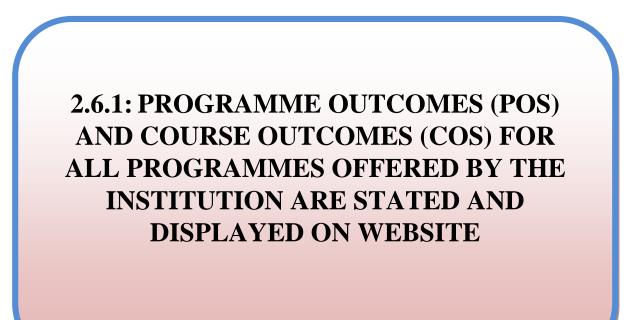


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A) Upload Additional information



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2.6.1: PROGRAMME OUTCOMES (POS) AND COURSE OUTCOMES (COS) FOR ALL PROGRAMMES OFFERED BY THE INSTITUTION ARE STATED AND DISPLAYED ON WEBSITE

Sr. No.	Name of the Document	Page Number (From-To)
Α	Upload Additional Information	3-100
1	Progammre outcomes and Course outcomes offered by Institution	3
2	Vision and Mission	4
3	Basics of CO and PO	5
4	Programme outcomes	6-7
5	M Pharm Course outcomes, Programme outcmoes and Programme Specific Outcomes for last five years	8-37
6	B Pharm Course outcomes, Programme outcomes and	38-100
	Programme Specific for last five years	

LIST OF DOCUMENTS



A/P Sudumbare, Talegaon –Chakan Road, Tal:Maval, Dist: Pune -412109 Phone : 02114-661947, ,Email: <u>siddhantcollegeofpharmacy@yahoo.in,Website</u>: <u>www.siddhantcop.in</u>

2.6.1 Programme outcomes (POs) and Course outcomes (COs) for all Programmes offered by the institution are stated and displayed on website.

Response:

The institution follows the curriculum designed by the Savitribai Phule Pune University which is affiliating university. The curriculum has well defined Programme Outcomes (POs), Program Specific Outcomes (PSOs) and Course Outcomes (COs) for Under graduate (B Pharm.) and Post graduate (M Pharm.) programs. Subjects are allotted by Academic in charge, HOD and Principal of the institution. Subject's orientation session is held for the staff at college level prior to commencement of academic term wherein the academic committee evaluates the academic presentation given by the respective staff member. The course file is prepared by staff member who highlights the CO's and PO's. All Course outcomes of each subject and Programme outcomes are mapped with each other by respective faculty. The stakeholders are exposed to PO's, CO's and PSO's through orientation programme held at the commencement of every academic year for Under graduate (B Pharm.) and Post graduate (M Pharm.) programs. The prospectus and website also showcases the vision and mission of the institution.

Effective pedagogical techniques facilitates the faculty to articulate the learning outcomes. The lesson plan maps the learning outcomes and the students are made aware of the same prior to and upon completion of each topic. The students acceptance of topic is more when they are abreast with the learning outcome thereby facilitating them to perform well. Staff have taken part in syllabus framing and orientation workshops wherein they have contributed to upgradation of syllabi and incorporation of CO's, PO's and PSO's



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Vision:

Siddhant College of Pharmacy will lead the way toward effective global health care by developing innovative teaching practices, advancing research, practice and merging true entrepreneurial spirit with care and compassion

Mission:

- Siddhant College of Pharmacy fosters a learning-centered, researchoriented educational environment that encourages individuals to make positive lifelong contributions to global health.
- We prepare professional students to provide compassionate pharmacist to society.
- We inspire our students through innovative problem-based learning; rich experiential program, and inter- professional collaboration.
- We foster a community of scholars who will further the body of knowledge in pharmaceutical, biomedical, and clinical sciences.
- > We strive to improve quality of life locally, nationally, and globally



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DEFINITIONS

Sr. No.	Definition
1	COURSE OUTCOME They are the resultant knowledge skills the student acquires at the end of a course. It defines the cognitive processes a course provides.
2	PROGRAM OUTCOME Program outcomes describe what students are expected to know and would be able to do by the time of graduation. These relate to the skills, knowledge, and behaviours that students acquire as they progress through the program.
3	PROGRAM EDUCATIONAL OBJECTIVES Program educational objectives are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve.
4	PROGRAM SPECIFIC OUTCOMES Program Specific Outcomes are statements that describe what the Pharmacy graduates should be able to do.

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Programme Outcomes

PO1	Pharmacy Knowledge: Possess knowledge and comprehension of the core and basic associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.
PO2	Planning Abilities: Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.
PO3	Problem analysis: Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.
PO4	Modern tool usage: Learn, select, and apply appropriate methods and procedures resources, and modern pharmacy-related computing tools with an understanding of the limitations.
PO5	Leadership skills: Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and well-being.
PO6	Professional Identity: Understand, analyze and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).
PO7	Pharmaceutical Ethics: Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.
PO8	Communication: Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.
PO9	The Pharmacist and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice.



Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109.

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PO10	and for sustainable development.				
PO11	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing basis.				



C

Principal Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval Dist.-Pune 412103.



CAYM Education Trusts Siddhant College of Pharmacy A/P Sudumbare, Talegaon – Chakan Road, Tal: Maval, Dist: Pune -412109

Academic Year 2022-23

Course Outcomes

M Pharm.: Pharmaceutical Quality Assurance

Sr.	Name of the	Name of the	Course Outcome
<u>No.</u> 1		Program Course M Pharm Modern Pharmaceutical Analytical Techniques Techniques	 Develops clear insight about theoretical and practical skills of the instruments used in pharmaceutical industry The students will understand principle and instrumentation
2		Quality Management System	 The student will understand the quality parameters and quality attribute in Pharmaceutical industry sectors By studying and practicing the guidelines iso, NABL and other regulatory agencies student will predicts the current need of changes. It provide the idea in the customers expectations in the quality pharmaceutical product. student will know the importance of the quality of medicines in the public. The subject will afford methodology in the regulatory body requirements for the import and export pharmaceutical products. Student shall be able to understand the
3		Quality control and Quality Assurance	 cGMP aspects in a pharmaceutical industry Student shall be able to understand the importance of documentation Student shall be able to understand the scope of quality certifications applicable to Pharmaceutical industries Student shall be able to understand the responsibilities of QA department Student shall be able to understand the full be able to understand the student shall be able to understand the scope of QA department
	6.0)	SEAL COLORING	Principal Siddhant College of I Sudumbare. Teth DistPune 412

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	these Trants of Pringermany and, Cale of a 1 (2) Pringer out of the	a make	A	responsibilities of QC department Student shall be able to understand GLP and regulatory Affairs	A STATE OF
4	Product development and Technology Transfer	163	*	To apply the knowledge to develop new procedures of their own design of Pilot layouts	
	300.02)	10.2	*	Student shall be able to understand the Quality by design practices of sterile and non sterile dosage forms	
	cheres a los a might altron Germania	Los Los	A A	Student shall be understand the Regulatory requirements in drug development stages Students shall understand the phase of	
5	Hazards and	Part of		technology transfer	
	Safety Management	uni.	A	To understand the energy resources in the to make eco-friendly industry	
	stone of wall the set and the	sit i	A	environment The course knowledge of the state	
	and in Pharmatican and man (c)	nap hone		The course knowledge useful to Find hazards in work atmosphere	
		1.4	>	It creates the passage to understand,	
	to dving and provide the	Ev :		Determine and to take control measures to	
	simes (a), NATH and over	ATTE		eliminate or minimize the level of the	
	The traduite as dance grant	ician.		risks	
	ing and the bean transmostly and	presid	4	It support the student to recognize the	
	a pie the mean much wet	Mag N		control measures to eliminate or minimize	
	stan on the quality	oriza		the level of the risks	
	Juilton j. Inclinensm	mig	A	It provides platform for formal process	
	The successful sold would live the	-SI did		for hazard identification, risk assessment	
	using or moduring to the	die		and control to effectively manage workplace and safety hazards	
	or ward in the line bandles like topic	Send.	A		
	the second secon	part	-	It develop proper understanding in the stages of risk assessment	
6	Pharmaceutical		A	The Students learn on the importance of	-
	Validation	121-121		validation.	
	can shall be at he is to do a set the	1-127	>	The student learns on the importance of	
	Sectore constraint parate en active S	21-12		patent and intellectual property rights.	
		abou	A	The students are trained on the	
	all the second a stille of Herton	100		qualification aspects of instruments.	
	a strains a course	Simi	A	The importance of calibration to be	
	mile a cost adapte of such and there are	1 10		performed for the instruments.	
	allowed a strange of the low	The .	A	The various validation aspects to be	
	Martin Bernetter	11 10		carried out in the industry.	
	and the same of a star of the set	ALC K	>	The students gain knowledge on how	
	a mart of 189 m al ale	-		validation are carried for various	
				components. Such as instrument	
	in Trust's Sig	1		validation, cleaning validation and	
	Trust's Sigman Co			L'and L'AND	
	a une une Co			Principal	
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	a businece.			Sudumbare, TalMaval, DistPune 412109.	Ł
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	KC PLANOD		process validation
7	Audit and	4/12	The student gain knowledge on the
	Regulatory		importance of auditing in pharmaceutical
	Compliance		preparation.
	11.0	×	The various forms of auditing are and how an audit process happens are briefed
-			to the students.
Long the second states adapted	Developer element	*	Preparation of various audit checklist for the auditing.
Notes 1	in undurantic to		when and what are the areas the auditing
	and a second second	*	to be carried is taught to the student.
and some should	regulation		
	and the second second	×	
a state to the state of the	in the second second		process is taught to the student.
	Devinion Plant	>	The student practices the auditing process and reporting process
8	Pharmaceutical	>	Student shall be able to understand the
	Manufacturing Technology		common practice in the pharmaceutical industry developments
		*	Student shall be able to understand the practices of aseptic process technology
		×	Student shall be able to understand the
	in all a long		practices of non-sterile manufacturing
	The month server		technology
	starting much		Student shall be able to understand the
		-	practices of packaging technology
in with the allese many	Desident in		· Division - Conditioners
a protest manarely 0 &	De réspondent	>	Student shall be able to understand
- mail inter	and the state of the state of the		understanding of principles and implementation of Quality by design
Security in the opposite of the	some to alles's and a		(QbD)

Programme Specific outcomes (PSOs)

- 1. To Understand the applications of Quality assurance and Quality control throughout product life cycle.
- 2. To Analyze the Application Based Importance of Emerging Quality Building Concepts in Product Manufacturing.
- 3. To Perform Procedures like Method Validation, Process Validation, Equipment /Facilities/Utilities
- 4. Validation, Documents and Records Designing as per the Regulatory Standards Leading to compliance of cGMP.
- 5. To Understand the Regulatory requirements of Pharmaceuticals.



Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109.

COURSE OUTCOME (CO) M.PHARM(PHARMACEUTICS)

S.no	Name of the program	Name of the course	Course outcome
1	tell crede altra	Modern Pharmaceutical Analytical Techniques	Develops clear insight about theoretical and practical skills of the instruments used in pharmaceutical industry.
2	the states.	Drug Delivery system	Categorizes new drug delivery systems and formulations.
3	and the second	Modern Pharmaceutics	Establishes process of development of ethical and quality considerations of medical devices.
4	M.Pharm	Regulatory Affairs	Develops Pharmacovigilence and process of monitoring in clinical trials
5	to provide the second s	Molecular Pharmaceutics (NanoTech and Targeted DDS)	Establishes knowledge of Novel drug delivery systems.
6	formersion a	Advanced Biopharmaceutics and pharmacokinetics	Develops the student for designing and evaluation of dosage regimens of the drugs using pharmacokinetic and biopharmaceutic parameters.
7	abrahagy A ka undonen	Computer Aided drug delivery System	Develops Computer skills for Preclinical Development and Optimization Techniques in Pharmaceutical Formulation.
8	na na ma	Cosmetics and Cosmeceuticals	Establishes skills of new combinations and formulations.

Program Specific Outcome (PSO)

M. Pharm(Pharmaceutics)

- Locates on patients and products, accordingly the curriculum has been framed. The theoretical concepts are specifically taught in theory and further the concepts are strengthened and measured during practical's.
- Develops knowledge regarding dosage forms, drug delivery systems, biopharmaceutics and pharmacokinetic study, computer aided drug development during the program and to understand dosage form design, optimization, *in-vitro* parameters and relevant techniques for drug development.
- Describes research methodology, key aspects in research and scientific writing to present the research work.

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 Establishes knowledge regarding newer technology and skills in technology development and achieve maximum output.

Program Outcome (PO)

M. Pharm(Pharmaceutics) and M Pharm.: Pharmaceutical Quality Assurance

-

PO1: Pharmaceutical Knowledge:- Students achieve a deep knowledge regarding human body, its related diseases, analytical skills, drug molecules (Active Pharmaceutical Ingredients) along with excipients, natural drug resources, chemistry involved in API including synthesis of commonly used drugs, effect of drug on human body, toxicity and impurity profile, ADME studies of drugs (behavior of drug in human body), dosage form studies including novel approaches, designing and development of formulation stability studies, analysis etc

PO2: Research Analysis: Develops knowledge in research field to make new relevant discoveries and to identify new entities.

PO3: Design & Development of dosage forms: Describes preparation of various dosage forms that could be prepared by the pharmacy students in the pharmaceutical companies for the ease of patients and to optimize formulations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.

PO5: Modern methods usage: Create, select, and apply appropriate techniques, resources and modern methods with an understanding of the limitations and its usage. The student also learns to handle many instruments related to their studies which would help them work in a Pharmaceutical Industry, pharmacovigilance, regulatory requirements, legal processes etc.

PO6: Pharmacy and society: Pharmacist provide complete health care data and practices to the people of the society and guide them to be healthy. The student also learns drug distribution system, patient counseling, industrial laws etc. Students achieve expertise in storage and distribution of drugs with all precautions and in-depth knowledge of dose, adverse effect and other health related issues to deal with ambulatory and IPD patients in hospitals and also in public and achieve responsibility of computing profession and society.

PO7: Environment and sustainability: Locate the impact of the professional pharmacist in



Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412100 society and environment and make an impact of it on the people of the society.

PO8: Ethics: Justify & apply ethical principle and commit to professional ethics and responsibilities and norms of the pharmacy practice. Student is also trained in ethical behavior with physician, nurses and other paramedical staff for protecting patient's health.

PO9: Individual and team work: Function effectively as an individual and as a member or leader in diverse teams acts as a multidisciplinary person in every context. Students will be able to demonstrate rigorous and independent thinking and encourage participatory decision making in teams.

PO10: Communication: Develops Communication effectively on pharmaceutical activities with the community and with society.

PO11: Life-long learning: Recognize the need and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change and implement those technology by gaining experience.



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Academic Year 2021-22

Course Outcomes

M Pharm.: Pharmaceutical Quality Assurance

Sr.	Name of the	Name of the	Cour	se Outcome
<u>No.</u> 1	Program M Pharm	Course Modern Pharmaceutical Analytical Techniques	A	and practical skills of the instruments used in pharmaceutical industry
	atender elimente	and the second	tal .	
2	ine mailed to brief	Quality Management System		The student will understand the quality parameters and quality attribute in Pharmaceutical industry sectors
	di enanciada lunionas alte in charal cultura	ninate entra des ninate entra de co		By studying and practicing the guidelines iso, NABL and other regulatory agencies student will
	a la anguta su la la	toppone un material and m en material level e fait	*	predicts the current need of changes. It provide the idea in the customers expectations in the quality
	And and a start of the start of	in dennis particular in dennis barra d instanta	*	pharmaceutical product. student will know the importance of the quality of medicines in the public.
	and a second second	lan en en pols in seux den la op	*	The subject will afford methodology in the regulatory body requirements for the
		Atostalo	Def.	import and export pharmaceutical products
3	and attacked	Quality control and Quality Assurance	A	Student shall be able to understand the cGMP aspects in a pharmaceutical industry
	all all and all all all all all all all all all al	i energio evalua a ole Se conterentino a	14.1 1	Student shall be able to understand the importance of documentation
		le de la	*	Student shall be able to understand the scope of quality certifications applicable to Pharmaceutical industries
		and another a	*	Student shall be able to understand the responsibilities of QA department
		and the second se	Siddha	Student shall be able to understand the

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Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109.

		*	responsibilities of QC department Student shall be able to understand GLP and regulatory Affairs
4	Product	*	To apply the knowledge to develop new
	development and Technology Transfer	*	procedures of their own design of Pilot layouts Student shall be able to understand the Quality by design practices of sterile and non sterile dosage forms
		~ ~	Student shall be understand the Regulatory requirements in drug development stages Students shall understand the phase of technology transfer To understand the energy resources in the
5	Hazards and Safety Management		to make eco-friendly industry environment
			hazards in work atmosphere It creates the passage to understand, Determine and to take control measures to eliminate or minimize the level of the
		,	risks It support the student to recognize the control measures to eliminate or minimize the level of the risks
	an and a second and a second and a second and a second a second a second a second second a second a second second a second a second second a second		for hazard identification, risk assessment and control to effectively manage workplace and safety hazards
			 It develop proper understanding in the stages of risk assessment
	Pharmaceutical Validation		 The Students learn on the importance of validation.
-	1000 - 1000 Ball	3	The student learns on the importance of patent and intellectual property rights.
-	a construction of the second		 The students are trained on the qualification aspects of instruments. The importance of calibration to be
-			 The importance of calibration to be performed for the instruments. The various validation aspects to be
			carried out in the industry.
13	Buhant College		 The students gain knowledge on how validation are carried for various components. Such as instrument validation, cleaning variation and

	Lieby How	DER.	process validation
	Audit and Regulatory Compliance	* *	The student gain knowledge on the importance of auditing in pharmaceutical preparation. The various forms of auditing are and how an audit process happens are briefed to the students.
the second second star			Preparation of various audit checklist for the auditing. when and what are the areas the auditing
a look from the second of the		14 T	to be carried is taught to the student. The Reporting form of the auditing process is taught to the student. The student practices the auditing process
a set a second the	Participation of the second second	4	and reporting process
8	Pharmaceutical Manufacturing Technology	A A A	Student shall be able to understand the common practice in the pharmaceutical industry developments Student shall be able to understand the practices of aseptic process technology Student shall be able to understand the
the part of the	tahos adv golars	1	practices of non-sterile manufacturing
	alitario aurolo da arriacolitacia ale bacanego i	>	technology Student shall be able to understand the practices of packaging technology
	terration anexas para fi har region incontra ana a abaita office a	>	Student shall be able to understand understanding of principles and implementation of Quality by design (QbD)

Programme Specific outcomes (PSOs)

- 1. To Understand the applications of Quality assurance and Quality control throughout product life cycle.
- 2. To Analyze the Application Based Importance of Emerging Quality Building Concepts in Product Manufacturing.
- 3. To Perform Procedures like Method Validation, Process Validation, Equipment /Facilities/Utilities
- 4. Validation, Documents and Records Designing as per the Regulatory Standards Leading to compliance of cGMP.
- 5. To Understand the Regulatory requirements of Pharmaceuticals.



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<u>COURSE OUTCOME (CO)</u> <u>M.PHARM(PHARMACEUTICS)</u>

S.no	Name of the program	Name of the course	Course outcome
1	a seatore a	Modern Pharmaceutical Analytical Techniques	Develops clear insight about theoretical and practical skills of the instruments used in pharmaceutical industry.
2	Annual Contractor	Drug Delivery system	Categorizes new drug delivery systems and formulations.
3		Modern Pharmaceutics	Establishes process of development of ethical and quality considerations of medical devices.
4	M.Pharm	Regulatory Affairs	Develops Pharmacovigilence and process of monitoring in clinical trials
5	Contractional of	Molecular Pharmaceutics (NanoTech and Targeted DDS)	Establishes knowledge of Novel drug delivery systems.
6	intrainter I battenhei	Advanced Biopharmaceutics and pharmacokinetics	Develops the student for designing and evaluation of dosage regimens of the drugs using pharmacokinetic and biopharmaceutic parameters.
7		Computer Aided drug delivery System	Develops Computer skills for Preclinical Development and Optimization Techniques in Pharmaceutical Formulation.
8		Cosmetics and Cosmeceuticals	Establishes skills of new combinations and formulations.

Program Specific Outcome (PSO)

M. Pharm(Pharmaceutics)

- Locates on patients and products, accordingly the curriculum has been framed. The theoretical concepts are specifically taught in theory and further the concepts are strengthened and measured during practical's.
- Develops knowledge regarding dosage forms, drug delivery systems, biopharmaceutics and pharmacokinetic study, computer aided drug development during the program and to understand dosage form design, optimization, *in-vitro* parameters and relevant techniques for drug development.
- Describes research methodology, key aspects in research and scientific writing to present the research work.

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• Establishes knowledge regarding newer technology and skills in technology development and achieve maximum output.

Program Outcome (PO)

M. Pharm(Pharmaceutics) and M Pharm.: Pharmaceutical Quality Assurance

PO1: Pharmaceutical Knowledge:- Students achieve a deep knowledge regarding human body, its related diseases, analytical skills, drug molecules (Active Pharmaceutical Ingredients) along with excipients, natural drug resources, chemistry involved in API including synthesis of commonly used drugs, effect of drug on human body, toxicity and impurity profile, ADME studies of drugs (behavior of drug in human body), dosage form studies including novel approaches, designing and development of formulation stability studies, analysis etc

PO2: Research Analysis: Develops knowledge in research field to make new relevant discoveries and to identify new entities.

PO3: Design & Development of dosage forms: Describes preparation of various dosage forms that could be prepared by the pharmacy students in the pharmaceutical companies for the ease of patients and to optimize formulations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.

PO5: Modern methods usage: Create, select, and apply appropriate techniques, resources and modern methods with an understanding of the limitations and its usage. The student also learns to handle many instruments related to their studies which would help them work in a Pharmaceutical Industry, pharmacovigilance, regulatory requirements, legal processes etc.

PO6: Pharmacy and society: Pharmacist provide complete health care data and practices to the people of the society and guide them to be healthy. The student also learns drug distribution system, patient counseling, industrial laws etc. Students achieve expertise in storage and distribution of drugs with all precautions and in-depth knowledge of dose, adverse effect and other health related issues to deal with ambulatory and IPD patients in hospitals and also in public and achieve responsibility of computing profession and society.

