



Sant Dnyaneshwar Shikshan Sanstha's

Annasaheb Dange College of D Pharmacy, Ashta

Mandatory Disclosure

2022-23

Mandatory Disclosures

1. Name of the Institution:

- **Name of the Institution :** Sant Dnyaneshwar Shikshan Sanstha's, Annasaheb Dange College of D Pharmacy, Ashta.
- **Address :** Near Old Air Port, A/P- Ashta, Tal – Walwa, Dist – Sangli. State: Maharashtra. Pin Code: 416301
- **Phone No. :** 02342 – 241125, **Mobile No:** 9158008167
- **E-Mail ID :** principaladcdp@gmail.com

2. Name and Address of the Trust / Society / Company and the Trustees

- **Name of the Society :** Sant Dnyaneshwar Shikshan Sanstha
- **Address of the Society :** "Madhav" Niwas, Kachare Galli, A/ P- Islampur, Tal – Walwa, Dist – Sangli, State: Maharashtra. Pin Code: 416409
- **Telephone :** 02342 – 241105
- **Email ID :** info@santdnyaneshwar.org
- **Name of the Trustee :**

Details of the Trustee		
Sr. No.	Name of Trustee	Designation
01	Hon. Shri. Ramchandra Dange	President
02	Hon. Shri. Sampatrao Patil	Vice - President
03	Hon. Shri. Rajendra Dange	Secretary
04	Shri. Vitthalrao Musai	Member
05	Shri. Vishwanath Dange	Member
06	Shri. Sukumar Lavate	Member
07	Shri. Sattu Dhole	Member
08	Shri. Chaganrao Nangare	Member
09	Shri. Appasaheb Pujari	Member

3. Name and Address of the Principal

- **Name of the Principal :** Mr. Sujit Arun Desai
- **Address :** At/Post -Kavathe-Piran, Tal – Miraj, Dist – Sangli. Pincode: 416417.
- **Phone No. :** 02342 – 241124. **Mobile No:**9673013737
- **Email ID :** sujitdesai37@gmail.com

4. Name of the Affiliating University / Board

- **Name of the University :** Maharashtra State Board of Technical Education, Mumbai
- **Address :** 2nd Floor, Govt. Polytechnic Building, 49, Kherwadi Rd, Kherwadi, Mumbai, Maharashtra 400051
- **Contact No. :** 022 - 2647 8531

5. Governance

▪ Members of the Board and their brief background

- The institution has active academic advisory body. The members of the body are –

Sr. No.	Name	Nomination	Designation
01	Adv. Shri. Rajendra R. Dange Secretary, Sant Dnyaneshwar Shikshan Sanstha, Islampur	Educationist	Chairman
02	Prof. Rafiq A. Kanai Executive Director, Sant Dnyaneshwar Shikshan Sanstha, Islampur	Educationist Nominated by Sanstha	Member
03	Dr. Remeth J. Dias Head of Department, Government College of Pharmacy, Karad	Educationist Nominated by Sanstha	Member
04	Prof. (Dr.) Mahesh G. Saralaya Professor & Principal, ADCBP, Ashta	Educationist Nominated by Sanstha	Member
05	Mr. Sachin J. Sajane Vice Principal (Admin), ADCBP Ashta	Educationist Nominated by Sanstha	Member
06	Dr Prajyot P. Naik Executive Commercial Chain Supply IPCA Laboratories. Mumbai	Industrialist Nominated by Sanstha	Member
07	Vacant	Nominee of Maharashtra State Board of Technical Education, Mumbai	Member
08	Vacant	Nominee of the State Government	Ex-Officio Member
09	Vacant	Industrialist / Technologist / Educationist Nominated by State Government	Member
10	Mr. Prakash I. Nargatti Assistant Professor	Diploma Faculty Member Nominated by Sanstha	Member
11	Mr. Sujit A. Desai Principal, ADCDP Ashta	Principal of the Institute	Member-Secretary

▪ Members of Academic Advisory Body

- The institution has active academic advisory body. The members of the body are -

