO9	**3**	Strongly mapped as use of isolated & analyzed phytoconstituents in formulations benefit health of society & conseled by pharmacist.
	PO10	**2**	Moderately mapped as environmental sustainability can be maintained with analyzing phytoconstituents which benefit to improve quality & environment sustainability.
	PO11	**3**	Strongly mapped as lifelong learning is highly achievable.
BP504TCO4	**PO1**	**3**	Strongly mapped as students will gain the basic knowledge of industrial production, estimation and utilization of the phytoconstituents
	PO2	**2**	Moderately mapped as students will develop planning abilities as a planning is required for production, estimation and utilization of the phytoconstituents at industry.
	PO3	**3**	Strongly mapped as problem analysis abilities will be developed while industrially producing & estimating phytoconstituents.
	PO4	**2**	Moderately mapped as students will use modern method of producing & estimating the active constituents.

	PO5	**3**	Strongly mapped as leadership skill will developed while discussing & developing methods of production, estimation & uses of active constituents.
	PO6	**3**	Strongly mapped as industrial production, their estimation the utilization of active constituents reflects professional identity.
	PO7	**3**	Strongly mapped as ethics should be followed while producing, estimating the phytoconstituents of crude drugs.
	PO8	**2**	Moderately mapped as students will develop communication skills through seminar, group discussion regarding methods of production, how to estimate or utilize the particular phytoconstituents
	PO9	**3**	Strongly mapped as use of isolated & analyzed phytoconstituents in formulations benefit health of society & conseled by pharmacist
	PO10	**2**	Moderately mapped as estimation utilization on produced phytoconstituents will helpful in maintaining sustainability.
	PO11	**3**	Strongly mapped as lifelong learning is highly achievable.
BP504TCO5	**PO1**	**3**	Strongly mapped as students will gain the basic knowledge of drugs Phytochemistry, methods of extraction, spectroscopic methods chromatographic techniques.
	PO2	**3**	Strongly mapped as students will develop planning abilities as a planning is required for extracting phytoconstituents by using different solvents, for analyzing phytoconstituents by different chromatographic techniques.
	PO3	**3**	Strongly mapped as problem analysis abilities will be developed while studying different modern methods of extraction, different chromatographic techniques & Spectroscopic methods.
	PO4	**3**	Strongly mapped as Some modern methods will enhances extraction, spectroscopy & chromatographic techniques will help
	PO5	**3**	Strongly mapped as leadership skill will developed while discussing the different modern methods of extraction, different chromatographic techniques & their applications, advantages & disadvantages.
	PO6	**3**	Strongly mapped as modern methods of extraction, spectroscopy & chromatography reflects professional identity.
	PO7	**3**	Strongly mapped as ethics should be followed while studying applications, modern methods of extraction, spectroscopy & chromatography.
	PO8	**3**	Strongly mapped as students will develop communication skills through seminar, group discussion regarding modern methods of extraction, spectroscopy & chromatography.
	PO9	**3**	Strongly mapped as modern methods of extraction, spectroscopy & chromatography will improve quality of formulation
	PO10	**3**	Strongly mapped as, modern methods of extraction, spectroscopy & chromatography chromatographic techniques will helpful for qualitative & quantitative studies.
	PO11	**3**	Strongly mapped as lifelong learning is highly achievable.

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