PO7: Environment and sustainability: Locate the impact of the professional pharmacist in



Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109. society and environment and make an impact of it on the people of the society.

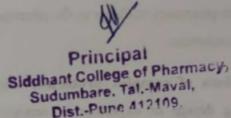
PO8: Ethics: Justify & apply ethical principle and commit to professional ethics and responsibilities and norms of the pharmacy practice. Student is also trained in ethical behavior with physician, nurses and other paramedical staff for protecting patient's health.

PO9: Individual and team work: Function effectively as an individual and as a member or leader in diverse teams acts as a multidisciplinary person in every context. Students will be able to demonstrate rigorous and independent thinking and encourage participatory decision making in teams.

PO10: Communication: Develops Communication effectively on pharmaceutical activities with the community and with society.

PO11: Life-long learning: Recognize the need and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change and implement those technology by gaining experience.







CAYM Education Trusts Siddhant College of Pharmacy A/P Sudumbare, Talegaon – Chakan Road, Tal: Maval, Dist: Pune -412109

Academic Year 2020-21

Course Outcomes

M Pharm.: Pharmaceutical Quality Assurance

Sr.	Name of the	Name of the	Course Outcome
No.	Program	Course	
1	M Pharm	Modern Pharmaceutical Analytical Techniques	 Develops clear insight about theoretical and practical skills of the instruments used in pharmaceutical industry The students will understand principle and instrumentation
2		Quality	> The student will understand the
1 20	dige unities to the spikety augus to colonica	Management System	quality parameters and quality attribute in Pharmaceutical industry sectors
	in man le mano s	the on Late and cat	 By studying and practicing the
	the losses will re-	andres of mining built and mining	guidelines iso, NABL and other regulatory agencies student will
	Here share we many	ot enuerous longe	predicts the current need of changes.It provide the idea in the customers
		alar site to Israels	 It provide the idea in the customers expectations in the quality
	E mant prod	monthly shares	pharmaceutical product.
	Sizer and Prin 1995	the thread the way	 student will know the importance of
	and state and	of Longers he	the quality of medicines in the
	alterna A	tiste are not place	public.
	and the property of the	the section of the section of the	> The subject will afford methodology in
	No.	The same part in the	the regulatory body requirements for
	a commentaria and to	and the second s	the
3	the moon sol	Quality control	import and export pharmaceutical products.
2	in the set of the set	Quality control and Quality Assurance	 Student shall be able to understand the cGMP aspects in a pharmaceutical industry
	and the second s	and an in Channe and	Student shall be able to understand the
1.1		a part the well have rely	 importance of documentation Student shall be able to understand the
	de la comparte	Patrician wellinging to	scope of quality certifications applicable
		and the state of t	to Pharmaceutical industries
1	and the second	the state of	Student shall be able to understand the
10.0	100.00 -00 0-0-0	CAYN	responsibilities of QA department
	and the second s	Line and Editor	> Student shall be able to understand the
	Den nort	Contraction of the state of the	Y
	11 - 10 0 palo - 1	alega al Strange	Principal
14	DANTER ANT ANE DE THE	THAT THE THE THE THE THE THE THE THE THE TH	Siddhant College of Pharm Sudumbare. TalMaval,

	responsibilities of QC department
	 Student shall be able to understand GLP
The stand that the second	
4 D. 1.	and regulatory Affairs
4 Produc	i i i i i i i i i i i i i i i i i i i
developm and Techno	lasu procession of them of the o
Transfe	r
Tunore	Student shall be able to understand the
	Quality by design practices of sterile and
	 non sterile dosage forms Student shall be understand the Regulatory
	 Student shall be understand the Regulatory requirements in drug development stages
of Research Strategy (1998) and the off Concession	 Students shall understand the phase of
war to an inclusion in the	technology transfer
5 Hazards a	
Safety	To another and one by resources in the
Managem	inductor coo intendity industry
and Department Privat Mark Strends	environment
We have a sublimities of	> The course knowledge useful to Find
and the second statement of	hazards in work atmosphere
	> It creates the passage to understand,
And the best count of the	Determine and to take control measures to
the said bet the state of and	eliminate or minimize the level of the
the second of an	risks
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de the idea is the contents	
setting with a set	
the box sales	> It provides platform for formal process
the morning of a state of the second state	for hazard identification, risk assessment
"ty or reaching the own the	and control to effectively manage
	workplace and safety hazards
a ministration broken by the	 It develop proper understanding in the
in an and the second se	stages of risk assesment
6 Pharmaceu	The Difference real of the importance of
Validatio	validation.
which the state of the second state of a spire	> The student learns on the importance of
and summing the damage	patent and intellectual property rights.
	> The students are trained on the
with former unitarie in white half transfer	qualification aspects of instruments.
and distant and you be and	> The importance of calibration to be
with a survey of the set there	performed for the instruments.
A Manufacture and the same and the	> The various validation aspects to be
and a lo grap	carried out in the industry.
at the second state of the	> The students gain knowledge on how
and a line of the second se	validation are carried for various
i some collage	components. Such as in instrument
SEADDRed 0	validation, cleaning valuation and
1 5 5000 6270	and the second s
Principal	Principal Siddhant College of Pharm
CAYMEN STORMAN CONEGE O	Sudumbare. TalMaval,
A could be a	DistPune 412109.

	DALE ACOL	process validation
7	Audit and Regulatory Compliance	 The student gain knowledge on the importance of auditing in pharmaceutical preparation. The various forms of auditing are and how an audit process happens are briefed
	an and operations of the second operation of the second operation operation and the second operation opera	 to the students. Preparation of various audit checklist for the auditing. when and what are the areas the auditing to be carried is taught to the student. The Reporting form of the auditing process is taught to the student. The student practices the auditing process
and the publication	connunts involutional	and reporting process
8	Pharmaceutical Manufacturing Technology	 Student shall be able to understand the common practice in the pharmaceutical industry developments Student shall be able to understand the practices of aseptic process technology Student shall be able to understand the practices of non-sterile manufacturing technology
	in alternation with	 Student shall be able to understand the practices of packaging technology
	Development and Development at She recent at	 Student shall be able to understand understanding of principles and implementation of Quality by design (QbD)

Programme Specific outcomes (PSOs)

- 1. To Understand the applications of Quality assurance and Quality control throughout product life cycle.
- 2. To Analyze the Application Based Importance of Emerging Quality Building Concepts in Product Manufacturing.
- 3. To Perform Procedures like Method Validation, Process Validation, Equipment /Facilities/Utilities
- 4. Validation, Documents and Records Designing as per the Regulatory Standards Leading to compliance of cGMP.
- 5. To Understand the Regulatory requirements of Pharmaceuticals.

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Principal Siddhant College of Pharmacy Sudumbare, Tal.-Maval, Dist.-Pune 412109.

COURSE OUTCOME (CO) M.PHARM(PHARMACEUTICS)

S.no	Name of the program	Name of the course	Course outcome
1	i and and the	Modern Pharmaceutical Analytical Techniques	Develops clear insight about theoretical and practical skills of the instruments used in pharmaceutical industry.
2	and the second s	Drug Delivery system	Categorizes new drug delivery systems and formulations.
3	and and and	Modern Pharmaceutics	Establishes process of development of ethical and quality considerations of medical devices.
4	M.Pharm	Regulatory Affairs	Develops Pharmacovigilence and process of monitoring in clinical trials
5	- i damaninentina and a martin a fan trockera trockera	Molecular Pharmaceutics (NanoTech and Targeted DDS)	Establishes knowledge of Novel drug delivery systems.
6		Advanced Biopharmaceutics and pharmacokinetics	Develops the student for designing and evaluation of dosage regimens of the drugs using pharmacokinetic and biopharmaceutic parameters.
7	antonical at	Computer Aided drug delivery System	Develops Computer skills for Preclinical Development and Optimization Techniques in Pharmaceutical Formulation.
8	gings ad you	Cosmetics and Cosmeceuticals	Establishes skills of new combinations and formulations

Program Specific Outcome (PSO)

M. Pharm(Pharmaceutics)

- Locates on patients and products, accordingly the curriculum has been framed. The theoretical concepts are specifically taught in theory and further the concepts are strengthened and measured during practical's.
- Develops knowledge regarding dosage forms, drug delivery systems, biopharmaceutics and pharmacokinetic study, computer aided drug development during the program and to understand dosage form design, optimization, *in-vitro* parameters and relevant techniques for drug development.
- Describes research methodology, key aspects in research and scientific writing to present
 - the research work.

College of galaxies

Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109. • Establishes knowledge regarding newer technology and skills in technology development and achieve maximum output.

Program Outcome (PO)

M. Pharm(Pharmaceutics) and M Pharm.: Pharmaceutical Quality Assurance

PO1: Pharmaceutical Knowledge:- Students achieve a deep knowledge regarding human body, its related diseases, analytical skills, drug molecules (Active Pharmaceutical Ingredients) along with excipients, natural drug resources, chemistry involved in API including synthesis of commonly used drugs, effect of drug on human body, toxicity and impurity profile, ADME studies of drugs (behavior of drug in human body), dosage form studies including novel approaches, designing and development of formulation stability studies, analysis etc

PO2: Research Analysis: Develops knowledge in research field to make new relevant discoveries and to identify new entities.

PO3: Design & Development of dosage forms: Describes preparation of various dosage forms that could be prepared by the pharmacy students in the pharmaceutical companies for the ease of patients and to optimize formulations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.

PO5: Modern methods usage: Create, select, and apply appropriate techniques, resources and modern methods with an understanding of the limitations and its usage. The student also learns to handle many instruments related to their studies which would help them work in a Pharmaceutical Industry, pharmacovigilance, regulatory requirements, legal processes etc.

PO6: Pharmacy and society: Pharmacist provide complete health care data and practices to the people of the society and guide them to be healthy. The student also learns drug distribution system, patient counseling, industrial laws etc. Students achieve expertise in storage and distribution of drugs with all precautions and in-depth knowledge of dose, adverse effect and other health related issues to deal with ambulatory and IPD patients in hospitals and also in public and achieve responsibility of computing profession and society.

PO7: Environment and sustainability: Locate the impact of the professional pharmacist in



Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109 society and environment and make an impact of it on the people of the society.

PO8: Ethics: Justify & apply ethical principle and commit to professional ethics and responsibilities and norms of the pharmacy practice. Student is also trained in ethical behavior with physician, nurses and other paramedical staff for protecting patient's health.

PO9: Individual and team work: Function effectively as an individual and as a member or leader in diverse teams acts as a multidisciplinary person in every context. Students will be able to demonstrate rigorous and independent thinking and encourage participatory decision making in teams.

PO10: Communication: Develops Communication effectively on pharmaceutical activities with the community and with society.

PO11: Life-long learning: Recognize the need and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change and implement those technology by gaining experience.



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CAYM Education Trusts Siddhant College of Pharmacy A/P Sudumbare, Talegaon – Chakan Road, Tal: Maval, Dist: Pune -412109

Academic Year 2019-20

Course Outcomes

M Pharm.: Pharmaceutical Quality Assurance

Sr. No.	Name of the Program	Name of the Course	Course Outcome	
1	M Pharm	Modern Pharmaceutical Analytical Techniques	 Develops clear insight about theoretical and practical skills of the instruments used in pharmaceutical industry The students will understand principle and instrumentation 	_
2		Quality Management System	 The student will understand the quality parameters and quality attribute in Pharmaceutical industry sectors By studying and practicing the guidelines iso, NABL and other regulatory agencies student will predicts the current need of changes. It provide the idea in the customers expectations in the quality pharmaceutical product. student will know the importance of the quality of medicines in the public. The subject will afford methodology in the regulatory body requirements for the import and export pharmaceutical products. 	
3		Quality control and Quality Assurance	 Student shall be able to understand the cGMP aspects in a pharmaceutical industry Student shall be able to understand the importance of documentation Student shall be able to understand the scope of quality certifications applicable to Pharmaceutical industries Student shall be able to understand the responsibilities of QA department Student shall be able to understand the responsibilities of QA department 	th
	4 Ince	SEAL Sudumbare une-412109	Pr Siddhant Co Sudumba	Illege of Pha re. TalMav une 412109

			-	responsibilities of QC department
	14 30 3			Student shall be able to understand GLP
	and the second second second		*	
_				and regulatory Affairs
-	Product		>	To apply the knowledge to develop new
	development			procedures of their own design of Pilot
	and Technology			layouts
	Transfer		×	Student shall be able to understand the
	entropyty			Quality by design practices of sterile and
				non sterile dosage forms
	a stage of easy and a series a		*	Student shall be understand the Regulatory
		1. Che		requirements in drug development stages
	a second and a finite frank	1286	×	Students shall understand the phase of
	and the second s	DIN		technology transfer
	Hazards and	dr.F	A	To understand the energy resources in the
	Safety	Cont.		to make eco-friendly industry
-	Management			environment
	station of the main states when	11	A	The course knowledge useful to Find
	A web has access by long	mp	-	hazards in work atmosphere
	the Contact providently in about	UIE .		
	loves.	100	A	It creates the passage to understand
	shall and party range the	7.8		Determine and to take control measures to
	who had IBAT an emilal	DEL		eliminate or minimize the level of the
	How to make so the second	100		risks
	ficts the communication of the	CHE I	>	It support the student to recognize the
	more and un born after shires	- 32		control measures to eliminate or minimized
	acturana the culling	2.00		the level of the risks
	mathematic in manufacture	1	A	It provides platform for formal process
		prog		for hazard identification, risk assessment
	it constant in 6di would live inal	1.134		
	are in entroution in Attractio	19(1)		, ,
	tari-	inset		workplace and safety hazards
	a Look dan print routines	NT.	A	It develop proper understanding in the
6	Pharmaceutical	10132		stages of risk assesment
	Validation	0751	A	The Students learn on the importance of
	Vandation	11411		validation.
	the product of the Amb	SIL.	A	The student learns on the importance of
	the second second second second second second	2		patent and intellectual property rights.
		du	*	The students are trained on the
-	and and and it is the	The.		qualification aspects of instruments.
	the second s	TTE	*	The importance of calibration to be
	and the second second	n'z		performed for the instruments.
	service and the service		*	The various validation aspects to be
		1.11		carried out in the industry.
	and the second s	112	×	The students gain knowledge on h
		1000		The students gain knowledge on how validation are carried for various
	Siddhanko	and a		curred for various
	S (SEAL OF	A sea		components. Such as instrument
	Sunumbarra 2			validation, cleaning validation and
	Sudumbargo C Bune-A12109 D			Principal
	and the second second			Siddhant College of Pharmacy
	1 all and and a			Sudumbare, TalMaval,

Dist.-Pune 412109.

	TO D' TOMONDIA	process validation
1	Audit and Regulatory Compliance	 The student gain knowledge on the importance of auditing in pharmaceutical preparation. The various forms of auditing are and how an audit process happens are briefed
	Princhene de la principal de la principal de la formal de la galite constitues Pastoches pres	 to the students. Preparation of various audit checklist for the auditing. when and what are the areas the auditing to be carried is taught to the student. The Reporting form of the auditing process is taught to the student. The student practices the auditing process and reporting process
M	armaceutical anufacturing Fechnology	 Student shall be able to understand the common practice in the pharmaceutical industry developments Student shall be able to understand the practices of aseptic process technology Student shall be able to understand the
	Develops ino a evaluation of de pharmacoleman	 practices of non-sterile manufacturing technology Student shall be able to understand the practices of packaging technology
	De velopment De velopment Playmaceuties	 Student shall be able to understand understanding of principles and implementation of Quality by design (QbD)

Programme Specific outcomes (PSOs)

- 1. To Understand the applications of Quality assurance and Quality control throughout product life cycle.
- To Analyze the Application Based Importance of Emerging Quality Building Concepts in Product Manufacturing.
- 3. To Perform Procedures like Method Validation, Process Validation, Equipment /Facilities/Utilities
- 4. Validation, Documents and Records Designing as per the Regulatory Standards Leading to compliance of cGMP.
- 5. To Understand the Regulatory requirements of Pharmaceuticals,

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COURSE OUTCOME (CO) M.PHARM(PHARMACEUTICS)

S.no	Name of the program	Name of the course	Course outcome
1	ani ye ala	Modern Pharmaceutical Analytical Techniques	Develops clear insight about theoretical and practical skills of the instruments used in pharmaceutical industry.
2	tradition or a little	Drug Delivery system	Categorizes new drug delivery systems and formulations.
	acient.	Modern Pharmaceutics	Establishes process of development of ethical and quality considerations of medical devices.
4	M.Pharm	Regulatory Affairs	Develops Pharmacovigilence and process of monitoring in clinical trials
5	Construction of the second sec	Molecular Pharmaceutics (NanoTech and Targeted DDS)	Establishes knowledge of Novel drug delivery systems.
6	range failer	Advanced Biopharmaceutics and pharmacokinetics	Develops the student for designing and evaluation of dosage regimens of the drugs using pharmacokinetic and biopharmaceutic parameters.
7	di seturi di so conference remojulio	Computer Aided drug delivery System	Develops Computer skills for Preclinical Development and Optimization Techniques in Pharmaceutical Formulation.
8	irey by Ara	Cosmetics and Cosmeceuticals	Establishes skills of new combinations and formulations.

Program Specific Outcome (PSO)

M. Pharm(Pharmaceutics)

- Locates on patients and products, accordingly the curriculum has been framed. The theoretical concepts are specifically taught in theory and further the concepts are strengthened and measured during practical's.
- Develops knowledge regarding dosage forms, drug delivery systems, biopharmaceutics and pharmacokinetic study, computer aided drug development during the program and to understand dosage form design, optimization, *in-vitro* parameters and relevant techniques for drug development.
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Program Outcome (PO)

M. Pharm(Pharmaceutics) and M Pharm.: Pharmaceutical Quality Assurance

PO1: Pharmaceutical Knowledge:- Students achieve a deep knowledge regarding human body, its related diseases, analytical skills, drug molecules (Active Pharmaceutical Ingredients) along with excipients, natural drug resources, chemistry involved in API including synthesis of commonly used drugs, effect of drug on human body, toxicity and impurity profile, ADME studies of drugs (behavior of drug in human body), dosage form studies including novel approaches, designing and development of formulation stability studies, analysis etc

PO2: Research Analysis: Develops knowledge in research field to make new relevant discoveries and to identify new entities.

PO3: Design & Development of dosage forms: Describes preparation of various dosage forms that could be prepared by the pharmacy students in the pharmaceutical companies for the ease of patients and to optimize formulations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.

PO5: Modern methods usage: Create, select, and apply appropriate techniques, resources and modern methods with an understanding of the limitations and its usage. The student also learns to handle many instruments related to their studies which would help them work in a Pharmaceutical Industry, pharmacovigilance, regulatory requirements, legal processes etc.

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PO7: Environment and sustainability; Docate the impact of the professional pharmacist in



Principal Siddhant College of Pharmacy Sudumbare, Tat.-Maval, Dist.-Pune 412109. society and environment and make an impact of it on the people of the society.

PO8: Ethics: Justify & apply ethical principle and commit to professional ethics and responsibilities and norms of the pharmacy practice. Student is also trained in ethical behavior with physician, nurses and other paramedical staff for protecting patient's health.

PO9: Individual and team work: Function effectively as an individual and as a member or leader in diverse teams acts as a multidisciplinary person in every context. Students will be able to demonstrate rigorous and independent thinking and encourage participatory decision making in teams.

PO10: Communication: Develops Communication effectively on pharmaceutical activities with the community and with society.

PO11: Life-long learning: Recognize the need and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change and implement those technology by gaining experience.

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CAYM Education Trusts Siddhant College of Pharmacy A/P Sudumbare, Talegaon - Chakan Road, Tal: Maval, Dist: Pune -412109

Academic Year 2018-19

Course Outcomes

M Pharm.: Pharmaceutical Quality Assurance

	Program M Pharm	Course Modern Pharmaceutical Analytical Techniques Quality Management System	× × ×	Develops clear insight about theoretical and practical skills of the instruments used in pharmaceutical industry The students will understand principle and instrumentation The student will understand the quality parameters and quality attribute in Pharmaceutical industry sectors By studying and practicing the
	M Pharm	Pharmaceutical Analytical Techniques Quality Management		and practical skills of the instruments used in pharmaceutical industry The students will understand principle and instrumentation The student will understand the quality parameters and quality attribute in Pharmaceutical industry sectors By studying and practicing the
		Analytical Techniques Quality Management		practical skills of the instruments used in pharmaceutical industry The students will understand principle and instrumentation The student will understand the quality parameters and quality attribute in Pharmaceutical industry sectors By studying and practicing the
		Techniques Quality Management		pharmaceutical industry The students will understand principle and instrumentation The student will understand the quality parameters and quality attribute in Pharmaceutical industry sectors By studying and practicing the
		Quality Management	~ ~ ~	The students will understand principle and instrumentation The student will understand the quality parameters and quality attribute in Pharmaceutical industry sectors By studying and practicing the
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	the second secon	Management	· · · · ·	The student will understand the quality parameters and quality attribute in Pharmaceutical industry sectors By studying and practicing the
		Management		quality parameters and quality attribute in Pharmaceutical industry sectors By studying and practicing the
	the second of th	Management		quality parameters and quality attribute in Pharmaceutical industry sectors By studying and practicing the
				attribute in Pharmaceutical industry sectors By studying and practicing the
	the reserves	System		sectors By studying and practicing the
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	n land on a	alles on para second	>	
	n fan fanaf ni naminen af	the support of the late	TRACE.	111 in NADI and share
ado a	to realized			guidelines iso, NABL and other
	the resolution		ALC: NO.	regulatory agencies student will
and the second		the set and the second	A 11 4	predicts the current need of changes.
-		the second second of	No N	It provide the idea in the customers
1000		Aur of rule -	0.00	expectations in the quality
and the second		mains de la	a a w	pharmaceutical product.
		in the second	100 -	student will know the importance of
-		the all have a	1000	the quality of medicines in the
		d while we when	in the second se	
		and the second second	to at	public.
1 1		source of all	>	The subject will afford methodology in
		the second second	100	the regulatory body requirements for
1 2 -2		The stated manufacture	Call 7	the
		-0.9. I	1.4	import and export pharmaceutical products.
by his	and subject only	Quality control	*	Student shall be able to understand the
		and Quality	Title T	cGMP aspects in a pharmaceutical
2.42		Assurance	00 h -	industry
		In The Real Property is	*	Student shall be able to understand the
10		her and the spirit	WIT -	importance of documentation
		and and the Assess	2	Student shall be able to understand the
		and the second	1017 4	scope of quality certifications applicable
		West will get the same	1	to Pharmaceutical industries
			1.37 . 4	
1		and the second	*	Student shall be able to understand the
			1 Pr/	responsibilities of QA department
Lon may		Trust's Sido	× A	Student shall be able to understand the
-		He SE	2210	4
		dun dung) <u>e</u>	Principal
		12:00 HIZIO	ega	College of Phi
		13-13-11-10	Cype 1	Siddnant Concest TalMar Sudumbare. TalMar

	ter Deusen er Princemar of Tat house Dig man av eres	 responsibilities of QC department Student shall be able to understand GLP and regulatory Affairs
4	Product development and Technology Transfer	 To apply the knowledge to develop new procedures of their own design of Pilot layouts
	I ransier	 Student shall be able to understand the Quality by design practices of sterile and non sterile dosage forms
	the second second second second	 Student shall be understand the Regulator requirements in drug development stages
	The same attraction of the set of	 Students shall understand the phase of technology transfer
5	Hazards and	> To understand the energy resources in the
	Safety Management	to make eco-friendly industry environment
	and and here an arrive the	 The course knowledge useful to Find hazards in work atmosphere
	100	> It creates the passage to understand
	and and the standy and good from	Determine and to take control measures to eliminate or minimize the level of the risks
	the ter manual matual	 It support the student to recognize the
	The second of th	control measures to eliminate or minimize the level of the risks
	and a strange of the second strange	 It provides platform for formal process for hazard identification, risk assessment
	and a sponting the gular	and control to effectively manage workplace and safety hazards
	and post bections breath live margins	 It develop proper understanding in the stages of risk assessment
6	Pharmaceutical Validation	 The Students learn on the importance of validation.
		 The student learns on the importance of patent and intellectual property rights.
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	> The students are trained on the
	all have along a state of her are	qualification aspects of instruments.> The importance of calibration to be
	and have reasoned at more said of the same	performed for the instruments.The various validation aspects to be
	Anust's Siddhap	carried out in the industry.
	SEAL College	The students gain knowledge on how validation are carried for various
	Dune-412109 2	validation, cleaning validation and
161	Sid	dhant College of PharmaCy Sudumbare. TalMaval, DistPune 4121'

COURSE OUTCOME (CO) M.PHARM(PHARMACEUTICS)

S.	no	Name of the program	Name of the course	Course outcome
1	-	antiballe tile	Modern Pharmaceutical Analytical Techniques	Develops clear insight about theoretical and practical skills of the instruments used in pharmaceutical industry.
2	5	Tourist and	Drug Delivery system	Categorizes new drug delivery systems and formulations.
3	20	Joseph and In-	Modern Pharmaceutics	Establishes process of development of ethical and quality considerations of medical devices.
4		M.Pharm	Regulatory Affairs	Develops Pharmacovigilence and process of monitoring in clinical trials
5	int of	the material and the second se	Molecular Pharmaceutics (NanoTech and Targeted DDS)	Establishes knowledge of Novel drug delivery systems.
6		tomacelous of	Advanced Biopharmaceutics and pharmacokinetics	Develops the student for designing and evaluation of dosage regimens of the drugs using pharmacokinetic and biopharmaceutic parameters.
7	Levi	aliminets A la guille o	Computer Aided drug delivery System	Develops Computer skills for Preclinical Development and Optimization Techniques in Pharmaceutical Formulation.
8	161	any log date	Cosmetics and Cosmeceuticals	Establishes skills of new combinations and formulations.

Program Specific Outcome (PSO)

M. Pharm(Pharmaceutics)

- Locates on patients and products, accordingly the curriculum has been framed. The theoretical concepts are specifically taught in theory and further the concepts are strengthened and measured during practical's.
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Principal Siddhant College of Pharmacy Sudumbarn Tal.-Maval.

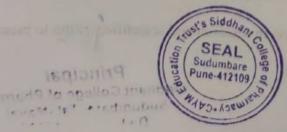
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Dist

7	process validation
Audit and Regulatory Compliance	 The student gain knowledge on the importance of auditing in pharmaceutical preparation. The various forms of auditing are and how an audit process happens are briefed
Develops often insight sizes theoretical red routing diffs of the antrinormic cost is	 Preparation of various audit checklist for the auditing.
ategorizen new doen delvery enderne ma eroulations. Multisnes process of development of dilical and mility considerations or medical devices. Develops Plearaterovirulence and process of	 The Reporting form of the auditing process is taught to the student. The student practices the auditing process
8 Pharmaceutical Manufacturing Technology	 and reporting process Student shall be able to understand the common practice in the pharmaceutical industry developments Student shall be able to understand the practices of aseptic process technology Student shall be able to understand the
Develops the student for designing and evaluation of desage restricted of the areginal first observation of desage restricted of the area of the	 practices of non-sterile manufacturing technology Student shall be able to understand the
Developsi Computer skills for Practicital Development and Optimization Technique in Physiomeostical Fermulation.	 practices of packaging technology Student shall be able to understand understanding of principles and implementation of Quality by design (QbD)

Programme Specific outcomes (PSOs)

- 1. To Understand the applications of Quality assurance and Quality control throughout product life cycle.
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Principal Siddhant College of Pharmacy Sudumbare, Tal.-Maval, Dist .- Pune 4 ...

 Establishes knowledge regarding newer technology and skills in technology development and achieve maximum output.

Program Outcome (PO)

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Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109. society and environment and make an impact of it on the people of the society.

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PO9: Individual and team work: Function effectively as an individual and as a member or leader in diverse teams acts as a multidisciplinary person in every context. Students will be able to demonstrate rigorous and independent thinking and encourage participatory decision making in teams.

PO10: Communication: Develops Communication effectively on pharmaceutical activities with the community and with society.

PO11: Life-long learning: Recognize the need and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change and implement those technology by gaining experience.

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CAYM Education Trusts Siddhant College of Pharmacy

A/P Sudumbare, Talegaon - Chakan Road, Tal: Maval, Dist: Pune -412109

Course outcomes 2022-23

B Pharmacy

nester I)			
The students should be able to: CO 1. Explain the gross morphology, structure and functions of various organs of the human body. CO 2. Describe the various homeostatic mechanisms and their imbalances. CO3. Identify the various tissues and organs of different systems of human body. CO4. Perform the various experiments related to special senses and nervous system. CO5. Appreciate coordinated working pattern of different organs of each system			
The students should be able to: CO 1. Understand and explain the methods assuring the quality and safety of pharmaceuticals. CO 2. Explain about accuracy, precision, and significant figure error concepts. CO 3. Understand the principles of volumetric and electro chemical analysis CO 4. Carryout various volumetric and electrochemical titrations			
The student should be able to CO1. Know the history of profession of pharmacy CO2, Understand the basics of different dosage forms, pharmaceutical incompatibilities and pharmaceutical calculations CO3. Understand the professional way of handling the prescription CO4. Preparation of various conventional dosage forms			
The students should be able to: CO 1. know the sources of impurities and methods to determine the impurities in inorganic drugs and pharmaceuticals CO 2. Understand the medicinal and pharmaceutical importance of inorganic compounds CO3. To perform the identification of inorganic compounds			
The students should be able to: CO 1. Understand the behavioural needs a pharmacist to function effectively in the areas of pharmaceutical operation CO 2. Communicate effectively (Verbal and Non-Verbal) CO 3. Effective manage the team as a team player			
RBT- Remedial The students should be able to: CO 1. know the classification and salier features of five kingdoms of life CO 2. understand the basic component anatomy & physiology of plant CO 3. know understand the basic components of anatomy & physiology animal with special reference to human			
The students should be able to: CO1: Know the theory and their application in Pharmacy CO2: Solve the different types of problems by applying theory CO3: Appreciate the important application of mathematics in Pharmacy			

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First Year II Sem

Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109.

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BP201T-Human	Thestal is a second seco		
Anatomy and Physiology II	The students should be able to: CO1: Explain the gross morphology, structure and functions of various organs of the human body. CO2: Describe the various homeostatic mechanisms and their imbalances CO3: Identify the various tissues and organs of different systems of human body CO4. Perform the hematological tests like blood cell counts, haemoglobin estimation, bleeding/clotting time etc and also record blood pressure, heart rate, pulse and respiratory volume.		
BP202T- Pharmaceutical Organic Chemistry I	The students should be able to: CO 1. Understand and explain the concepts of hybridization, electronic and steric effects of organic molecules and to appreciate the chemistry of hydrocarbons CO 2. Acquire knowledge about preparation and reactivity of compounds with functional groups, such as aldehydes and ketones, carboxylic acids, amino and azo compounds CO 3. Explain the mechanism involved in the substitution, addition, nucleophilic and elimination reactions.		
BP203T Biochemistry	The students should be able to: CO 1. Understand the catalytic role of enzymes, importance of enzyme inhibitors in design of new drugs, therapeutic and diagnostic applications of enzymes. CO 2. Understand the metabolism of nutrient molecules in physiological and pathological conditions CO 3. Understand the genetic organization of mammalian genome and functions of DNA in the synthesis of RNAs and proteins		
BP204T Pathophysiology	CO1: Describe the etiology and pathogenesis of the selected disease states. CO2: Name the signs and symptoms of the diseases; and CO3: Mention the complications of the diseases.		
BP205T Computer Applications in Pharmacy	CO1. know the various types of application of computers in pharmacy CO2. know the various types of databases CO3. know the various applications of databases in pharmacy		
BP206T Environmental sciences	The students should be able to: CO 1. Create the awareness about environmental problems among learners CO 2. Impart basic knowledge about the environment and its allied problems. CO 3. Develop an attitude of concern for the environment. CO 4. Motivate learner to participate in		
Second Year B.Pharm (II	environment protection and environment improvement.		
BP301T Pharmaceutical Organic Chemistry II	The students should be able to: CO 1. Acquire knowledge on Nucleophilic and Electrophilic reactions and chemistry of carbohydrate, protein and hetero aromatic compounds. CO 2. write the structure, name and the type of isomerism of the organic compound CO 3. Understand and explain the pharmaceutical applications of synthetic reagents and reactions. CO 4. account for reactivity/stability of compounds		
BP302T Physical Pharmaceutics I	The students should be able to: CO 1. Understand various physicochemical properties of drug molecules in the designing the dosage forms CO2. Know the principles of chemical kinetics & to use them for stability testing and determination of expiry date of formulations CO 3. Demonstrate use of physicochemical properties in the formulation development and evaluation of dosage forms.		
BP303T Pharmaceutical Microbiology	The students should be able to: CO1: Understand methods of identification, cultivation and preservation of various microorganisms CO2: To upderstand, the importance and implementation of sterlization in		
Principa) Satistan (o.l.ea.) Sudunbur Dist. F	Siddhant College et Pharmacy Sudumbare. TatMaval, DistPune 412109.		

s of disease former. COO ir manuel evaluate them fo	pharmaceutical processing and industry CO3: Learn sterility testing of pharmaceutical products CO4: Carried out microbiological standardization of Pharmaceuticals			
BP304T Pharmaceutical Engineering	The students should be able to: CO 1. To know various unit operations used in pharmaceutical industries CO 2. To understand the material handling techniques CO 3. To perform various processes involved in pharmaceutical manufacturing process. CO 4. To carry out various test to prevent environmental pollution CO5. To appreciate and comprehend significance of plant lay out design for optimum use of resources.			
Second Year IV sem	The second			
BP401T Pharmaceutical Organic Chemistry III	CO1. understand the methods of preparation and properties of organic compounds CO2. explain the stereo chemical aspects of organic compounds and stereo chemical reactions CO3. know the medicinal uses and other applications of organic compounds.			
BP402T Medicinal Chemistry I	The students should be able to: CO 1. understand the chemistry of drugs with respect to their pharmacological activity CO 2. understand the drug metabolic pathways, adverse effect and therapeutic value of drugs CO 3. know the Structural Activity Relationship (SAR) of different class of drugs CO 4. write the chemical synthesis of some drugs			
BP403T Physical Pharmaceutics II	The students should be able to: CO 1. Understand various physicochemical properties of drug molecules in the designing the dosage forms CO 2. Know the principles of chemical kinetics & to use them for stability testing and determination of expiry date of formulations CO 3. Demonstrate use of physicochemical properties in the formulation development and evaluation of dosage forms.			
BP404T Pharmacology I	The students should be able to: CO 1. To understand basic concepts in Pharmacology CO2: To Explain Role of Pharmacologists in drug development and drug use CO3: To impart knowledge regarding mechanisms of drug action, ADR, drug interactions CO4: To inform them regarding the steps involved in drug discovery.			
BP405T Pharmacognosy and Phytochemistry I	The student should be able to CO1: understand sources of drugs from various natural sources CO2: Understand about Plant taxonomy & Cultivation, Collection, Processing, and storage of crude drugs CO3: Understand about active constituents of drugs, their isolation & different properties CO4: carry out the microscopic and morphological evaluation of crude drugs			
T.Y. Year B.Pharm V ser	RPaul F. The surfaces should be able too Cvi 1, Abla to m			
BP501T Medicinal Chemistry II	The students should be able to: CO 1. Explain the influence of the metabolic profile of drugs and their impact on biological system. CO 2. Outline the synthetic route for the selective medicinal compounds of each category and acquire knowledge on the mechanism of action of pharmacodynamics agents. CO 3. Classify the therapeutic agents and based on the chemical nature. CO 4. Acquire knowledge about the relationship between the biological activity and structure of therapeutic agents.			
BP502T Industrial Pharmacy-I	The students should be able to: CO1: Explain the properties and selection of excipients used in different dosage forms. CO2: Know the various pharmaceutical dosage forms and their manufacturing techniques. CO3:			

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l erra sessifit testing of a afticing to stable after	Explain the quality control and quality analysis of dosage forms. CO4: Formulate solid, liquid and semisolid dosage forms and evaluate them for their quality		
BP503T Pharmacology IIThe students should be able to CO 1. Demonstrate isolation of difference organs/tissues from the laboratory animals by simulated experiment Describe the bioassay and its role in drug discovery CO 3. To Explay Pharmacology of drugs acting on respiratory system CO 4. Apprece correlation of pharmacology with related medical sciences			
BP504T Pharmacognosy and Phytochemistry II	The students should be able to: CO 1. to know the modern extraction techniques, characterization and identification of the herbal drugs and phytoconstituents CO 2. to understand the preparation and development of herbal formulation CO 3. understand the herbal drug interactions CO 4. to carryout isolation and identification of phytoconstituents		
BP505T Pharmaceutical Jurisprudence	The students should be able to: CO 1. Acquire knowledge on schedule rules, laws and regulations related to drugs and cosmetics. CO 2. Explain pharmaceutical legislation, history, evolution and growth of pharmaceutic industry. CO 3. Describe the pharmaceutical education and its regulatory bodies, pharmacy profession in concern to code of ethics. CO 4. Explain other acts and rules associated with food and factories CO 5. Explain the intellectual property rights and regulatory guidlines		
T.Y. B.Pharm VI sem	resonances and a second of the		
BP601T Medicinal Chemistry III	The students should be able to: CO 1. Understand the importance of drug design and different techniques of drug design. CO 2. Understand the chemistry of drugs with respect to their biological activity CO 3. Know the metabolism, adverse effects and therapeutic value of drugs. CO 4. Know the importance of SAR of drugs CO 5. Write the synthetic route		
BP602T Pharmacology III	The students should be able to CO 1. Understand the mechanism of drug action and its relevance in the treatment of different infectious diseases CO 2. Comprehend the principles of toxicology and treatment of various poisonings CO 3. Appreciate correlation of pharmacology with related medical sciences		
BP603T Herbal Drug Technology	The students should be able to: CO 1. understand raw material as source herbal drugs from cultivation to herbal drug product CO 2. know the WHO and ICH guidelines for evaluation of herbal drugs CO 3. know the herbal cosmetics, natural sweeteners, nutraceuticals CO 4. appreciate patenting of herbal drugs, GMP		
BP604T- Biopharmaceutics and Pharmacokinetics	The students should be able to: CO 1. Able to understand the concepts of biopharmaceutics & pharmacekinetics CO 2. Determine factors offecting		
BP605T Pharmaceutical Biotechnology	The students should be able to: CO 1. Understanding the importance of Immobilized enzymes in Pharmaceutical Industries CO 2. Canatia		
Diotechnology	engineering applications in relation to production of pharmaceuticals CO 3. Importance of Monoclonal antibodies in Industries CO4: Appreciate the use of microorganisms in fermentation technology		

Sudumhare Bune 412103 00 Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412100

Assurance	pharmaceutical industry appreciate the importance of documentation CO2. Understand the scope of quality certifications applicable to pharmaceutical industries CO3. Understand the responsibilities of QA & QC departments			
B.Pharm Final Year VII	sem			
BP701T Instrumental Methods of Analysis Understand the chromatographic separation and analysis of drugs Perform quantitative & qualitative analysis of drugs using various analytical instruments.				
BP702T Industrial Pharmacy-II	The students should be able to: CO 1. Know the process of pilot plant and scale up of pharmaceutical dosage forms CO 2. Understand the process of technology transfer from lab scale to commercial batch CO3. Know different Laws and Acts that regulate pharmaceutical industry CO4. Understand the approval process and regulatory requirements for drug products			
BP703T Pharmacy Practice	The students should be able to: CO 1 knows various drug distribution methods in a hospital CO 2 appreciates the pharmacy stores management and inventory control CO 3 monitor drug therapy of patient through medication chart review and clinical review CO 4 obtains medication history interview and counsel the patients CO 5 identifies drug related			
BP704T Novel Drug Delivery System	ovel Drug The students should be able to: CO1. To understand various approaches			
B.Pharm Final Year VI	II sem			
BP801T Biostatistics and Research Methodology	The students should be able to: CO1 Know the operation of M.S. Excel, SPSS, R and MINITAB®, DoE (Design of Experiment) CO2 Know the various statistical techniques to solve statistical problems CO3. Appreciate statistical techniques in solving the problems			
BP802T Social and Preventive Pharmacy	The students should be able to: CO1. Acquire high consciousness/realization of current issues related to health and pharmaceutical problems within the country and worldwide CO2. Have a critical way of thinking based on current healthcare development CO3. Evaluate alternative ways of solving problems related to health and pharmaceutical issues			
BP804ET Cosmetic ScienceThe students should be able to: CO1 Understand the concepts of anatomy of skin v/s hair, general excipients used in cosmetics. the concept of cosmeceuticals, history, difference between cosm &cosmeceuticals & cosmeceuticals agents CO3. Know difference Acts that regulate pharmaceutical industry. CO4. Understand process and regulatory requirements for drug products.				
BP805 ET Pharmacovigilance	The students should be able to: CO1 History and development of pharmacovigilance CO2 National and international scenario of pharmacovigilance CO3 Dictionaries, coding and terminologies used in pharmacovigilance CO4 Detection of new adverse drug reactions and their assessment CO5 International standards for classification of diseases and drugs CO6 Adverse drug reaction reporting systems and communication in pharmacovigilance			

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CAYM Education Trusts Siddhant College of Pharmacy A/P Sudumbare, Talegaon – Chakan Road, Tal: Maval, Dist: Pune -412109 Academic Year 2022-23 B Pharmacy <u>Program Outcome</u>

PO1: Pharmaceutical Knowledge:- Students achieve a deep knowledge regarding human body, its related diseases, analytical skills, drug molecules (Active Pharmaceutical Ingredients) along with excipients, natural drug resources, chemistry involved in API including synthesis of commonly used drugs, effect of drug on human body, toxicity and impurity profile, ADME studies of drugs (behavior of drug in human body), dosage form studies including novel approaches, designing and development of formulation stability studies, analysis etc

PO2: Research Analysis: Develops knowledge in research field to make new relevant discoveries and to identify new entities.

PO3: Design & Development of dosage forms: Describes preparation of various dosage forms that could be prepared by the pharmacy students in the pharmaceutical companies for the ease of patients and to optimize formulations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.

PO5: Modern methods usage: Create, select, and apply appropriate techniques, resources and modern methods with an understanding of the limitations and its usage. The student also learns to handle many instruments related to their studies which would help them work in a Pharmaceutical Industry, pharmacovigilance, regulatory requirements, legal processes etc.

PO6: Pharmacy and society: Pharmacist provide complete health care data and practices to the people of the society and guide them to be healthy. The student also learns drug distribution system, patient counseling, industrial laws etc. Students achieve expertise in storage and distribution of drugs with all precautions and in-depth knowledge of dose, adverse effect and other health related issues to deal with ambulatory and IPD patients in hospitals and also in public and achieve responsibility of computing profession and society.

PO7: Environment and sustainability: Locate the impact of the professional pharmacist in society and environment and make an impact of it on the people of the society.



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PO8: Ethics: Justify & apply ethical principle and commit to professional ethics and responsibilities and norms of the pharmacy practice. Student is also trained in ethical behavior with physician, nurses and other paramedical staff for protecting patient's health.

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PO9: Individual and team work: Function effectively as an individual and as a member or leader in diverse teams acts as a multidisciplinary person in every context. Students will be able to demonstrate rigorous and independent thinking and encourage participatory decision making in teams.

PO10: Communication: Develops Communication effectively on pharmaceutical activities with the community and with society.

PO11: Life-long learning: Recognize the need and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change and implement those technology by gaining experience.

PO12: Social Interaction: Being a public welfare job, a pharmacist would be able to interact with the people in a better way to cure them and make them feel healthy also investigate and evaluate the general state of public health conditions and concerns and develop and apply appropriate programs of action within program content area

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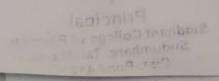
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Siddhant College of Pharmacy



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Program Specific Outcome

Some of the program specific outcomes are mentioned below:

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PSO 1: Prepared to implement the knowledge gained during the course of the program from pharmacology, pharmaceutics, medicinal chemistry, pharmacognosy, APHE, communication skills, pharmaceutical analysis, biotechnology, biochemistry, cosmetology and environmental studies.

PSO 2: Develops knowledge of ethical and management principle required to work in a team as well as to lead a team.

PSO 3: Achieve multidisciplinary jobs in the pharmaceutical industries in various branches and would be able to write relevant and effective project reports in multidisciplinary environment in the context of changing technologies.

PSO4 Prepares to communicate easily and effectively. Would be able to perform multitasks in multifields including pharmaceuticals & cosmetic in timebound manner. Research area would be the key element.



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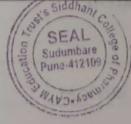
Principal Siddhant College of Pharmac, Sudumbare. Tal.-Maval, Dist.-Pune 412109.

Course outcomes 2021-22

B Pharmacy

Year	Subject	Outcome
and	BP101T. HUMAN ANATOMY AND PHYSIOLOGY-I CO1	It establishes an insight related to human body and apply pharmaceutical science to it.
01 1000	BP102T. PHARMACEUTICAL ANALYSIS CO2	Students construct fundamentals of preparing different strength solutions and interpretations and may execute in its discipline.
periosi tente la periosi tecentra	BP103T. PHARMACEUTICS- I CO3	Students establish techniques and ideas of new dosage forms and combination.
	BP104T. PHARMACEUTICAL	It develops the monographs of inorganic drugs and pharmaceuticals.
all of the starts of the	INORGANIC CHEMISTRY CO4	ONGANIC CHENTSTRY -1
I year	BP105T.COMMUNICATION SKILLS CO5	Constructs soft skills set to work cohesively with the team & develops leadership quality.
10	BP 106RBT.REMEDIAL BIOLOGY CO6	Establishes knowledge of cell biology classification system, theory of evolution tissue system etc.
	BP 106RMT.REMEDIAL MATHEMATICS	Constructs calculation techniques
The office and the	CO7	It establishes an insight related to human bod
	BP 201T. HUMAN ANATOMY AND PHYSIOLOGY-II	and apply pharmaceutical science to it.
1º	CO8 BP202T. PHARMACEUTICAL	Builds laboratory techniques
POTSTA STORE	PHARMACEUTICAL Styst's Siddhenr Sudumbare Sudumbare Bune-412100	Principal Siddhant College of Pharmacy Sudumbare. TalMaval, DistPune 412109.

	ORGANIC CHEMISTRY -I	
	CO9	ti tuisel faata
	BP203 T. BIOCHEMISTRY	Constructs biochemical facts
abort marmar or E	CO10	PARTH POURS
	BP 204T.PATHOPHYSIOLOGY CO11	Builds a baseline knowledge required to practice medicine safely, confidently, rationally and effectively.
interest in the	BP205 T. COMPUTER APPLICATIONS IN PHARMACY	Constructs use of IT tools in pharmaceuticalindustry.
	CO12	CO1
eroo la eksio bris	BP 206 T. ENVIRONMENTAL SCIENCES	Demonstrates physical and biological characters of the environment along with socialand cultural.
Chief of the garage	CO13 choose sill equilavesta ti	BY 1047.
	BP301T. PHARMACEUTICAL ORGANIC CHEMISTRY –II	Develops basic knowledge about reactivity, method and mechanism of organic compound.
etermination strategy	CO14	LAND BRINT COMPLET
	BP302T. PHYSICAL PHARMACEUTICS-I	Modifies in various areas of formulation research and development.
ne shad the T	C015	HOLOGY HEALTH
	BP 303 T. PHARMACEUTICAL	Develops information of all categories of microorganisms.
and the	MICROBIOLOGY CO16	R.FTAMBETAN
cost in at the	BP 304 T. PHARMACEUTICAL ENGINEERING	Develops pharmaceutical manufacturing skills.



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	C017	CC326
and protession of	BP401T. PHARMACEUTICAL ORGANIC CHEMISTRY -III	Develops knowledge on medicinal and other uses of organic compounds.
II year	CO18	C027
with the substantial terreposition values of	BP402T. MEDICINAL CHEMISTRY – I CO19	Establishes the student in correlating between the pharmacology of a disease and its cure.
dogeolinati kan	BP 403 T. PHYSICAL PHARMACEUTICS-II CO20	Develops better insight into various areas of formulation research and development.
and the lange states	BP 404 T. PHARMACOLOGY-I CO21	Establishes a correlation of pharmacology with other biomedical sciences.
in the entrance suggest	BP 405 T.PHARMACOGNOSYAND PHYTOCHEMISTRY I	Categorizes herbal formulations
Longerbort linne on i cross line antiquestion	CO22 BP501T. MEDICINAL CHEMISTRY – II CO23	Employ knowledge on structure activity relationships of drugs, importance of physicochemical properties and metabolism of drugs.
teen loomoo giliany antidadan lasanaan	BP 502 T. Industrial PharmacyI CO24	Builds student to understand and appreciate the influence of pharmaceutical additives and various pharmaceutical dosage forms on the performance of the drug product.
III year	BP503.T. PHARMACOLOGY-II CO25	Establishes knowledge of classification & mode of action of drugs.
	BP504 T. PHARMACOGNOSYAND PHYTOCHEMISTRY II	Establishes basic principles of traditional systemof medicine.

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	CO26	300
mitte ene franzaltere	BP 505 T. PHARMACEUTICAL JURISPRUDENCE CO27	Establishes knowledge about important legislations related to the profession of pharmacy in India.
ine and do dore	BP601T. MEDICINAL CHEMISTRY – III CO28	Develops fundamental knowledge on the structure, chemistry and therapeutic value of drugs.
To dark devide cal	BP602 T. PHARMACOLOGY-III	Establishes diagnostic and classification technique.
	CO29	
dia na panananana a	BP 603 T. HERBAL DRUGTECHNOLOGY	This subject gives the student the knowledge of basic understanding of herbal drug industry.
	CO30	
	BP 604 T. BIOPHARMACEUTICS AND PHARMACOKINETICS	Employs techniques of dosage forms and regimen.
	C031	6.033
eserense unstande In scientscope i In methonologie Lan a	BP 605 T. PHARMACEUTICAL BIOTECHNOLOGY	This course would lead to new biological revolutions in diagnosis, prevention and cure of diseases.
and the second s	CO32	Internation of 17 and 17
has ter the house	BP606TPHARMACEUTICAL QUALITY ASSURANCE	Builds various aspects of quality control and quality assurance of pharmaceutical industries.
	C033	Transmith Mary 191
	BP701T. INSTRUMENTAL METHODS OF ANALYSIS CO34	Imparts fundamental knowledge on the principles and instrumentation of spectroscopic and chromatographic technique.

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IV year	Develope and entry from of a	WE BOG CT, QUALITY
	BP 702 T. INDUSTRIAL PHARMACYII CO35	Builds new ideas related to production of pharmaceutical products.
- mesont i	BP 703T. PHARMACY PRACTICE CO36	Employs the student to provide minor ailment to the patients.
	BP 704T: NOVEL DRUG DELIVERY SYSTEMS	Categorizes novel drug delivery system
litour accents	CO37 BP801T. BIOSTATISITCS AND RESEARCH METHODOLOGY	Measures applications of Biostatics in Pharmacy.
and the second second	CO38 BP 802T SOCIAL AND	Relates health issues and their challenges
	PREVENTIVE PHARMACY CO39	PHARMACOLOGICAL SCREENINGMETAIOUS
a miglana -	BP803ET. PHARMA MARKETING MANAGEMENT	Develops the student for taking a challenging role in Sales and Product management.
an adhorat	CO40	FECHINOURS
bers 1	BP804 ET: PHARMACEUTICAL	Establishes regulatory aspects and ethics.
la receive announ Ja	REGULATORY SCIENCE CO41	NUTRAL FARMER AND
	BP 805T: PHARMACOVIGILANCE	Develops skills of classifying drugs, disease and adverse drug reactions.

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	CO42	
	BP 806 ET. QUALITY CONTROL AND	Develops standardization of herbal drugs
to mutuakers	STANDARDIZATION OF HERBALS	LAIRIN RIPH I LOW AN
	CO43	CG34
andra argente da	BP 807 ET. COMPUTER AIDED DRUG DESIGN	Develops rational drug design process.
	CO44	CKD36
· materia c	BP808ET: CELL AND	Theorize complete cell biology
	MOLECULAR BIOLOGY (Elective subject)	C037
Biostanius	CO45	BUNNIT, BROTATISTICS
	BP809ET. COSMETIC SCIENCE(Theory) CO46	Develops ideas of new formulations with different combinations.
- angreellerta	BP810 ET.	Creates hand in preclinical animal handling
	PHARMACOLOGICAL SCREENINGMETHODS	1 20,000 00 1 3 0 1 1 0 0 1 0 0 0 0 0 1 1 0 0 0 0
nip-miliatio a pro	CO47	ANRANG, THE THE
	BP 811 ET. ADVANCED INSTRUMENTATION TECHNIQUES	Develops knowledge about the principles and instrumentation of spectroscopic and chromatographic techniques.
	CO48	The Diverge
	BP 812 ET. DIETARY SUPPLEMENTS AND NUTRACEUTICALS	Constructs ideas regarding need and requirements of dietary supplements among different groups in the population.
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Program Outcome

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Program Specific Outcome

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PSO 1: Prepared to implement the knowledge gained during the course of the program from pharmacology, pharmaceutics, medicinal chemistry, pharmacognosy, APHE, communication skills, pharmaceutical analysis, biotechnology, biochemistry, cosmetology and environmental studies.

PSO 2: Develops knowledge of ethical and management principle required to work in a team as well as to lead a team.

PSO 3: Achieve multidisciplinary jobs in the pharmaceutical industries in various branches and would be able to write relevant and effective project reports in multidisciplinary environment in the context of changing technologies.

PSO4 Prepares to communicate easily and effectively. Would be able to perform multitasks in multifields including pharmaceuticals & cosmetic in timebound manner. Research area would be the key element.



Flegdand Dr. Swati Jogdand

Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109.

Course outcomes 2020 - 21

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B Pharmacy

Year	T	Subject	Outcome Via Leader and an and an
100	01	BP101T. HUMAN ANATOMY AND	It establishes an insight related to human body and apply pharmaceutical science to it.
		PHYSIOLOGY-I	Horry Indiana Participant Participant And Andrew Street
		CO1 BP102T. PHARMACEUTICAL ANALYSIS CO2	Students construct fundamentals of preparing different strength solutions and interpretations and may execute in its discipline.
		BP103T. PHARMACEUTICS- I CO3	Students establish techniques and ideas of new dosage forms and combination.
		BP104T. PHARMACEUTICAL INORGANIC CHEMISTRY CO4	It develops the monographs of inorganic drugs and pharmaceuticals.
I yea	r acits	BP105T.COMMUNICATION SKILLS	Constructs soft skills set to work cohesively with the team & develops leadership quality.
30	CO5 BP 106RBT.REMEDIAL BIOLOGY CO6	Establishes knowledge of cell biology classification system, theory of evolution tissue system etc.	
		BP 106RMT.REMEDIAL MATHEMATICS CO7	Constructs calculation techniques
		BP 201T. HUMAN ANATOMY AND PHYSIOLOGY-II CO8	It establishes an insight related to human bo and apply pharmaceutical science to it.
		BP202T. PHARMACEUTICAL	Builds laboratory techniques

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Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109.

ORGANIC CHEMISTRY -I	Course rute more
BP203 T. BIOCHEMISTRY	Constructs biochemical facts
CO10	
BP 204T.PATHOPHYSIOLOGY CO11	Builds a baseline knowledge required to practice medicine safely, confidently rationally and effectively.
BP205 T. COMPUTER APPLICATIONS IN PHARMACY	Constructs use of IT tools in pharmaceutical industry.
C012	Demonstrates physical and biologica
BP 206 T. ENVIRONMENTAL SCIENCES	Demonstrates physical and biological characters of the environment along with socialand cultural.
CO13 CO13	te or
BP301T. PHARMACEUTICAL ORGANIC CHEMISTRY -II	Develops basic knowledge about reactivity, method and mechanism of organic compound
remucts soft shills set to week c 1000	NOTTA DEMONSTRATION CO
BP302T. PHYSICAL PHARMACEUTICS-I	Modifies in various areas of formulation research and development.
CO15 Sewert markey markey	MP DOCRT.R.SMEDIAL
BP 303 T. PHARMACEUTICAL MICROBIOLOGY	Develops information of all categories of microorganisms.
CO16	APPLICATION ALLO
BP 304 T. PHARMACEUTICAL ENGINEERING	Develops pharmaceutical manufacturing skills.



Suidhant College of The dumbare. Tet Mau Dist Runs 4(2109 Principal Principal Siddhant College of Pharmacy Sudumbare, Tal, Maval, Dist.-Pune 412109

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	C017	
II year	BP401T. PHARMACEUTICAL ORGANIC CHEMISTRY –III CO18	Develops knowledge on medicinal and othe uses of organic compounds.
	BP402T. MEDICINAL CHEMISTRY – I CO19	Establishes the student in correlating between the pharmacology of a disease and its cure.
	BP 403 T. PHYSICAL PHARMACEUTICS-II CO20	Develops better insight into various areas o formulation research and development.
	BP 404 T. PHARMACOLOGY-I CO21	Establishes a correlation of pharmacology with other biomedical sciences.
	BP 405 T.PHARMACOGNOSYAND PHYTOCHEMISTRY I CO22	Categorizes herbal formulations
	BP501T. MEDICINAL CHEMISTRY – II CO23	Employ knowledge on structure activity relationships of drugs, importance of physicochemical properties and metabolism of drugs.
1 A	BP 502 T. Industrial PharmacyI CO24	Builds student to understand and appreciate the influence of pharmaceutical additives and various pharmaceutical dosage forms on the performance of the drug product.
III year	BP503.T. PHARMACOLOGY-II CO25	Establishes knowledge of classification & mode of action of drugs.
	BP504 T. PHARMACOGNOSYAND PHYTOCHEMISTRY II	Establishes basic principles of traditional systemof medicine.

SEAL Pune 412100 Principal Principal Siddhant College of Pharmae; Sudumbare. Tal.-Maval, Dist.-Pune 412109.

CO26	61(3)3
BP 505 T. PHARMACEUTIC JURISPRUDENCE CO27	L Establishes knowledge about important legislations related to the profession of pharmacy in India.
BP601T. MEDICI CHEMISTRY – II CO28	L Develops fundamental knowledge on the structure, chemistry and therapeutic value of drugs.
BP602 T. PHARMACOLOG CO29	Establishes diagnostic and classification technique.
BP 603 T. HER DRUGTECHNO CO30 BP 604 T.	
BP 604 T. BIOPHARMACE PHARMACOKIN CO31	
BP 605 T. PHARMACEUT BIOTECHNOLO	AL This course would lead to new biological revolutions in diagnosis, prevention and cure
CO32	and and a second stand of the second stand of the
BP606TPHARM QUALITY ASSU CO33	Management a second
BP701T. INSTR METHODS OF CO34	
designed a spirit of	of even were and a figure

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Principal Siddhant College of Pharmacy Sudumbare, Tal.-Mavah Dist.-Pune 412169.

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V year		
	BP 702 T. INDUSTRIAL PHARMACYII	Builds new ideas related to production of pharmaceutical products.
	C035	PRAIMACYII PRAMINEN
	BP 703T. PHARMACY PRACTICE	Employs the student to provide minor ailments to the patients.
		PRACTICE to the put
	BP 704T: NOVEL DRUG DELIVERY SYSTEMS	Categorizes novel drug delivery system
	CO37	BP TEATY MONYEL INCOG Campana DELIVERY SYSTEMS
1	BP801T. BIOSTATISITCS	Measures applications of Biostatics in Pharmacy.
	AND RESEARCH METHODOLOGY	
	C038	SILTIODOLOCY
	BP 802T SOCIAL AND PREVENTIVE PHARMACY	Relates health issues and their challenges
	CO39	I BEVENTVE PHARMACT
	BP803ET. PHARMA MARKETING	Develops the student for taking a challenging role in Sales and Product management.
	MANAGEMENT	AMPARTAL AND
	CO40	have appeare and ethics
	BP804 ET:	Establishes regulatory aspects and ethics.
1	PHARMACEUTICAL REGULATORY SCIENCE	TRADATION CONTICAL
	CO41	
	BP 805T: PHARMACOVIGILANCE	Develops skills of classifying drugs, diseases and adverse drug reactions.



Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Punc 415.09

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IV year	in with many or bourt in starter	and shines I have to the second state
	BP 702 T. INDUSTRIAL PHARMACYII	Builds new ideas related to production of pharmaceutical products.
	C035	T ALL AND A THE ACT DESCRIPTION
	BP 703T. PHARMACY PRACTICE	Employs the student to provide minor ailments to the patients.
	CO36	Tare Tarty and TL DIREO Categorize
	BP 704T: NOVEL DRUG DELIVERY SYSTEMS	Categorizes novel drug delivery system
	CO37	America A Districts Manuel
	BP801T. BIOSTATISITCS AND RESEARCH METHODOLOGY	Measures applications of Biostatics in Pharmacy.
	CO38 Marks right from recent data	THE HEAT BOCKALLAND
	BP 802T SOCIAL AND PREVENTIVE PHARMACY	Relates health issues and their challenges
	CO39	FREE CHARMAN DEVELOP
	BP803ET. PHARMA MARKETING MANAGEMENT	Develops the student for taking a challenging role in Sales and Product management.
	CO40	Patability
	BP804 ET: PHARMACEUTICAL REGULATORY SCIENCE	Establishes regulatory aspects and ethics.
1	CO41	Care avenue a
	BP 805T:	Develops skills of classifying drugs, diseases

Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109.

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-	CO42	Eregene Oulcon
18 miles	BP 806 ET. QUALITY	Develops standardization of herbal drugs
- mode	CONTROL AND	is as such success, stallpointer & roug constraint,
3 m vi	STANDARDIZATION OF	ed diseases analytical skills, drig molecules (A
10 01	HERBALS	d gradients second grad freeder analysis
CIMPCA	CO43	and armen enter of Jone on human brid
Invite	demand shibits much automotion	whod manual is such as in a second
	BP 807 ET. COMPUTER	Develops rational drug design process.
	AIDED DRUG DESIGN	
Access of	CO44	Research Azatraha Develops Inc. Azatraha in
		Theorize complete cell biology
	BP808ET: CELL AND	Theorize complete cen blology
SILVER .	MOLECULAR BIOLOGY	Design & Development of dousge former Desc
Insur	(Elective subject)	and he moved by the planmary students in the
	CO45	and an amina similar and an and
_	BP809ET. COSMETIC	Develops ideas of new formulations with
states and	SCIENCE(Theory)	different combinations.
bun ab	SCIENCE(Theory)	reb meteods including design of experiments
	CO46	devised biley ablema to maneradar se la see
1005 200	BP810 ET.	Creates hand in preclinical animal handling
aminut a	PHARMACOLOGICAL	and the second s
	SCREENINGMETHODS	ers merneds with an understanding of the binner
* 11 A	care shout do no montost would also	and's many independents related to their stud
1.1	CO47	menominal industry, pharmacovigilance, regulate
and the co	BP 811 ET. ADVANCED	Develops knowledge about the principles and
adudit	INSTRUMENTATION	instrumentation of spectroscopic and
has and	TECHNIQUES	chromatographic techniques.
fiect and	CO48	the at Low and the set of the
a and a	040	
	BP 812 ET. DIETARY	Constructs ideas regarding need and
	SUPPLEMENTS AND	requirements of dietary supplements among different groups in the population.
a alarm	NUTRACEUTICALS	
	CO49	Tr Eavierances and ansistmetility: Locale 1
	The people of the society.	a standard make and make an improve of it o

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Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109.

Program Outcome

PO1: Pharmaceutical Knowledge:- Students achieve a deep knowledge regarding human body, its related diseases, analytical skills, drug molecules (Active Pharmaceutical Ingredients) along with excipients, natural drug resources, chemistry involved in API including synthesis of commonly used drugs, effect of drug on human body, toxicity and impurity profile, ADME studies of drugs (behavior of drug in human body), dosage form studies including novel approaches, designing and development of formulation stability studies, analysis etc

PO2: Research Analysis: Develops knowledge in research field to make new relevant discoveries and to identify new entities.

PO3: Design & Development of dosage forms: Describes preparation of various dosage forms that could be prepared by the pharmacy students in the pharmaceutical companies for the ease of patients and to optimize formulations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.

PO5: Modern methods usage: Create, select, and apply appropriate techniques, resources and modern methods with an understanding of the limitations and its usage. The student also learns to handle many instruments related to their studies which would help them work in a Pharmaceutical Industry, pharmacovigilance, regulatory requirements, legal processes etc.

PO6: Pharmacy and society: Pharmacist provide complete health care data and practices to the people of the society and guide them to be healthy. The student also learns drug distribution system, patient counseling, industrial laws etc. Students achieve expertise in storage and distribution of drugs with all precautions and in-depth knowledge of dose, adverse effect and other health related issues to deal with ambulatory and IPD patients in hospitals and also in public and achieve responsibility of computing profession and society.

PO7: Environment and sustainability: Locate the impact of the professional pharmacist in society and environment and make an impact of it on the people of the society.

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Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109. **PO8:** Ethics: Justify & apply ethical principle and commit to professional ethics and responsibilities and norms of the pharmacy practice. Student is also trained in ethical behavior with physician, nurses and other paramedical staff for protecting patient's health.

PO9: Individual and team work: Function effectively as an individual and as a member or leader in diverse teams acts as a multidisciplinary person in every context. Students will be able to demonstrate rigorous and independent thinking and encourage participatory decision making in teams.

PO10: Communication: Develops Communication effectively on pharmaceutical activities with the community and with society.

PO11: Life-long learning: Recognize the need and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change and implement those technology by gaining experience.

PO12: Social Interaction: Being a public welfare job, a pharmacist would be able to interact with the people in a better way to cure them and make them feel healthy also investigate and evaluate the general state of public health conditions and concerns and develop and apply appropriate programs of action within program content area

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Siddhant College of Pharmac Sudumbare, Tal.-Maval, Dist.-Pune 412109.

Program Specific Outcome

Some of the program specific outcomes are mentioned below:

PSO 1: Prepared to implement the knowledge gained during the course of the program from pharmacology, pharmaceutics, medicinal chemistry, pharmacognosy, APHE, communication skills, pharmaceutical analysis, biotechnology, biochemistry, cosmetology and environmental studies.

PSO 2: Develops knowledge of ethical and management principle required to work in a team as well as to lead a team.

PSO 3: Achieve multidisciplinary jobs in the pharmaceutical industries in various branches and would be able to write relevant and effective project reports in multidisciplinary environment in the context of changing technologies.

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Principal Siddhant College of Pharmacy Sudumbare. Tal.-Maval, Dist.-Pune 412109.

		B.Pharm I Year	2019-20	1000
	Proventing and the second second	Semester		100 000
Course Code	Course Name	Course Outcome No.	Course Outcome Description (as per New Syllabus introduced from Session 2019-20)	1 acates
	In nothing on the residue of the	BPT101.1	After completion students should be able to understand basic terminologies used in Anatomy and Physiology, structure of and function of cell parts, transport acrossplasma membrane and types of tissue	
	the same new reaction in the local day	BPT101.2	To understand anatomy and physiology of Integumentary system, Skeletal system with joints	
BPT101	Human Anatomy & Physiology I (Theory)	BPT101.3	After completion students should be able to describe physiology of lymphatic system and blood with its disorders.	1
1.00	The second se	BPT101.4 ~	To understand structure and function of special sense organ and peripheral nervous system	
	a finite and the second second	BPT101.5	The students should be able to understand anatomy and physiology of cardiovascular system and associated disorders.	-
	and a second	BPP107.1	Upon the completion students should be able to identify different types of tissue and bones	
BPP107	Human Anatomy & Physiology I (Practical)	BPP107.2	Upon the completion students should be able to determine different haematological and cardiovascular parameters	
	Antonio I orbital and the relation	BPT102.1	Students should be able to explain concept and types of pharmaceutical Analysis along with methods of expressions, methods of preparations and standardisations of different Molar and Normal solutions.	
	and the second local data and the second local data	BPT102.2	Student should be able to explain concepts of Errors, Accuracy, Precision and sourcesof Impurities in Pharmaceutical Analysis. Also should be able to explain methods and purpose of limit tests.	
BPT102	Pharmaceutical Analysis (Theory)	BPT102.3	Students should be able to explain theories of Acid Base Indicators, classify types of Acid Based titrations, interpret and identify neutralization curves and explain non- aqueous titrations.	
	And the other states in the second se	BPT102.4	Students should be able to explain techniques and applications of precipitation, complexometric, Gravimetric, Redox and Analytical techniques.	
	paratis a state state a	BPT102.5	Students should be able to understand and explain Electrochemical Methods of Analysis like Conductometry, Potentiometry, and Polarography.	
	Bundah Martine Arris 1 dari	BPP108.1	Student should be able to understand, explain and perform concepts of limit test.	
BPP108	Pharmaccutical Analysis (Practical)	BPP108.2	Student should be able to understand and perform methods of preparations and standardisations of different solutions.	en
lagion	29	BPP108.3	Students should be able to perform Assays of different chemicals. Student should be able to understand and perform Electrochemical AnalyticaP methods like Conductometry & Potentiometry. Siddhant C	- inal

			the second	
		BPT103.1	After completion students should be able to understand the history of profession of pharmacy, basic of different dosage forms, way of handling prescription and calculate dose calculations.	
BPT103	Pharmaceutics I (Theory)	BPT103.2	To understand pharmaceutical calculations, classification of powders, liquid dosage forms.	
	Alterna in a second of an and a second of	BPT103.3	After completion students should be able to understand preparation of monophasic liquid dosage forms, suspension and emulsions.	
	and a start of the second	BPT103.4	To understand formulation and evaluation of suppositories, basics of pharmacentical incompatibilities.	
	the second s	BPT103.5	The students should be able to prepare and evaluate semisolid dosage forms.	
	A DESCRIPTION OF THE PARTY OF THE PARTY OF	BPP109.1		
BPP109	Pharmaceutics I (Practical)	BIT 109.1	After completion students should be able to Understand and Carry out the formulation of dosage forms like syrups, elixirs, linctuses, solutions. powders, Gargles and Mouthwashes.	
	Ar source in postion of the spin or much section of	BPP109.2	To understand and Carry out the formulation and evaluation of dosage forms like suspensions, emulsions, suppositories and semisolids.	
	tana ana ana ana ana ana ana ana ana ana	BPT104.1	Student shall be able to know the sources of impurities and methods to determine the impurities	
	formation and the end of these reportion and	BPT104.2	Students shall well acquaint with principles and procedures of limit test of different impurities.	
BPT104	Pharma Inorganic Chemistry I (Theory)	BPT104.3	Student shall familiar with different classes of inorganic pharmaceuticals and their functions	
	a contract which and a second of the second se	BPT104.4	Student shall understand medicinal and pharmaceutical importance of inorganic compounds.	
	 Statistical and a second state of the second state of	BPT104.5	Student shall be identify different anions, cations and know their role in physiologicalacid base balance and also familiar with uses of different inorganic compounds.	
	and a first state and state of the state	BPP110.1	Student should able to know principles of limit tests and perform limit test and detect impurities of various ions like chloride, sulfate, iron, lead and arsenic.	
BPP110	Pharma Inorganic Chemistry I (Practical)	BPP110.2	Student will able to identify various inorganic substances by performing various identification tests.	
		BPP110.3	Students will be able to perform various tests for purity of inorganic substances.	
	to an interest in the second section of the	BPP110.4	Student will able to prepare inorganic pharmaceuticals by different preparation reactions.	19.
	Freeze	BPP110.5	Student will able to know advantages of inorganic substances as pharmaceuticals.	Y
16giapia		BPTIOS 1		incipal
Ingingia Ingeneration Ingeneration	SEAL Pune state	BPT105.1	Upon completion students should understand the behavioral need Students and C Pharmacist tofunction effectively in the areas of pharmaceutical operation	ollege o
MARTIN STREET	B 12109 8	BPT105.2	through effective communication (Verbal and Non Verbal) After completion students should manage the team as a team player & Know the elements, styles and barriers of communication.	Pune 4121

	the second se	BPT105.3	kan Road, Tal: Maval, Dist: Pv 12109	
BPT105	Communication Skill (Theory)	671103.3	upon completion student should know the importance of globa instanting states	
		BPT105.4	After completion students should know the essentials of good writing skills and know the dos and dun'ts of formal written communication.	
		BPT105.5	Upon Completion student should develop interview skills, Leadership qualities and essentials of group discussions.	
BPP111	Communication Skill (Practical)	BPP111.1	To become a good communicator in real life situations, and have a command overones languages through forming grammatically correct sentences and prefect pronunciations.	
	DESERVICE STATES	BPP111.2	To have good and effective writing skills, know the proper communication etiquettes and excellent presentation skills.	
	and a state of the	BPRBT106.1	Upon completion of subject studentswill beable to know the classification and salient features of five kingdoms of life.	
BPRBT10	Remedial Biology (Theory)	BPRBT106.2	Upon completion of subject students will heable to understand the basic components of anatomy & physiology of plant.	
0	and the second second second	BPRBT106.3	Upon completion of subject students will beable to know understand the basic components of anatomy & physiology of animal with special reference to human.	
BPRBP11	Remedial Biology (Practical)	BPMTP112.1	Upon completion of subject students will beable to understand microscopic study andidentification of tissues of plant, cell and its inclusions, detailed study of frog by using computer models.	
2	entrate interest of the second se	BPMTP112.2	Upon completion students will beable to identify different types of bones and determine different haematological and cardiovascular parameters.	
and the second second	And an and an an and an an an an an	BPRMT106.1	Student should understand the theory and applications of partial fraction, logarithms, function, limits and continuity in pharmacy.	
1	the second is more living the basis	BPRMT106.2	Student should be able to solve the problems related to matrices and ddeterminants.	
BPRMT1	Remedial Math (Theory)	BPRMT106.3	Student should be able to solve the problems related to derivative and it's functions.	
		BPRMT106.4	Student should be able to apply concepts of analytical geometry.	
	to de place, estimizante los portestes to	BPRMT106.5	Student should be able to solve the problems related to differential equations and laplace transform.	
2	the standard of the standard of the standard of the	B.Pharm I Y	car	
-	and the second second second second second second	Semester		
Course Code	Course Name	Course Outcome No.	Course Outcome Description (as per New Syllabus introduced from Session 2019-20)	ser
ist en	Contraction of the Lorison de los of the	BPT201.1	After completion students should be able to understand the gross morphology Side Tenforme, digestive, nervous, respiratory, urinary and reproductive system.	Principa
BPT201	Human Anatomy & Physiology II (Theory)	BPT20 200 S	Lifen champletion students should understand physiology of endocrineSiddha EA acry sus, ligestive, respiratory, urinary and reproductive system. Sud	nt College o umbare. Tal. istPune 41

		BPT201.4	Upon completion students should be able to explain basics of genetics.	
	The second Division of Description	BPP207.1	Upon the completion students should be able to determine vital capacity, tidal volume, body temperature and basal mass index.	
BPP207	Human Anatomy & Physiology II (Practical)	BPP207.2	Upon the completion students should be able to demonstrate general neurological examinations and feedback mechanisms	
	T	BPT202.1	understand the nomenclature, classification and isomerism.	
		BPT202.2	write the methods of preparation of alkane. alkene, dienes , alkyl halides , alcohol , carbonyl compounds ,carboxylic acids and aliphatic amines	
BPT202	Pharmaceutical Organic Chemistry I (Theory)	BPT202.3	Will be able to explain the reactions, name the reactions orientation and reactivityshown by alkane, alkene, dienes, alkyl halides, alcohol, carbonyl compounds, carboxylic acids and aliphatic amines.	
	and the second s	BPT202.4	write the structure and uses of important reagents from the following categories of organic compounds like alkane. alkene, dienes, alkyl halides, alcohol, carbonyl compounds, carboxylic acids and aliphatic amines	
		BPT202.5	will be able to understand qualitative tests for alcohol and amines	
		BPP208.1	perform systematic qualitative analysis of unknown organic compounds	
BPP208	Pharmaceutical Organic Chemistry I (Practical)	BPP208.2	Will be able to prepare the solid derivatives from organic compounds	
Direct	Time nerventen sog	BPP208.3	Do the construction of molecular models.	
		BPT203.1	Students should be able to understand chemical nature and biological roles of	
	and the second second second second second	Brizosa	Biomolecules and concepts of Bioenergetics.	
		BPT203.2	Students should be able to understand and explain Carbobydrate Metabolism and Biological Oxidation.	
BPT203	Biochemistry II (Theory)	BPT203.3	Students should be able to understand and explain Lipid Metabolism and Amino Acid Metabolism.	
		BPT203.4	Students should be able to understand and explain Concepts of Nucleic Acid Metabolism and Genetics Information Transfer.	
		BPT203.5	Students should be able to understand and explain Concepts of Enzymes.	
	the literation of the second s	BPP209.1	Students should be able to understand and perform Qualitative Analysis of Carbohydrates, Identifications of proteins and Quantitative analysis of reducing sugars and proteins.	5
BPP209	Bicilianistry II (Practical)	BPP209.2	Students should be able to understand andperform Qualitative analysis of abnormalurine constituents and determination of blood components like	Principal
	Siddhant College	BPP209.3	Students should be able to understand and perform preparation of buffer solution, enzymatic hydrolysis of starch.	Principal College of P mbare, TalN
History	(SEADDARE OF P	BPP209.4	Students should be able to understand and perform preparation of butter solution, enzymatic hydrolysis of starch. <u>Sidelhant</u> Students should be able to understand and perform study of salivary anylased up activity.	-ine 412

		BPT204.1	Upon completion of subject students will be able to explain mechanisms	
	and and a state of the second s	BPT204.2	involved in the process of inflammation and infectious diseases. Upon completion of subject students will be able to explain basic principal of cell injury and adaptation.	
BPT204	Pathophysiology (Theory)	BPT204.3	Upon the completion of subject students will beable to explain pathophysiology of diseases of cardiovascular, respiratory, renal, endocrine, nervous and gastrointestinal system.	
		BPT204.4	Upon the completion of subject students will be able to explain principal of cancer, pathophysiology of hematological diseases, sexually transmitted diseases and diseases of bones and joints, Inflammatory bowel diseases, jaundice and liver disease.	
	and the first of the second second second second	BPT205.1	To know the number systems, its conversion, calculations and the concept of the information systems and software's used in different field and its processes.	
		BPT205.2	To know the various types of application of computers in pharmacy	
BPT205	Computer Application in Pharmacy (Theory)	BPT205.3	To understand the various web technologies and the different databases and various applications of databases in pharmacy.	
	ter data and las and an	BPT205.4	To know the Bioinformatics Databases, Concept and Impact of Bioinformatics in Vaccine Discovery and know the Computers as data analysis in Preclinical development like CDS, LIMS, TIMS etc.	
	All second and the second s	Conduction in consideration	I want the second	
1	and in the second second second second	BPP210.1	To Design questionnaires, invoice tables, drug information storage and its retrival and its side effects, using word process	
BPP210	Computer Application in Pharmacy (Practical)	BPP210.2	To Create a personal HTML webpage, create invoice tables, Generate reports frompatients database, and Exporting Tables, Queries, Forms and Reports to web pages and to XML pages.	
	and the second set of the second statements	and a second second second		
	and and a series	BPT206.1	After completion students should be able to understand our environment, renewable and non-renewable natural resources and the multidisciplinary nature of studies.	AN Ducation Filling
BPT206	Environmental Studies (Theory)	BPT206.2	The students should be able to know, understand and explain about the natural resources like forest, water, minerals, food, energy and land, the problems associated with them and role of an individual in their conservation.	Siddhan, EAL Umbare 412109
Brize		BPT206.3	The students should be able to understand and explain the concept of an ecosystem, different types of ecosystems like forest, grassland, desert and aquatic, their structure, functions and characteristics.	80/0050103
ABE	The second second second second	BPT206.4	The students should be able to know, understand and explain about various environmental pollutions like soil, water and air and preventive measures for them.	101
		B.Pharm II	Year	2
		Semester	AIL	Principal
Course	Course Name	Course Outcome	Course Outcome Description (as per New Syllabus introduced from Sessi@ldd 2019-20)	hant College of Pl udumbare. TalMa

	and a second	BPT301.1	write the structures ,names and types of isomerism of benzene ,phenols ,aromatic amines ,aromatic acids ,fats and oils polynuclear hydrocarbons and cycloakanes	
	and the second s	BPT301.2	write the methods of preparation of benzene ,phenols ,aromatic amines ,aromatic acids ,fats and oils polynuclear hydrocarbons and cycloakanes	
BPT301	Pharma. Organic Chemistry II (Theory)	BPT301.3	Will be able to explain reactivity orientation and theories regarding stability of thereactions shown by benzene ,phenols ,aromatic amines ,aromatic acids ,fats and oils poly nuclear hydrocarbons and cycloalkanes.	
	and the second	BPT301.4	write the structure and uses of DDT.Saccharine .BHC,Chloramine ,phenols,cresols,resorcinol,naphthols,aryl diazonium salts ,diphenylmethane, triphenylmethane.	
	to any other and the formation of the second	BPT301.5	will be able to understand analytical tests for phenols and fats and oils	
-		BPP305.1	do the experiments on recrystallization and steam distillation	
BPP305	Pharma, Organic Chemistry II (Theory)	BPP305.2	determine the oil values and perform standardization of reagents	
011000		BPP305.3	Will be able to do the synthesis of various organic compounds	
		to al conditional la sure		
	and even (exceptional large on of discourse many other Commission in Calmannia on the Pereference (1996) con	BPT302.1	Upon completion of syllabusstudents will be able to Understand various physicochemical properties of drug molecule, able to identify state and all basic phenomenon related to drug.	
	al bas mouth and a vite settle settle	BPT302.2	Upon completion of syllabus students will be able to Apply their knowledge related to basics of drug by simple methods and demonstration.	
BPT302	Physical Pharmaceutics I (Theory)	BPT302.3	Upon completion of syllabusstudents will be able to Understand different principles and laws related to basic characteristics of drugs.	
	Strang Table Deeres Parager Barenses	BPT302.4	Upon completion of syllabus students will be able to Understand different phenomenon's and structure and nature of drugs.	
	The breening in devid his	BPT302.5	Upon completion of syllabus students will be able to Get better insight in to various areas of formulations, research and development.	
1000	and lock restricted in the shire local op	BPP306.1	Upon completion of address of data the back to be a	
-	the total do while the first have been a series of	B11300.1	Upon completion of syllabus students will be able to demonstrate the concept of Ph, Pka, solubility density, viscosity, etc	
BPP306	Physical Pharmaceutics I (Practical)	BPP306.2	Upon completion of syllabus students will be able to demonstrate miscible, partially miscible liquid and all practical aspect regarding solubility of liquid.	
	and the income of (radial)	BPP306.3	Upon completion of syllabus students will be able to demonstrate different equations regarding Ph, Pka and solubility.	
		BPP306.4	Upon completion of syllabus students will be able to demonstrate CMC of various surfactants.	1
	the same of a line of the same of the	BPT303.1	Fundain stanification Mantification of the	Lusts
124-		DI 1303.1	Explain classification, identification, nutritional requirement, isolation and preservation methods for pure culture of bacteria including quantitative measurement of bacterial growth. Summarize various types of microscope.	Aucation ,
ei ei		BPT303.2	Explain methods, evaluation, equipment required and testing of pharmaceutical products for sterilization.	134

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ddhant College of Pharm Sudumbare, Tal.-Maval, Dist - Dise 412109.

		BPT303.3	Understand morphology, classification, reproduction/replication and cultivation of fungi and virus.	
BPT303	Pharmaceutical Microbiology (Theory)	BPT303.4	Explain classification, mode of action, factors influencing and evaluation of Disinfection.	
		BPT303.5	Understand laminar flow equipment, sources, methods and classification of aseptic area including general aspects related environment cleanliness. Explain principles andmethods of various microbiological assays also Assessment and testing of new antibiotics.	1023-906
		BPT303.6	To Know types, factors, sources and assessment of microbial contamination and spoilage. Preservation and evaluation of formulation containing antimicrobial agents. To study growth and procedure for cell culture and its applications.	
BPP307	Pharmaceutical Microbiology (Practical)	BPP307.1	Study and describe equipment's, sterilization of glassware, preparation and Culture media, sub culturing, nutrient stabs and slants, multiple streak plate and othertechniques also microbiological assay.	
		BPP307.2	Identify the bacterial morphology using staining techniques and acquire knowledge on the principles of biochemical tests.	
	t an Provide Contra or and the Cont	BPT304,1	Understand importance of various unit operations used in pharmaceutical industries, importance of size reduction, powder size and size separation, principle, constructionand working of equipment's used in size reduction and size separations.	
AL LEL	and the second second of the state and her they been	BPT304.2	Understand the various processes involved in pharmaceutical manufacturing processes like evaporation, distillation and drying	
BPT304	Pharmaceutical Engineering (Theory)	BPT304.3	Develop knowledge of unit operations, mixing, mass transfer and flow of fluids and theories as well as basic mechanisms; understand principle, construction and working of equipments used in mixing, mass transfer and flow of fluids.	
	and a state of the second	BPT304.4	Comprehend significance of various equipments used in manufacturing processes like filtration and centrifugation	
		BPT304.5	Appreciate the various preventive methods used for corrosion control in pharmaceutical Industries. Also factors affecting material selection.	
		BPP308.1	Build up skill and ability to analyze; particle size distribution, effect of filter aid on filtration rate.	
BPP308	Pharmaceutical Engineering (Practical)	cering (Practical) glass, heat transfer coefficie of air.	Determination of radiation constant of brass, iron, unpainted and painted glass, heat transfer coefficient, moisture content and loss on drying, humidity of air.	
	And the second se	BPP308.3	Demonstration of various mills.	
all and the second		BPP308.4	Construction of drying curves.	
Eratia - Log		B.Pharm II		A
Contract of the local		Semester I	Course Outcome Description (as per New Syllabus introduced from Session	-4-
Course Code	Course Name	Course Outcome No.	2019-20)	Principal nt College of Phar

	An and some the second s	BPT401.1	write the stereo chemical aspects of organic compounds and write stereo	
		D.D.T. LOL 2	chemical reactions including optical and geometric isomerism	
	1. Manufactory and a Manager of Page and a strain distance of the	BPT401.2	write the structures ,names and classifications of heterocyclic compounds	
BPT401	Pharma. Organic Chemistry III (Theory)	BPT401.3	Will be able to explain reactivity orientation and theories regarding stability of the reactions shown by heterocyclic compounds	
Contract of	and the second sec	BPT401,4	write the methods of preparation of of heterocyclic compounds	
	make seeing with the set of an and the set of the set of the set	BPT401.5	understand the and uses of heterocyclic compounds	
	and the second sec	BPT401.6	will be able to understand reactions of synthetic importance	
		BPT402.1	Students should be able to explain the effects of physicochemical properties on drug actions	
	the serie of the second s	BPT402.2	Students should be able to explain the process of metabolism, influence of metabolic profile of drug and their impact on biological system.	
BPT402	Medicinal Chemistry I (Theory)	BPT402.3	Students Should be able to explain synthetic procedure for selective compounds of different categories.	
		BPT402.4	Students should be able to classify different categories of agents based on their chemical natures.	
	and other, provide the state of	BPT402.5	Students should be able to explain Physicochemical properties, SAR, Metabolism and Mechanism of Action of Adrenergic, Cholinergic, and CNS agents.	
		PRESSER		12/
	Part of the second of the seco	BPP406.1	Students should be able to understand and explain methods of synthesis for intermediates and drugs.	upucation 7
BPP406	Medicinal Chemistry I (Practical)	BPP406.2	Students should be able to explain physicochemical characterisation and recrystallization methods for intermediates and drugs.	
		BPP406.3	Students should be able to understand and perform the principle and procedure of quantitative determination of drugs in different dosage forms.	
	A lot and a second seco	BPP406.4	Students should be able to understand the principle and procedure of determination of partition co-efficient of drugs.	
		BPT403.1	Upon completion of syllabus students will be able to deal with the concept of	
BPT403	we we want to see the second second set at the second	n to your fs han in to a	various physical, physicochemical properties and principal involved in dosage form formulation.	
	A spectra of the second s	BPT403.2	Upon completion of syllabus students will be able to get better insight in to various areas of formulation research and development.	Princip ddhant College
	Physical Pharmaceutics II (Theory)	BPT403.3	Upon completion of syllabus students will be able to demonstrate use of formulation of various dosage form.	
		BPT403.4	Upon completion of syllabus students will be able to describe the fundamental and derived properties of various dosage form.	
and and		BPT403.5	Upon completion of syllabus students will be able to understand stability and shelflife, calculate expiry of various dosage form.	budumbare. Diet .Print
Pancip		BPP407.1	Upon completion of syllabus students will be able to demonstrate concept of particle, size, and its use in formulation of various dosage form.	Line

	AD-STREET	BPP407.2	Upon completion of syllabus students will be able to demonstrate microscopic and micromeritic characteristic of dosage form.	
BPP407	Physical Pharmaceutics II (Practical)	BPP407.3	Upon completion of syllabus students will be able to demonstrate stability testing of various dosage form.	
		BPP407.4	Upon completion of syllabus students will be able to demonstrate HLB value, orderof reaction and Handel various equipment like Brookfied viscometer, stability chamber etc.	
1	and a second sec	BPT404.1	Upon completion students will be able to Describe the scope of pharmacology and signify routes of drug administration.	
	An other and the story of the s	BPT404.2	Upon completion students will be able to Explain the Principles of absorption, distribution, metabolism and excretion of a drug, enzyme induction, enzyme inhibition and kinetics of elimination and the relationship between drug and its receptors, mechanism of action, therapeutic effect, drug interaction and adverse drugreaction.	
	and a star and started married with the start	BPT404.3	Upon completion studentswill beable to explain Drug discovery and clinical evaluation of new drugs, preclinical evaluation phase, phases of clinical trials and pharmacovigilance.	
BPT404	Pharmacology I (Theory)	BPT404.4	Upon completion students will be able to Understand organization and function of ANS Parasympathomimetics, parasympatholytics, Sympathomimetics, sympatholytics, Neuromuscular blocking agents and skeletal muscle relaxants, Local anesthetic agents and Drugs used in myasthenia gravis and glaucoma.	on Trust's g
	Aberlinen belatte og ogenh dærer strude	BPT404.5	Upon completion students will be able to explain Neurohumoral transmission in the C.N.S. and various neurotransmitters like with GABA, Glutamate, Glycine, serotonin, dopamine. Pharmacology of anesthetics, Sedatives, hypnotics and centrallyacting muscle relaxants, Anti-epileptics, Alcohols and disulfiram	CCPAM Educar
	remark and explore to interesting tring, there and \$100 of particular terms are preferring and \$100 of particular terms and and a particular terms are and a second terms are and a second terms are and a second term are and and the second terms are and a second term are and a second term are and a second term are and a second term are and a second term are and a second term are and a second term are and a second term are and a second term are an are an are an are an are an are an are an are an are an are an	BPT404.6	Upon completion students will be able to explain Psychopharmacological knowledge in prevention and treatment of various diseases like antipsychotic, antidepressant, anti- anxiety, anti-manics and hallucinogens, drugs used in Parkinsons and Alzheimer's disease, CNS stimulants and nootropics, Opioid analgesics and antagonists, drug addiction, drug abuse, tolerance and dependence.	and active activ
	an important over 1. State in the second of	BPP408.1	Introduction to experimental pharmacological instruments, laboratory animals as per CPCSEA guidelines. Demonstration of different routes of drug administrationin rats and mice and techniques of blood withdrawal, serum and plasma separation, anesthetics and euthanasia used for animal studies	
BPP408	Pharmacology I (Practical)	BPP408.2	Demonstration of stereotype and anti-catatonic activity, anxiolytic activity of drugsusing rats/mice, local anesthetics by different methods and effect of hepatic microsomal enzyme inducers on the phenobarbitone sleeping time in mice.	11
10 april 103 a		BPP408.3	Demonstration of Effect of drugs on ciliary motility of frog ocsophagus, rabbit eye,skeletal muscle relaxants using rota-rod apparatus, locomotor activity using actophotometer, Anticonvulsant effect by MES and PTZ metbody drugs	Principal

	and the second s	BPT405.1	My student should understand definition, history, development and scope of pharmacognosy along with the sources, classification and quality control of	
1.00	state and management or date or free dates	- main and a state of the second	drugs obtained from natural sources.	
	and a set of the set o	BPT405.2	My student should be able to explain cultivation, collection, processing and storage of crude drugs along with methods of improving crop variety and the conservation ofmedicinal plants.	
BPT405	Pharmacognosy & Phytochemistry-I (Theory)	BPT405.3	My student should understand different aspects of plant tissue culture along with application of plant tissue culture in pharmacognosy.	
	and a second	BPT405.4	My student should be able to describe role of pharmacognosy in allopathic as well as traditional systems of medicine and able to explain different aspects of secondary metabolites along with its classification and eamples.	
	a protection of a fight have the state and	BPT405.5	My student should know some of the specialized plant products like allergens, fibres, hallucinogens and teratogens, along with different aspects of primary metabolites, its classification and examples.	
	the second second second second second	line word to and have	Start C. Link MR	
	Warning (a) - warning a physical states and	BPP409.1	My student should be able to analyse and identify unorganised crude drugs of natural origin by means of chemical tests.	
	in others Panyain - manager 1 - 5	BPP409.2	My student should be able to determine different types of leaf constants.	
BPP409	Pharmacognosy & Phytochemistry-I (Practical)	BPP409.3	My student should be able to evaluate quantitative microscopical characteristics of crude drugs.	1
100	and the second se	BPP409.4	My student should be able to determine different physical constants of crude drugs.	
5	and a state of the	BPP409.5	My student should be able to evaluate crude drugs by official methods.	11
85123	anten inder and the state of the month	B.Pharm III	Year	1
ST 13	and do and a second product of the sales from	Semester	V	
Course Code	Course Name	Course Outcome No.	Course Outcome Description (as per New Syllabus introduced from Session 2019-20)	
	all have a property second of the state of the second seco	BPT501.1	Students should be able to understand and explain Development, Classification, Mechanism of Action, Uses and SAR of Anti-histaminic, Proton Pump Inhibitors, Anti-neoplastic agents and anti metabolites.	
BPT501	Medicinal Chemistry II (Theory)	BPT501.2	Students should be able to understand and explain Development, Classification, Mechanism of Action, Uses and SAR of Anti-Anginals, Diuretics and Anti- hypertensive.	
DF1501	Anonemini Cheanon y in Crinedry)	BPT501.3	Students should be able to understand and explain Development, Classification, Mechanism of Action, Uses and SAR of Anti-Arrhythmic, Anti- hyper lipidemics, Co- agulants and Anti-coagulants, Drugs used in CHF.	
		BPT501.4	Students should be able to understand and explain Development, Classification, Mechanism of Action, Uses and SAR of Drugs Acting on Endocrine System.	2/
- Sel		BPT501.5	Students should be able to understand and explain Development, Classification, Mechanism of Action, Uses and SAR of Anti-diabetics and local anaesthetics dia Students	Princi

17	Ginetics, courter a possible descent special in the	BPT502.1	Explain and demonstrate various preformulation parameters including	7
		BPT502.2	Physical and Chemical properties of drug substance required for formulation Describe classification, formulation, processing problems, Equipment, required for tablets and tablet coating and their evaluation	
		BPT502.3	Explain formulation, manufacturing considerations, Filling, packaging, and evaluation of syrups, elixiers, suspensions, emulsions	
BPT502	Industrial Pharmacy I (Theory)	BPT502.4	Explain and summarize, formulation, Filling, packaging , storage and Evaluation of hard and Soft capsules	
DITOOL	industrial a mature y ((incory)	BPT502.5	Understand and describe types, formulation, filling, sealing, evaluation of various	-
		BPT502.6	types of parenterals and Opthalmic dosage forms Understand formulation of various types of cosmetic preparations	
		BPT502.7	Explain and understand formulation, containers, evaluation, stability study, and Ouality control of aerosols	
		BPT502.8	Understand materials for containers, study of factors, legal and official requirements, stability aspects and quality control of packaging material	
	No. in classical in addition	DDDCoc 1	To carry out preformulation study various drugs	
Sure.		BPP506.1	To prepare and evaluate Paracetamol/Aspirin tablet/Tetracycline capsules/Calcium Gluconate injection/Ascorbic acid injection	
State 1		The local differences in the	To formulate and evaluate Eye drop/ Eye ointment	1
BPP506	Industrial Pharmacy I (Practical)		To formulate cold cream/ vanishing cream	Trust
1911		THE NAME OF TAXABLE PARTY.	To carry out evaluation of glass containers	1/ 30010 0
124			To evaluate marketed tablets / capsules	A Jan Call
			Classification of drugs along with their mechanism of action, receptor, adverse	M WAR
		BPT503.1	effect, drug interaction, contraindication and therapeutic uses for the treatment of cardiovascular diseases and haemopoeitic system/disoders.	Narmacy 20
BPT503		BPT503.2	Classification of drugs along with their mechanism of action, receptor, adverse effect, drug interaction, contraindication and therapeutic uses of drugs acting on renalsystem.	
	Pharmacology II (Theory)	BPT503.3	Classification of drugs along with their mechanism of action, receptor, adverse effect, drug interaction, contraindication and therapeutic uses of hormones/drugs acting on endocrine system/disorders.	the second
		BPT503.4	Classification of drugs along with their mechanism of action, receptor, adverse effect, drug interaction, contraindication and therapeutic uses of autacoids, its analogue and blockers.	
1 as	tradium model and and work with the	BPT503.5	Definition of bioassay, its principle, applications, types and standard bioassay methods for some pharmacological agents	- 19
1	Little anime	BPP507.1	Describe thecomposition of physiological salt solutions used in experimental	Deinain
16GIOnna		Dirouri	pharmacology. Understand basic principles of bioassay, bioassay of various drugs. Siddhar	Principa

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	And the second s	BPP507.3	Understand performance of isolated experiments using various isolated preparation and the effect of different drugs on the concentration response curves.	
	and the second s	BPP507.4	Study the preclinical screening of various drugs.	
	And Alexandra an	BPT504.1	My student should understand basics of metabolic pathways and formation of Secondary metabolites through those pathways.	
	and the second s	BPT504.2	My student should be able to describe different aspects of secondary metabolites along with pharmacognostic details of crude drugs from which they obtained.	
BPT504	Pharmacognosy & Phytochemistry II (Theory)	BPT504.3	My student should be able to explain isolation, identification and analysis of secondary metabolites obtained from crude drugs.	
	the second state of the second state	BPT504.4	My student should understand industrial production, estimation and utilization of phytoconstituents.	
	most have a formal in the solution	BPT504.5	My student should know modern methods for extraction of crude drugs along with latest techniques for its isolation, purification and identification.	
	Republican in the	BPP508.1	My student should be able to examine morphological, histological and powder characteristics of organized crude drugs.	
	The set of the set of the set of the	BPP508.2	My student should be able to carry out extraction, isolation and detection of active constituents from crude drugs.	S SE.
BPP508	Pharmacognosy & Phytochemistry II (Practical)	BPP508.3	My student should be able to apply thin layer and paper chromatographic technique in separation and evaluation of phytoconstituents.	Pune 41
A Star and	and the second se	BPP508.4	My student should be able to carry out distillation of volatile oil from crude drugs and its evaluation by thin layer chromatographic technique.	1276 - 12109 176 - 20 (200 1943
Par I		BPP508.5	My student should be able to evaluate and identify unorganized crude drugs by chemical tests.	and a second
-		BPT505.1	To know and understand pharmaceutical legislations and their implicatins in development and marketting along with code of ethics during phamaceutical practice.	
	And the second s	BPT505.2	To know and understand the rules and regulations framed and amendments made under drugs and cosmetics act 1940	
	The second	BPT505.3	To know and understand the rules and regulations framed and amendments made under pharmacy act 1948.	
BPT505	Pharmaceutical Jurisprudence (Theory)	BPT505.4	To know and understand the rules and regulations framed and amendments made under medicinal and toilet preparations (excise duties) act 1955, rules 1976, narcoticdrugs and psychotropic substances act, and rules there under, drugs and magic remedies (objectionable advertisements) act 1954, prevention of cruelty to animals act1960, drug price control order, medical termination of pregnancy act 1970 and rules 1975 and right to inforation act the substant price of the substant price of the substant of the substant price of the	10/
	the officer of the second s	B.Pharm III	Year P	rincipal College of Pharm bare. TalMaval
- mainers	ucture .	Semester	vi	bare. TalMaval. Pune 412109.

Course Code	Course Name	Course Outcome No.	Course Outcome Description (as per New Syllabus introduced from Session 2019-20)	
	and the second s	BPT601.1	Students should be able to understand chemical aspects (Nomenclature, Stereochemistry, SAR, Classification etc.) and Biological Activities of β- Lactams and Tetracyclins.	
		BPT601.2	Students should be able to understand chemical aspects and Biological Activities of Different Macrolide, Miscellaneous Antibiotics and of different categories of drugs like Antimalarial, Ouinolones, Bigganides along with	
BPT601	Medicinal Chemistry-III (Theory)		the aspect of Pro-Drug Designing.	
		BPT601.3	Students should be able to understand chemical aspects and Biological Activities of Anti T. B. and Anti-Viral Agents.	
		BPT601.4	Students should be able to understand chemical aspects and Biological Activities of Anti Fungal, Anti- Protozoal, Anthelminthic and Sulphonamides.	
	and the second s	BPT601.5	Students should be able to understand different techniques of drug designing like QSAR, Docking and Combinatorial chemistry.	
	The problem by the second strength	BPP607.1	Students should be able to understand and perform synthesis of intermediates like Sulphonamides, Chlorobutanol, Tolbutamide etc.	
	The association of the factor of the second state of the	BPP607.2	Students should be able to understand and perform assay of drugs like, Isonicotinic acid hydrazide, Chloroquine, Metronidazole, Depsone, Chlorepheniramine Maleate, Benzyl Penicilline etc.	asi's Side
BPP607	Medicinal Chemistry-III (Practical)	BPP607.3	Students should be able to understand aspects of Microwave Irradiation Techniques.	SEAL SEAL
		BPP607.4	Students should be able to understand how to draw structures and reactions usingChem Draw and to find out physicochemical Properties using Drug Designing Softwares.	Pune-412109
		BPT602.1		
BPT602	agend forthe film devices a sign specific tes.	BP1002.1	Classification, mechanism of action, therapeutic uses, adverse effects and contraindications of various agents used in the treatment of respiratory and gastrointestinal tract diseases.	
	and the second s	BPT602.2	Classification, mechanism of action, antimicrobial spectrum, resistance, therapeutic uses, adverse effects and contraindications of various antimicrobial agents used in the treatment of infectious diseases.	
	Pharmacology III (Theory)	BPT602.3	Knowledge of immunopharmacology, including Immunostimulants, immunosuppressants, their uses/applications	
		BPT602.4	Definition, principle of toxicology, types of toxicity, clinical symptoms, general principles of treatment and management of poisoning by different chemicals.	
		BPT602.5	Definition of rhythm and cycles, knowledge of biological and their significance treatment of various diseases	
		BPP608.1	Calculation of dose for pharmacological experiment	14
		BPP608.2	Study the preclinical screening of various drugs.	2
BPP608	Pharmacology III (Practical)	BPP608.3		Principal College of Ph

		BPP608.4	Calculation of pharmacokinetic parameters	
		BPP608.5	Knowledge of Biostatistics methods used in experimental pharmacology	
		BPT603.1	My student should understand basics of Indian systems of medicine,	
	the second second second	BPT603.2	biodynamicagriculture of medicinal plants and different aspects of herbs as raw material for herbal medicine.	
		Br 1003.2	My student should be able to explain different aspects of neutraceuticals and health food and its utilization; along with herb-drug and herb-food interactions.	
BPT603	Herbal Drug Technology (Theory)	BPT603.3	My student should be able to describe herbal cosmetics and its related aspects, herbal excipients and herbal formulations.	
		BPT603.4	My student should understand guidelines for evaluation of herbal drugs as per international authorities like WHO and ICH along with intellectual property rightsand regulatory issues with respect to herbal drugs.	
-		BPT603.5	My student should know general aspects related to herbal industry and institutions involved in work on medicinal plants along with GMP requirements under schedule-T for herbal industry involved in production of formulations belonging to Indian systems of medicine.	
		BPP609.1	My student should be able to perform preliminary phytochemical screening of crude drugs.	
	A CONTRACT OF A	BPP609.2	My student should be able to determine alcohol content of asava and arista.	
BPP609	Herbal Drug Technology (Practical)	BPP609.3	My student should be able to carry out evaluation of excipients of natural origin alongwith incorporation of prepared and standardized extracts in cosmetic formulations and their evaluation.	15510
	and a set of the second of the period of the second of the	BPP609.4	My student should be able to carry out monograph analysis of herbal drugs alongwith incorporation of prepared and standardized extracts in pharmaceutical formulations and their evaluation as per pharmacopoeial requirements.	SE Sudation In
	and a second sec	BPP609.5	My student should be able to determine physical constants like aldehyde content, phenol content, total alkaloids content etc. of crude drugs.	MAN STAN
		BPT604.1	Explain various mechanism, factors influencing drug absorption and Distribution , and protein binding of drugs	
		BPT604.2	Discuss and understand basics of drug metabolizing pathways, factors affecting renal and non-renal excretion of drugs	V
BPT604	Biopharmaceutics and P'cokinetics (Theory)	BPT604.3	Understand concept of bioavailability and bioequivalence of drug product and	Princip
a start	I'm ben't	BPT604.4	Explain use of plasma drug concentration-time data to calculate the p'cokinetic parameters to describe the kinetics of drug absorption. Siddhant	ist-Pune

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		BPT604.6	Understand the concept of non snear P'cokinetics, factors, and kinetics.	
		BPT605.1	Student should understand the importance of immobilized enzymes in Pharmaceutical industries	
12		BPT605.2	Student should be able to explain Genetic engineering applications in relation to production of Pharmaceuticals	
BPT605	Pharmaceutical Biotechnology (Theory)	BPT605.3	Student should understand the types of immunity and its related technology	
		BPT605.4	Student should understand importance of Monoclonal antibodies in industries	
		BPT605.5	Student should appreciate the use of microorganisms in fermentation technology	
		BPT606.1	Student should understand the cGMP aspects in a pharmaceutical industry	
		BPT606.2	Student should appreciate the importance of documentation	
BPT606	Pharmaceutical Quality Assurance (Theory)	BPT606.3	Student should understand the scope of quality certifications applicable to pharmaceutical industries	
		BPT606.4	Student should understand the responsibilities of QA & QC departments	



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CAYM Education Trusts Siddhant College of Pharmacy A/P Sudumbare, Talegaon – Chakan Road, Tal: Maval, Dist: Pune -412109 Academic Year 2019-20 B Pharmacy

Program Outcome

PO1: Pharmaceutical Knowledge:- Students achieve a deep knowledge regarding human body, its related diseases, analytical skills, drug molecules (Active Pharmaceutical Ingredients) along with excipients, natural drug resources, chemistry involved in API including synthesis of commonly used drugs, effect of drug on human body, toxicity and impurity profile, ADME studies of drugs (behavior of drug in human body), dosage form studies including novel approaches, designing and development of formulation stability studies, analysis etc

PO2: Research Analysis: Develops knowledge in research field to make new relevant discoveries and to identify new entities.

PO3: Design & Development of dosage forms: Describes preparation of various dosage forms that could be prepared by the pharmacy students in the pharmaceutical companies for the ease of patients and to optimize formulations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.

PO5: Modern methods usage: Create, select, and apply appropriate techniques, resources and modern methods with an understanding of the limitations and its usage. The student also learns to handle many instruments related to their studies which would help them work in a Pharmaceutical Industry, pharmacovigilance, regulatory requirements, legal processes etc.

PO6: Pharmacy and society: Pharmacist provide complete health care data and practices to the people of the society and guide them to be healthy. The student also learns drug distribution system, patient counseling, industrial laws etc. Students achieve expertise in storage and distribution of drugs with all precautions and in-depth knowledge of dose, adverse effect and other health related issues to deal with ambulatory and IPD patients in hospitals and also in public and achieve responsibility of computing profession and society.

PO7: Environment and sustainability: Locate the impact of the professional pharmacist in society and environment and make an impact of it on the people of the society.



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PO8: Ethics: Justify & apply ethical principle and commit to professional ethics and responsibilities and norms of the pharmacy practice. Student is also trained in ethical behavior with physician, nurses and other paramedical staff for protecting patient's health.

PO9: Individual and team work: Function effectively as an individual and as a member or leader in diverse teams acts as a multidisciplinary person in every context. Students will be able to demonstrate rigorous and independent thinking and encourage participatory decision making in teams.

PO10: Communication: Develops Communication effectively on pharmaceutical activities with the community and with society.

PO11: Life-long learning: Recognize the need and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change and implement those technology by gaining experience.

PO12: Social Interaction: Being a public welfare job, a pharmacist would be able to interact with the people in a better way to cure them and make them feel healthy also investigate and evaluate the general state of public health conditions and concerns and develop and apply appropriate programs of action within program content area

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Principal Siddhant College of Pharmacy Sudumbare, Tai,-Maval, Dist.-Pune 412109.

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Program Specific Outcome

Some of the program specific outcomes are mentioned below:

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PSO 1: Prepared to implement the knowledge gained during the course of the program from pharmacology, pharmaceutics, medicinal chemistry, pharmacognosy, APHE, communication skills, pharmaceutical analysis, biotechnology, biochemistry, cosmetology and environmental studies.

PSO 2: Develops knowledge of ethical and management principle required to work in a team as well as to lead a team.

PSO 3: Achieve multidisciplinary jobs in the pharmaceutical industries in various branches and would be able to write relevant and effective project reports in multidisciplinary environment in the context of changing technologies.

PSO4 Prepares to communicate easily and effectively. Would be able to perform multitasks in multifields including pharmaceuticals & cosmetic in timebound manner. Research area would be the key element.



Principal Siddhant College of Pharmacy Sudumbare, Tai.-Maval,

		B.Pharm I Year	2018-19	
		Semester	Long	
Course Code	Course Name	Course Outcome No.	Course Outcome Description (as per New Syllabus introduced from Session 2019-20)	and the second
		BPT101.1	After completion students should be able to understand basic terminologies used in Anatomy and Physiology, structure of and function of cell parts, transport acrossplasma membrane and types of tissue	
		BPT101.2	To understand anatomy and physiology of Integumentary system, Skeletal system with joints	
BPT101	Human Anatomy & Physiology I (Theory)	BPT101.3	After completion students should be able to describe physiology of lymphatic system and blood with its disorders.	
	and a specie similar or attribute former	BPT101.4	To understand structure and function of special sense organ and peripheral nervous system	
	of the able to Understand and Carry out the	BPT101.5	The students should be able to understand anatomy and physiology of cardiovascular system and associated disorders.	T T La
1 and	an arrestore (experimental lateration and arrestore) or the model line and developed laterates for the	BPP107.1	Upon the completion students should be able to identify different types of tissue and bones	ALCONG THE
BPP107	Human Anatomy & Physiology I (Practical)	BPP107.2	Upon the completion students should be able to determine different haematological and cardiovascular parameters	0
12/	and the second sec	and an and a set		trust's Set
1	(i) promitishes and press during informations of the promitishes and press during information of the second sec	BPT102.1	Students should be able to explain concept and types of pharmaceutical Analysis along with methods of expressions, methods of preparations and standardisations of different Molar and Normal solutions.	SEAL Colle
	la mairaqui induneation de las	BPT102.2	Student should be able to explain concepts of Errors, Accuracy, Precision and sourcesof Impurities in Pharmaceutical Analysis, Also should be able to explain methods and purpose of limit tests.	Selfsteresterest
BPT102	Pharmaceutical Analysis (Theory)	BPT102.3	Students should be able to explain theories of Acid Base Indicators, classify	
	turi ilife be soni diter ne il cullerta lar.	sing its last 1 a see for bottomer	types of Acid Based titrations, interpret and identify neutralization curves and explain non- aqueous titrations.	
1016	San and hand other pay have men hand be and all	BPT102.4	Students should be able to explain techniques and applications of precipitation, complexometric, Gravimetric, Redox and Analytical techniques.	
	Use (Bariely, which in , but any another and the experiments of a performance	BPT102.5	Students should be able to understand and explain Electrochemical Methods of Analysis like Conductometry, Potentiometry, and Polarography.	
T	Mandaurile Dr S. r. 467 Martin	BPP108.1	Student should be able to understand, explain and perform concepts of limit test.	
BPP108	Pharmaceutical Analysis (Practical)	BPP108.2	Student should be able to understand and perform methods of preparations and standardisations of different solutions.	
	distant in concerning on proof in organ	BPP108.3	Students should be able to perform Assays of different chemicals.	VI
Conne of the	no. SI	BPP108.4	Student should be able to understand and perform Electrochemical Analytical methods like Conductometry & Potentiometry.	Principal hant College of Ph dumbare. TalMay DistPune 412100

		BPT103.1	After completion students should be able to understand the history of	
		DT 1103.1	profession of pharmacy, basic of different dosage forms, way of handling prescription and calculate dose calculations.	317340
BPT103	Pharmaceutics I (Theory)	BPT103.2	To understand pharmaceutical calculations, classification of powders, liquid dosage forms.	
	And the start () and all therein physical at fairgurence - years any any any	BPT103.3	After completion students should be able to understand preparation of monophasic liquid dosage forms, suspension and emulsions.	
	and he able to show the edge of the second second field of the	BPT103.4	To understand formulation and evaluation of suppositories, basics of pharmaceutical incompatibilities,	Xuxee
	printing one where owner equilibre and the	BPT103.5	The students should be able to prepare and evaluate semisolid dosage forms.	
BPP109	Pharmaceutics 1 (Practical)	BPP109.1	After completion students should be able to Understand and Carry out the formulation of dosage forms like syrups, elixirs, linctuses, solutions, powders, Gargles and Mouthwashes.	Tarust
	burnager in yestinis Eliferabilat alda sei kinetere	BPP109.2	To understand and Carry out the formulation and evaluation of dosage forms like suspensions, emulsions, suppositories and semisolids.	Callon Sugar
- Parate	A DECISION OF TAXABLE PARTY OF TAXABLE PARTY	BPT104.1	Student shall be able to know the sources of impurities and methods to	Nie de
IN 82 I PE	taxing sourced in provide the second source and	BPT104.2	determine the impurities Students shall well acquaint with principles and procedures of limit test of different impurities.	Sect+Ca
BPT104	Pharma Inorganic Chemistry I (Theory)	BPT104.3	Student shall familiar with different classes of inorganic pharmaceuticals and their functions	
1	a vertical triatyon the cloud postic to	BPT104.4	Student shall understand medicinal and pharmaceutical importance of inorganic compounds.	
	a la fi co en el cost fina factore a decena decenario el cost de contractore a contractore decenario el el cost de contractore en en el cost de cost de cost de contractore en en el cost de cost de cost de cost de cost de cost de cost de cost de cost de cost de cost de cost de cost de cost de c	BPT104.5	Student shall be identify different anions, cations and know their role in physiologicalacid base balance and also familiar with uses of different inorganic compounds.	
	Assessed on hair data this territ. Standard of the second	BPP110.1	Student should able to know principles of limit tests and perform limit test and detect impurities of various ions like chloride, sulfate, iron, lead and arsenic.	
DEDUIS	Printing and this set optimized	BPP110.2	Student will able to identify various inorganic substances by performing various identification tests.	M /
BPP110	Pharma Inorganic Chemistry I (Practical)	BPP110.3	Students will be able to perform various tests for purity of inorganic substances.	D/
	brand and problem mathems of programmers a subfigure	BPP110.4		College of P
- 224	And a state of the second state and the second state of the second	BPP110.5	Student will able to know advantages of inorganic substances as Siddham pharmaceuticals. Sudu:	College of P nbare. TalM stPune 4121
a Proven	Statement of the statement of the	BPT105.1	Upon completion students should understand the behavioral needs for a	stPuno

	A/P Sud	Siddhant C	Coucation Trusts ollege of Pharmacy can Road, Tal: Maval, Dist: Put 12109	
	a an arrest of gradulate of an income. The second se	BPT105.2	After completion students should manage the team as a team player & Know the elements, styles and barriers of communication.	a second
BPT105	Communication Skill (Theory)	BPT105.3	Upon completion student should Know the importance of good listening skills, and be a good listener.	
1000		BPT105.4	After completion students should know the essentials of good writing skills and know the dos and don'ts of formal written communication.	1
	112 - 12	BPT105.5	Upon Completion student should develop interview skills, Leadership qualities and essentials of group discussions.	
BPP111	Communication Skill (Practical)	BPP111.1	To become a good communicator in real life situations, and have a command overones languages through forming grammatically correct sentences and prefect pronunciations.	
		BPP111.2	To have good and effective writing skills, know the proper communication etiquettes and excellent presentation skills.	
		BPRBT106.1	Upon completion of subject studentswill beable to know the classification and salient features of five kingdoms of life.	
BPRBT10	Remedial Biology (Theory)	BPRBT106.2	Upon completion of subject students will beable to understand the basic components of anatomy & physiology of plant.	0
		BPRBT106.3	Upon completion of subject students will beable to know understand the basic components of anatomy & physiology of animal with special reference to human.	Sulling State
BPRBP11	Remedial Biology (Practical)	BPMTP112.1	Upon completion of subject students will beable to understand microscopic study andidentification of tissues of plant, cell and its inclusions, detailed study of frog by using computer models.	CALLER COUL
2		BPMTP112.2	Upon completion students will beable to identify different types of bones and determine different haematological and cardiovascular parameters.	
		BPRMT106.1	Student should understand the theory and applications of partial fraction, logarithms, function, limits and continuity in pharmacy.	~
		BPRMT106.2	Student should be able to solve the problems related to matrices and ddeterminants.	macy
BPRMT1 06	Remedial Math (Theory)	BPRMT106.3	Student should be able to solve the problems related to derivative and it's functions.	
		BPRMT106.4	Student should be able to apply concepts of analytical geometry.	Te
		BPRMT106.5	Student should be able to solve the problems related to differential equations and laplace transform.	Principa College
		B.Pharm I Ye	ar	Principal Princi
		Semester II		P D
Course Code	Course Name	Course Outcome No.	Course Outcome Description (as per New Syllabus introduced from Session 2019-20)	Print
		BPT201.1	After completion students should be able to understand the gross morphology of endocrine, digestive, nervous, respiratory, urinary and reproductive system.	Sid

AL THE	A/P St	hbare, Talegaon – Chakan BPT201.2	Road, Tal: Maval, Dist: Pr	412109 understand physiology of endocrine,	7
BPT201	Human Anatomy & Physiology II (Theory)	BF1201.2	nervous, digestive, respiratory, uri	nary and reproductive system.	
	Range the response in the 1 hours shall a	BPT201.3	Upon completion students should l	be able to explain basics of Energetics.	
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	A/P Su	Siddhant Co	ducation Trusts ollege of Pharmacy can Road, Tal: Maval, Dist: Put 212109	
	and the source in the second of the second second	BPT204.1	Upon completion of subject students will be able to explain mechanisms involved in the process of inflammation and infectious diseases.	
	Tout as and to determine out appartus solut- tional man onlys.	BPT204.2	Upon completion of subject students will be able to explain basic principal of cell injury and adaptation.	
BPT204	Pathophysiology (Theory)	BPT204.3	Upon the completion of subject students will beable to explain pathophysiology of diseases of cardiovascular, respiratory, renal, endocrine, nervous and gastrointestinal system.	
	Construction and American in the Antibush of Strate American Affriday and an antibush and aligned antibush and aligned and aligned antibush and aligned and aligned antibush and aligned and aligned antibush and aligned and aligned and aligned and aligned aligned and aligned aligned and aligned aligned aligned aligned aligned aligned aligned aligned aligned align	BPT204.4	Upon the completion of subject students will be able to explain principal of cancer, pathophysiology of hematological diseases, sexually transmitted diseases and diseasesof bones and joints, Inflammatory bowel diseases, jaundice and liver disease.	
	frightet unling. Frightet unling. Frightet die ob frig ab fallenig	BPT205.1	To know the number systems, its conversion, calculations and the concept of the information systems and software's used in different field and its processes.	
	This distance of years are set of autors,	BPT205.2	To know the various types of application of computers in pharmacy	
BPT205	Computer Application in Pharmacy (Theory)	BPT205.3	To understand the various web technologies and the different databases and various applications of databases in pharmacy.	and side
	anti-ar al subscene stratute second to a sub-	BPT205.4	To know the Bioinformatics Databases, Concept and Impact of Bioinformatics in Vaccine Discovery and know the Computers as data analysis in Preclinical development like CDS, LIMS, TIMS etc.	SudBitt SudBitter
	A Service in the service of the service	BPP210.1	To Design questionnaires, invoice tables, drug information storage and its retrival and its side effects, using word process	A JONLAN
BPP210	BPP210 Computer Application in Pharmacy (Practical)	BPP210.2	To Create a personal HTML webpage, create invoice tables, Generate reports frompatients database, and Exporting Tables, Queries, Forms and Reports to web pages and to XML pages.	
at and the		· Institude and think	and and a second s	
and the second	and and a paint of any paint of the ball of the	BPT206.1	After completion students should be able to understand our environment, renewable and non-renewable natural resources and the multidisciplinary nature of studies.	
DETAK	Environmental Studies (Theory)	BPT206.2	The students should be able to know, understand and explain about the natural resources like forest, water, minerals, food, energy and land, the nroblems associated with them and role of an individual in their conservation.	
BPT206	Elvinomental succes (1000) /	BPT206.3	The students should be able to understand and explain the concept of an ecosystem, different types of ecosystems like forest, grassland, desert and aquatic, their structure, functions and characteristics.	M
	There is a first of second state	BPT206.4	The students should be able to know, understand and explain about various environmental pollutions like soil, water and air and preventive measures for them.	Principai
	and the second start has a barry strong from the second	B.Pharm II Y	lear Siddhi	at College of Pl
Printing		Semester I	Cur	lumbare, 1al.
Course	Course Name	Course Outcome No.	Course Outcome Description (as per New Syllabus introduced from Session 2019-20)	DistPune 41210

	and the second s	BPT201.4	Upon completion students should be able to explain basics of genetics.	7
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BPP207	Human Anatomy & Physiology II (Practical)	BPP207.1	Upon the completion students should be able to determine vital capacity, tidal volume, body temperature and basal mass index.	
	and a second s	BPP207.2	Upon the completion students should be able to demonstrate general neurological examinations and feedback mechanisms	100700
	the fuglar-region dependent sales of their americants	BPT202.1	understand the nomenclature, classification and isomerism.	
	an depict desired and a serie for the series	BPT202.2	write the methods of preparation of alkane. alkene, dienes , alkyl halides , alcohol , carbonyl compounds , carboxylic acids and aliphatic amines	
BPT202	Pharmaceutical Organic Chemistry I (Theory)	BPT202.3	Will be able to explain the reactions, name the reactions orientation and reactivityshown by alkane. alkene, dienes, alkyl halides, alcohol, carbonyl compounds, carboxylic acids and aliphatic amines.	
	and a second	BPT202.4	write the structure and uses of important reagents from the following categories oforganic compounds like alkane. alkene, dienes, alkyl halides, alcohol, carbonyl compounds, carboxylic acids and aliphatic amines	
-	the state of the s	BPT202.5	will be able to understand qualitative tests for alcohol and amines	
-	Contraction of the local division of the loc	BPP208.1		
BPP208	Pharmaceutical Organic Chemistry I (Practical)	BPP208.1 BPP208.2	perform systematic qualitative analysis of unknown organic compounds	
		BPP208.2 BPP208.3	Will be able to prepare the solid derivatives from organic compounds	
11		DTT 200.5	Do the construction of molecular models.	
	Approximation of the second se	BPT203.1	Students should be able to understand chemical nature and biological roles of Biomolecules and concepts of Bioenergetics.	
	particular District District Party and Reports in	BPT203.2	Students should be able to understand and explain Carbohydrate Metabolism and Biological Oxidation.	Se Se Se
BPT203	Biochemistry II (Theory)	BPT203.3	Students should be able to understand and explain Lipid Metabolism and Amino Acid Metabolism.	Sudumbare
	and the second of the second s	BPT203.4	Students should be able to understand and explain Concepts of Nucleic Acid Metabolism and Genetics Information Transfer.	109 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	and the second se	BPT203.5	Students should be able to understand and explain Concepts of Enzymes.	-Jemin
	and suits when the side of the	BPP209.1	Students should be able to understand and perform Qualitative Analysis of	
	and a second secon	a also a franciska a san	Carbohydrates, Identifications of proteins and Quantitative analysis of reducing sugars and proteins.	
BPP209	Biochemistry II (Practical)	BPP209.2	Students should be able to understand andperform Qualitative analysis of abnormalurine constituents and determination of blood components like creatinine, sugar, cholesterol etc.	
1	the attention of historical line on how where the	BPP209.3	Students should be able to understand and perform preparation of buffer solution, enzymatic hydrolysis of starch.	In
		BPP209.4	Students should be able to understand and perform study of salivary amylase	4)

udumbare. Tal.-Maval, Dist.-Pune 412109.

	The standard of the particular second as a se	BPT301.1	write the structures ,names and types of isomerism of benzene ,phenols ,aromatic amines ,aromatic acids ,fats and oils polynuclear hydrocarbons and cycloakanes	
BPT301		BPT301.2	write the methods of preparation of benzene ,phenols ,aromatic amines ,aromatic acids ,fats and oils polynuclear hydrocarbons and cycloakanes	
671301	Pharma. Organic Chemistry II (Theory)	BPT301.3	Will be able to explain reactivity , orientation and theories regarding stability of thereactions shown by benzene ,phenols ,aromatic amines ,aromatic acids ,fats and oils poly nuclear hydrocarbons and cycloalkanes.	
	a soil are consul if its which is a soil of the source of	BPT301.4	write the structure and uses of DDT, Saccharine, BHC, Chloramine , phenols, cresols, resorcinol, naphthols, aryl diazonium saits, diphenylmethane, triphenylmethane.	
	Store of meters and shares and shares	BPT301.5	will be able to understand analytical tests for phenols and fats and oils	
	Land in the second second in the second second	BPP305.1		
BPP305	Pharma. Organic Chemistry II (Theory)	BPP305.2	do the experiments on recrystallization and steam distillation	
	Chicking and Chicking in (Theory)	BPP305.3	determine the oil values and perform standardization of reagents Will be able to do the synthesis of various organic compounds	
	intersection and the second second second second second	The lines of the other	of the beaute to do the synthesis of various organic compounds	
14 21 1 2 4		BPT302.1	Upon completion of syllabusstudents will be able toUnderstand various physicochemical properties of drug molecule, able to identify state and all basic phenomenon related to drug.	1
·	Physical Pharmaceutics I (Theory)	BPT302.2	Upon completion of syllabus students will be able to Apply their knowledge related to basics of drug by simple methods and demonstration.	La Concetton I
BPT302		BPT302.3	Upon completion of syllabusstudents will be able to Understand different principles and laws related to basic characteristics of drugs.	
a harring		BPT302.4	Upon completion of syllabus students will be able to Understand different phenomenon's and structure and nature of drugs.	
		BPT302.5	Upon completion of syllabus students will be able to Get better insight in to various areas of formulations, research and development.	
	material	Institute service and such		
		BPP306.1	Upon completion of syllabus students will be able to demonstrate the concept of Ph, Pka, solubility density, viscosity, etc	
BPP306	Physical Pharmaceutics I (Practical)	BPP306.2	Upon completion of syllabus students will be able to demonstrate miscible, partially miscible liquid and all practical aspect regarding solubility of liquid.	-
		BPP306.3	Upon completion of syllabus students will be able to demonstrate different equations regarding Ph, Pka and solubility.	
	without proph to see how more to the	BPP306.4	Upon completion of syllabus students will be able to demonstrate CMC of various surfactants.	Anna
	A CONTRACTOR OF THE OWNER OWNER OF THE OWNER OWNE	BPT303.1	Particle desidentia Mantéficiales estática handar	a.
14		DF 1303.1	Explain classification, identification, nutritional requirement, isolation and preservation methods for pure culture of bacteria including quantitative measurement of bacterial growth. Summarize various types of microscope.	N/
Princip nont College		BPT303.2	Explain methods, evaluation, equipment required and testing of	Princip ant College
dumbare. Ta	12	Manager - Marriel		dumbare. T

	None of the local division of the local divi	hbare, Talegaon – Chaka BPT303.3	Understand morphology, classification, reproduction/replication and	
	the second second second second second	a log in many shirt	cultivation of fungi and virus. Explain classification, mode of action, factors influencing and evaluation of	
BPT303	Pharmaceutical Microbiology (Theory)	BPT303.4	Disinfection	
	Strapher Science and J. (pressentation in account date and the course required and each on an otherwise accounties and an account of the sentiment and realizations.	BPT303.5	Understand laminar flow equipment, sources, methods and classification of aseptic area including general aspects related environment cleanliness. Explain principles andmethods of various microbiological assays also Assessment and testing of new antibiotics.	TACAPER
	1 NO CANT LETTER TO CONTRACT Internet Astronomy of the Angling State Second State, Department, and Second State.	BPT303.6	To Know types, factors, sources and assessment of microbial contamination and spoilage. Preservation and evaluation of formulation containing antimicrobial agents. To study growth and procedure for cell culture and its applications.	
BPP307	Pharmaceutical Microbiology (Practical)	BPP307.1	Study and describe equipment's, sterilization of glassware, preparation and Culture media, sub culturing, nutrient stabs and slants, multiple streak plate and othertechniques also microbiological assay.	and the
	A PARTICIPACTION OF A PARTICIPACTICACTION OF A PARTICIPACTICACTICACTICACTICACTICACTICACTIC	BPP307.2	Identify the bacterial morphology using staining techniques and acquire knowledge on the principles of biochemical tests.	Siddhan
	and the state based of free pilds, we did to approximate	BPT304.1	Understand importance of various unit operations used in pharmaceutical	13 CEAL
	and the second second spin of a second	britishing and and an	industries, importance of size reduction, powder size and size separation, principle, constructionand working of equipment's used in size reduction and size separations.	Sudumbar Sudumbar Sudumbar Sudumbar
the second	terrer will be glob in T adject and write way	BPT304.2	Understand the various processes involved in pharmaceutical manufacturing processes like evaporation, distillation and drying	(34.43.
BPT304	Pharmaceutical Engineering (Theory)	BPT304.3	Develop knowledge of unit operations, mixing, mass transfer and flow of fluids and theories as well as basic mechanisms; understand principle, construction and working of equipments used in mixing, mass transfer and flow of fluids.	
	and a grant distance of the second	BPT304.4	Comprehend significance of various equipments used in manufacturing processes like filtration and centrifugation	
		BPT304.5	Appreciate the various preventive methods used for corrosion control in pharmaceutical Industries. Also factors affecting material selection.	
	A CONTRACT OF A	BPP308.1	Build up skill and ability to analyze; particle size distribution, effect of filter aid on filtration rate.	- and the
BPP308	Pharmaceutical Engineering (Practical)	BPP308.2	Determination of radiation constant of brass, iron, unpainted and painted glass, heat transfer coefficient, moisture content and loss on drying, humidity of air.	
N C		BPP308.3	Demonstration of various mills.	
NY I	and resident encountry and the second second	BPP308.4	Construction of drying curves.	45
		B.Pharm II	Change and the second s	Princi
Concerned to the		Semester Course Outcome	Sid	ddhant Colleg Sudumbare.

	contract on the device of the set first vession	BPT401.1	write the stereo chemical aspects of organic compounds and write stereo chemical reactions including optical and geometric isomerism	
		BPT401.2	write the structures names and classifications of heterocyclic compounds	
BPT401	Pharma. Organic Chemistry III (Theory)	BPT401.3	Will be able to explain reactivity, orientation and theories regarding stability of the reactions shown by heterocyclic compounds	
	South and the second	BPT401.4	write the methods of preparation of of heterocyclic compounds	
		BPT401.5	understand the and uses of heterocyclic compounds	
		BPT401.6	will be able to understand reactions of synthetic importance	
	to address the map to a series	BPT402.1	Students should be able to explain the effects of physicochemical properties on drug actions	
	and the second of a second sec	BPT402.2	Students should be able to explain the process of metabolism, influence of metabolic profile of drug and their impact on biological system.	
BPT402	Medicinal Chemistry I (Theory)	BPT402.3	Students Should be able to explain synthetic procedure for selective compounds of different categories.	AL
	author to explain firms discretely and efficient	BPT402.4	Students should be able to classify different categories of agents based on their chemical natures.	S.F.
	And the second second second second	BPT402.5	Students should be able to explain Physicochemical properties, SAR, Metabolism and Mechanism of Action of Adrenergic, Cholinergic, and CNS agents.	I LON
	The second second second second	BPP406.1	Students should be able to understand and explain methods of synthesis for intermediates and drugs.	
	Medicinal Chemistry I (Practical)	BPP406.2	Students should be able to explain physicochemical characterisation and recrystallization methods for intermediates and drugs.	
BPP406		BPP406.3	Students should be able to understand and perform the principle and procedure of quantitative determination of drugs in different dosage forms.	
		BPP406.4	Students should be able to understand the principle and procedure of determination of partition co-efficient of drugs.	
	The format and the second seco	BPT403.1	Upon completion of syllabus students will be able to deal with the concept of variousphysical, physicochemical properties and principal involved in dosage form formulation.	
		BPT403.2	Upon completion of syllabus students will be able to get better insight in to various areas of formulation research and development.	
BPT403	Physical Pharmaceutics II (Theory)	BPT403.3	Upon completion of syllabus students will be able to demonstrate use of formulation of various dosage form.	a
	sector devices of the object of the respective sector is	BPT403.4	Upon completion of syllabus students will be able to describe the fundamental and derived properties of various dosage form.	X/
100	In success official and the second second second	BPT403.5	Upon completion of syllabus students will be able to understand stability and shelflife, calculate expiry of various dosage form.	Princi hant Colleg udumbare.

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	and the set of the second set of the second s	BPP407.2	Upon completion of syllabus students will be able to demonstrate microscopic and micromeritic characteristic of dosage form.	
BPP407	Physical Pharmaceutics II (Practical)	BPP407.3	Upon completion of syllabus students will be able to demonstrate stability testing of various dosage form.	
	Anna ang ang ang ang ang ang ang ang ang	BPP407.4	Upon completion of syllabus students will be able to demonstrate HLB value, orderof reaction and Handel various equipment like Brookfied viscometer, stability chamber etc.	
	and the second sec	BPT404.1	Upon completion students will be able to Describe the scope of pharmacology and signify routes of drug administration.	
(A)	 A. M. Terri or difference in a property of the last of subblement, information of the property of subblement in a subscription of subblement in the property of the subscription. 	BPT404.2	Upon completion students will be able to Explain the Principles of absorption, distribution, metabolism and excretion of a drug, enzyme induction, enzyme inhibition and kinetics of elimination and the relationship between drug and its receptors, mechanism of action, therapeutic effect, drug interaction and adverse drugreaction.	
2	and an increase of an error of the second se	BPT404.3	Upon completion studentswill beable to explain Drug discovery and clinical evaluation of new drugs, preclinical evaluation phase, phases of clinical trials and pharmacovigilance.	
BPT404	Pharmacology I (Theory)	BPT404.4	Upon completion students will be able to Understand organization and function of ANS Parasympathomimetics, parasympatholytics, Sympathomimetics, sympatholytics, Neuromuscular blocking agents and skeletal muscle relaxants, Local anesthetic agents and Drugs used in myasthenia gravis and glaucoma.	
		BPT404.5	Upon completion students will be able to explain Neurohumoral transmission in the C.N.S. and various neurotransmitters like with GABA, Glutamate, Glycine, serotonin, dopamine. Pharmacology of anesthetics, Sedatives, hypnotics and centrallyacting muscle relaxants, Anti-epileptics, Alcohols and disulfiram	
	(c) and (c)	BPT404.6	Upon completion students will be able to explain Psychopharmacological knowledge in prevention and treatment of various diseases like antipsychotic, antidepressant, anti-anxiety, anti-manies and hallucinogens, drugs used in Parkinsons and Alzheimer's disease, CNS stimulants and nootropics. Opioid analgesics and antagonists, drug addiction, drug abuse, tolerance and dependence.	
- Bill	tang na gin gin gin na ang ang ang ang ang ang ang ang ang	BPP408.1	Introduction to experimental pharmacological instruments, laboratory animals as per CPCSEA guidelines. Demonstration of different routes of drug administrationin rats and mice and techniques of blood withdrawal, serum and plasma separation, anesthetics and euthanasia used for animal studies	
BPP408	Pharmacology I (Practical)	BPP408.2	Demonstration of stereotype and anti-catatonic activity, anxiolytic activity of drugsusing rats/mice, local anesthetics by different methods and effect of hepatic microsomal enzyme inducers on the phenobarbitone sleeping time in mice.	Princip

3PT405		BPT405.1	My student should understand definition, history, development and scope of pharmacognosy along with the sources, classification and quality control of	
		BPT405.2	drugs obtained from natural sources. My student should be able to explain cultivation, collection, processing and storage of crude drugs along with methods of improving crop variety and the	
	Pharmacognosy & Phytochemistry-I (Theory)	BPT405.3	conservation of medicinal plants. My student should understand different aspects of plant tissue culture along with application of plant tissue culture in pharmacognosy.	
		BPT405.4	My student should be able to describe role of pharmacognosy in allopathic as well as traditional systems of medicine and able to explain different aspects of secondary metabolites along with its classification and eamples.	
		BPT405.5	My student should know some of the specialized plant products like allergens, fibres, hallucinogens and teratogens, along with different aspects of primary metabolites, its classification and examples.	
BPP409	Pharmacognosy & Phytochemistry-1 (Practical)	BPP409.1	My student should be able to analyse and identify unorganised crude drugs of natural origin by means of chemical tests.	Tues Side
		BPP409.2	My student should be able to determine different types of leaf constants.	E Suttum
		BPP409.3	My student should be able to evaluate quantitative microscopical characteristics of crude drugs.	Pume-ditte
1000		BPP409.4	My student should be able to determine different physical constants of crude drugs.	WELLEVILLE
		BPP409.5	My student should be able to evaluate crude drugs by official methods.	-
		B.Pharm III	Year	
		Semester	v	
Course Code	Course Name	Course Outcome No.	Course Outcome Description (as per New Syllabus introduced from Session 2019-20)	
BPT501	Medicinal Chemistry II (Theory)	BPT501.1	Students should be able to understand and explain Development, Classification, Mechanism of Action, Uses and SAR of Anti-histaminic, Proton Pump Inhibitors, Anti-neoplastic agents and anti metabolites.	
		BPT501.2	Students should be able to understand and explain Development, Classification, Mechanism of Action, Uses and SAR of Anti-Anginais, Diuretics and Anti- hypertensive.	
		BPT501.3	Students should be able to understand and explain Development, Classification, Mechanism of Action, Uses and SAR of Anti-Arrhythmic, Anti- hyper lipidemics, Co- agulants and Anti-coagulants, Drugs used in CHF.	des /
		BPT501.4	Students should be able to understand and explain Development, Classification, Mcchanism of Action, Uses and SAR of Drugs Acting on Endocrine SystemSig Students should be able to understand and explain Development, Classification.	Princip
		BPT501.5	Students should be able to understand and explain Development, Classification, Mechanism of Action, Uses and SAR of Anti-diabetics and local anaesthetics.	Sudumbare. Ta DistPune 4

	spectrum and an an energy star	BPT502.1	Explain and demonstrate various preformulation parameters including Physical and Chemical properties of drug substance required for formulation	
	dard many	BPT502.2	Describe classification, formulation, processing problems, Equipment, required for tablets and tablet coating and their evaluation	
	and a second second second second second	BPT502.3	Explain formulation, manufacturing considerations, Filling, packaging, and evaluation of syrups, elixiers, suspensions, emulsions	
BPT502	Industrial Pharmacy I (Theory)	BPT502.4	Explain and summarize,formulation, Filling, packaging , storage and Evaluation of hard and Soft capsules	
	the second secon	BPT502.5	Understand and describe types, formulation, filling, sealing, evaluation of various	
	aparta diserizza i be	BPT502.6	types of parenterals and Opthalmic dosage forms	
	a indential products (a, the law wild a Mi	BPT502.7	Understand formulation of various types of cosmetic preparations Explain and understand formulation, containers, evaluation, stability study, and Quality control of acrosols	
and second in		BPT502.8	Understand materials for containers, study of factors, legal and official requirements, stability aspects and quality control of packaging material	
1030215	and the local of the second second second second	dense strends (so able to		(siddh
and and the first	fails though	BPP506.1	To carry out preformulation study various drugs	33
E A	ante antiparte a martin and it in "and". Artig	attent should be shie in conditions from couch	To prepare and evaluate Paracetamol/ Aspirin tablet/ Tetracycline capsules/Calcium Gluconate injection/ Ascorbic acid injection	SEA Sudumb
BPP506	Industrial Pharmacy I (Practical)	and the set of the design of the	To formulate and evaluate Eye drop/ Eye ointment	Pune-41
	share and for state of the state of from state	THE REAL ON LABORATION CARDIN	To formulate cold cream/ vanishing cream	Barrow
	a laver chromosocraphic exherites	the set management of land	To carry out evaluation of glass containers	Cars.
	contration and an average firming have produced	on ship out his sain the lot	To evaluate marketed tablets / capsules	
	manufacture and their exception in the best owned	BPT503.1	Classification of drugs along with their mechanism of action, receptor, adverse effect, drug interaction, contraindication and therapeutic uses for the treatment of cardiovascular diseases and haemopoeitic system/disoders.	
	etheralesand bandworth emittaltype here ada	BPT503.2	Classification of drugs along with their mechanism of action, receptor, adverse effect, drug interaction, contraindication and therapeutic uses of drugs acting on renalsystem.	
BPT503	Pharmacology II (Theory)	BPT503.3	Classification of drugs along with their mechanism of action, receptor, adverse effect, drug interaction, contraindication and therapeutic uses of hormones/drugs acting on endocrine system/disorders.	
	[16] programming on consistent and with the second constraints automissions and sum with sums forms ones in figure manifest pilo environments are 1 ⁻⁰⁰ -0.	BPT503.4	Classification of drugs along with their mechanism of action, receptor, adverse effect, drug interaction, contraindication and therapeutic uses of autacoids, its analogue and blockers.	M
And services in the		BPT503.5	Definition of bioassay, its principle, applications, types and standard bioassay methods for some pharmacological agents	4

	and the second sec	BPP507.3	Understand performance of isolated experiments using various isolated preparation and the effect of different drugs on the concentration response curves.	
		BPP507.4	Study the preclinical screening of various drugs.	
	A preparation reachings	BPT504.1	My student should understand basics of metabolic pathways and formation of Secondary metabolites through those pathways.	
BPT504	relation of the second se	BPT504.2	My student should be able to describe different aspects of secondary metabolites along with pharmacognostic details of crude drugs from which they obtained.	
	Pharmacognosy & Phytochemistry II (Theory)	BPT504.3	My student should be able to explain isolation, identification and analysis of secondary metabolites obtained from crude drugs.	
	phase of the containers are shared as a substant	BPT504.4	My student should understand industrial production, estimation and utilization of phytoconstituents.	
	taking frontend stores in these spatial	BPT504.5	My student should know modern methods for extraction of crude drugs along with latest techniques for its isolation, purification and identification.	at's C:
T		DDDCog 1		Strust's Siddhe
BR Same	to and taxing the	BPP508.1	My student should be able to examine morphological, histological and powder characteristics of organized crude drugs.	Sudump L
ALC: A	and sight love three of lands of	BPP508.2	My student should be able to carry out extraction, isolation and detection of active constituents from crude drugs.	4 1210g
BPP508	Pharmacognosy & Phytochemistry II (Practical)	BPP508.3	My student should be able to apply thin layer and paper chromatographic technique in separation and evaluation of phytoconstituents.	3. Jaeuseud
E	a continueros	BPP508.4	My student should be able to carry out distillation of volatile oil from crude drugs and its evaluation by thin layer chromatographic technique.	
		BPP508.5	My student should be able to evaluate and identify unorganized crude drugs by chemical tests.	
	salis their and the set of the se	BPT505.1		
	Terrers and Assessed with a strain finders.	a rainta a francista a suga	To know and understand pharmaceutical legislations and their implicatins in development and marketting along with code of ethics during phamaceutical practice.	
	public cost in our seturation has writering	BPT505.2	To know and understand the rules and regulations framed and amendments made under drugs and cosmetics act 1940	
BPT505	Pharmaceutical Jurisprudence (Theory)	BPT505.3	To know and understand the rules and regulations framed and amendments made under pharmacy act 1948.	Larrent.
	and the second se	BPT505.4	To know and understand the rules and regulations framed and amendments	
A. and	all allow not the second second or a state of	Station of the second second	made under medicinal and toilet preparations (excise duties) act 1955, rules 1976, narcoticdrugs and psychotropic substances act, and rules there	A STREET, STRE
5		or and clouds are.	under, drugs and magic remedies (objectionable advertisements) act 1954	
tenineid	and an and a state of the state	tion of historicay, its party	prevention of cruelty to animals act1960, drug price control order, medical termination of pregnancy act 1970 and rules 1975 and right to inforation act along with intellectual property rights (IPR)	
College of	forther and provide and based summitted to these forces and	B.Pharm II		1g
-JET CONT	and highly	Semeste		Principal

Course Code	Course Name	Course Outcome	Course Outcome Description (as per New Syllabus introduced from Session	1
	and a start of the start of the start of the	No. BPT601.1	2019-20) Students should be able to understand chemical aspects (Nomenclature, Stereochemistry, SAR, Classification etc.) and Biological Activities of β-	
BPT601	Medicinal Chemistry-III (Theory)	BPT601,2	Lactams and Tetracyclins. Students should be able to understand chemical aspects and Biological Activities of Different Macrolide, Miscellaneous Antibiotics and of different categories of drugs like Antimalarial, Quinolones, Biguanides along with the aspect of Pro-Drug Designing.	
	and the second reaction and in science where the	BPT601.3	Students should be able to understand chemical aspects and Biological Activities of Anti T. B. and Anti-Viral Agents.	
	er og eite tringet her som selfe og til er stiller i	BPT601.4	Students should be able to understand chemical aspects and Biological Activities of Anti Fungal, Anti- Protozoal, Anthelminthic and Sulphonamides.	
	anon alte feterit le presi la rege. A specie retenit le presi reteni entre and	BPT601.5	Students should be able to understand different techniques of drug designing like QSAR, Docking and Combinatorial chemistry.	
and I	The partnership of a charge gran share bad-of-site	BPP607.1	Students should be able to understand and perform synthesis of intermediates like Sulphonamides, Chlorobutanol, Tolbutamide etc.	
BPP607	Matinal Charitan III (Depring)	BPP607.2	Students should be able to understand and perform assay of drugs like, Isonicotinic acid hydrazide, Chloroquine, Metronidazole, Depsone, Chlorepheniramine Maleate, Benzyl Penicilline etc.	Atust's Sidoha
DITOU	Medicinal Chemistry-III (Practical)	BPP607.3	Students should be able to understand aspects of Microwave Irradiation Techniques.	Sudumbare Pune-41210
2	(a) y well in advantise with a cyclication of surgery at the second second strength (1) and second second second second second second second second second second second second second secon	BPP607.4	Students should be able to understand how to draw structures and reactions usingChem Draw and to find out physicochemical Properties using Drug Designing Softwares.	unsers - Carity C
	and a second theory and the second theory of theory of the second theory of the second term of term	BPT602.1	Classification, mechanism of action, therapeutic uses, adverse effects and contraindications of various agents used in the treatment of respiratory and gastrointestinal tract diseases.	
BPT602	Pharmacology III (Theory)	BPT602.2	Classification, mechanism of action, antimicrobial spectrum, resistance, therapeutic uses, adverse effects and contraindications of various antimicrobial agents used in the treatment of infectious diseases.	
	too address of a period of a second	BPT602.3	Knowledge of immunopharmacology, including Immunostimulants, immunosuppressants, their uses/applications	
		BPT602.4	Definition, principle of toxicology, types of toxicity, clinical symptoms, general principles of treatment and management of poisoning by different chemicals.	/
		BPT602.5	Definition of rhythm and cycles, knowledge of biological and their significance treatment of various diseases	10 tot
	the transferre is an interest of the purpose	BPP608.1	Calculation of dose for pharmacological experiment	ay and a second
Petincipal	And the second se	BPP608.2	Study the preclinical screening of various drugs.	Principal
BPP608	Pharmacology III (Practical)	BPP608.3	A REAL PROPERTY AND A REAL	Principal ant College of

	A second as a fair and a second as	BPP608.4	Calculation of pharmacokinetic parameters	
		BPP608.5	Knowledge of Biostatistics methods used in experimental pharmacology	
	A second second tradem before the	BPT603.1	My student should understand basics of Indian systems of medicine, biodynamicagriculture of medicinal plants and different aspects of herbs as raw material for herbal medicine.	
	and the firm from the most of the state	BPT603.2	My student should be able to explain different aspects of neutraceuticals and health food and its utilization; along with herb-drug and herb-food interactions.	
BPT603	Herbal Drug Technology (Theory)	BPT603.3	My student should be able to describe herbal cosmetics and its related aspects, herbal excipients and herbal formulations.	
	Autoritation dans a source and the second and the s	BPT603.4	My student should understand guidelines for evaluation of herbal drugs as per international authorities like WHO and ICH along with intellectual property rightsand regulatory issues with respect to herbal drugs.	
	and a state of the	BPT603.5	My student should know general aspects related to herbal industry and institutions involved in work on medicinal plants along with GMP requirements under schedule-T for herbal industry involved in production of formulations belonging to Indian systems of medicine.	Trust's Sid
A 32 1	Abore particulation of the product of the product	A administration and		Sug Sug EA
CT+ STOC	an include hitserie in Microsophic Property in the	BPP609.1	My student should be able to perform preliminary phytochemical screening of crude drugs.	Pune 41210
1 the	and the second se	BPP609.2	My student should be able to determine alcohol content of asava and arista.	1742
BPP609	Herbal Drug Technology (Practical)	BPP609.3	My student should be able to carry out evaluation of excipients of natural origin alongwith incorporation of prepared and standardized extracts in cosmetic formulations and their evaluation.	0.436m)
	Research III is an article series stratight of the series of the termination of t	BPP609.4	My student should be able to carry out monograph analysis of herbal drugs alongwith incorporation of prepared and standardized extracts in pharmaceutical formulations and their evaluation as per pharmacopoeial requirements.	
	 The set of second second set of second s	BPP609.5	My student should be able to determine physical constants like aldehyde content, phenol content, total alkaloids content etc. of crude drugs.	
	And an and a second sec			and the second
	towned and the finite resident as an arrival	BPT604.1	Explain various mechanism, factors influencing drug absorption and Distribution , and protein binding of drugs	
Nº2	was divine and high instantial in other man	BPT604.2	Discuss and understand basics of drug metabolizing pathways, factors affecting renal and non-renal excretion of drugs	
BPT604	Biopharmaceutics and P'cokinetics (Theory)	BPT604.3	Understand concept of bioavailability and bioequivalence of drug product and their significance	40
Principa	and a substance of the substance of the	BPT604.4	Explain use of plasma drug concentration-time data to calculate the	Principal



CAYM Education Trusts Siddhant College of Pharmacy A/P Sudumbare, Talegaon – Chakan Road, Tal: Maval, Dist: Pune -412109 Academic Year 2018-19 B Pharmacy Program Outcome

PO1: Pharmaceutical Knowledge:- Students achieve a deep knowledge regarding human body, its related diseases, analytical skills, drug molecules (Active Pharmaceutical Ingredients) along with excipients, natural drug resources, chemistry involved in API including synthesis of commonly used drugs, effect of drug on human body, toxicity and impurity profile, ADME studies of drugs (behavior of drug in human body), dosage form studies including novel approaches, designing and development of formulation stability studies, analysis etc

PO2: Research Analysis: Develops knowledge in research field to make new relevant discoveries and to identify new entities.

PO3: Design & Development of dosage forms: Describes preparation of various dosage forms that could be prepared by the pharmacy students in the pharmaceutical companies for the ease of patients and to optimize formulations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.

PO5: Modern methods usage: Create, select, and apply appropriate techniques, resources and modern methods with an understanding of the limitations and its usage. The student also learns to handle many instruments related to their studies which would help them work in a Pharmaceutical Industry, pharmacovigilance, regulatory requirements, legal processes etc.

PO6: Pharmacy and society: Pharmacist provide complete health care data and practices to the people of the society and guide them to be healthy. The student also learns drug distribution system, patient counseling, industrial laws etc. Students achieve expertise in storage and distribution of drugs with all precautions and in-depth knowledge of dose, adverse effect and other health related issues to deal with ambulatory and IPD patients in hospitals and also in public and achieve responsibility of computing profession and society.

PO7: Environment and sustainability: Locate the impact of the professional pharmacist in society and environment and make an impact of it on the people of the society.



Principal Siddhant College of Pharmasy Sudumbare. Tal.-Maval, Dist.-Pune 412109. **PO8:** Ethics: Justify & apply ethical principle and commit to professional ethics and responsibilities and norms of the pharmacy practice. Student is also trained in ethical behavior with physician, nurses and other paramedical staff for protecting patient's health.

PO9: Individual and team work: Function effectively as an individual and as a member or leader in diverse teams acts as a multidisciplinary person in every context. Students will be able to demonstrate rigorous and independent thinking and encourage participatory decision making in teams.

PO10: Communication: Develops Communication effectively on pharmaceutical activities with the community and with society.

PO11: Life-long learning: Recognize the need and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change and implement those technology by gaining experience.

PO12: Social Interaction: Being a public welfare job, a pharmacist would be able to interact with the people in a better way to cure them and make them feel healthy also investigate and evaluate the general state of public health conditions and concerns and develop and apply appropriate programs of action within program content area



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Program Specific Outcome

Some of the program specific outcomes are mentioned below:

PSO 1: Prepared to implement the knowledge gained during the course of the program from pharmacology, pharmaceutics, medicinal chemistry, pharmacognosy, APHE, communication skills, pharmaceutical analysis, biotechnology, biochemistry, cosmetology and environmental studies.

PSO 2: Develops knowledge of ethical and management principle required to work in a team as well as to lead a team.

PSO 3: Achieve multidisciplinary jobs in the pharmaceutical industries in various branches and would be able to write relevant and effective project reports in multidisciplinary environment in the context of changing technologies.

PSO4 Prepares to communicate easily and effectively. Would be able to perform multitasks in multifields including pharmaceuticals & cosmetic in timebound manner. Research area would be the key element.



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