Academic Advisory Body		
Sr. No.	Name	Designation
01	Prof. Rafiq A. Kanai Executive Director, Sant Dnyaneshwar Shikshan Sanstha, Islampur	Head
02	Prof. (Dr.) Mahesh G. Saralaya. Principal, ADCBP	Member
03	Prof. Shailendra B. Hivarekar, Academician	Member
04	Prof. Santosh S. Mohite, Academician	Member

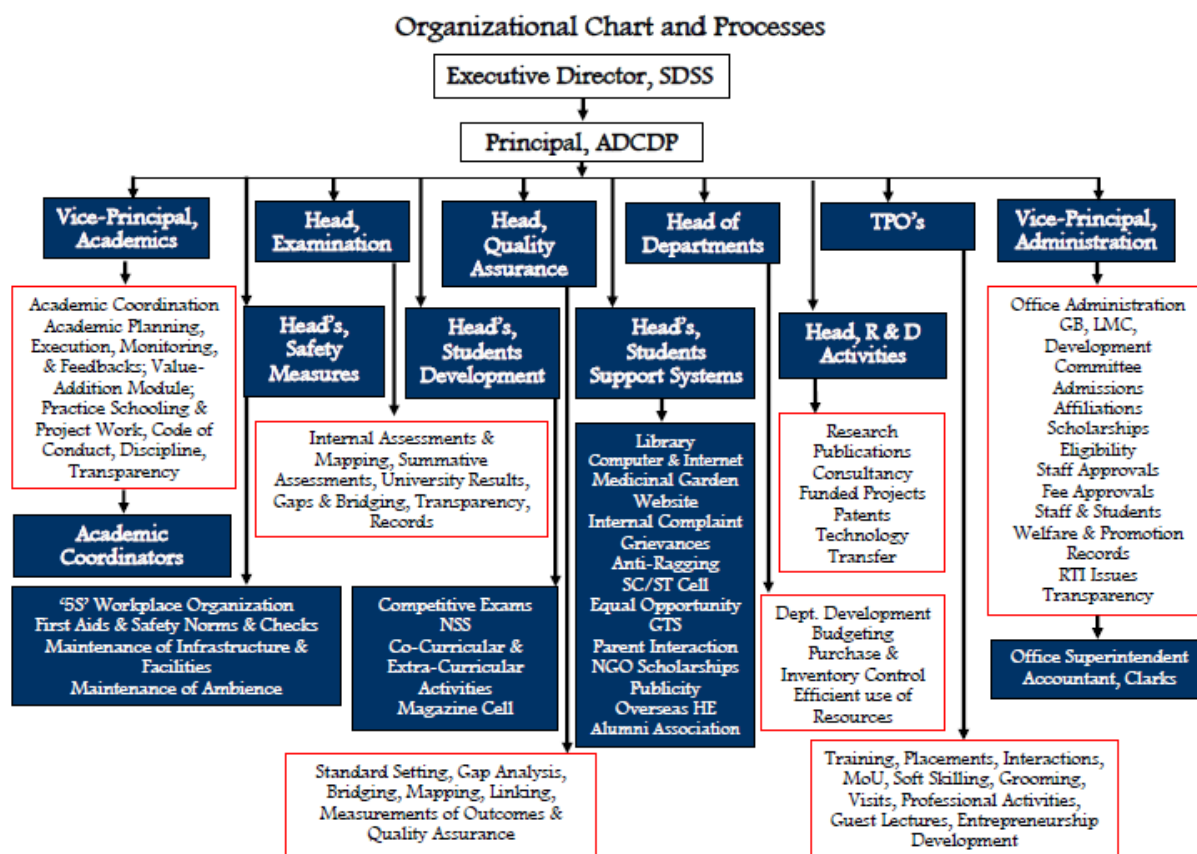
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05	Prof. Rajesh S Jagtap, Academic Coordinator	Member
06	Mr. Sujit A Desai, Principal, ADCDP	Member - Secretary

Frequency of the Board Meeting and Academic Advisory Body

Sr. No.	Name of Body	Frequency of the Board Meeting
01	Governing Body	02 / Year
02	Academic Advisory Body	02 / Year

Organizational Chart and Processes



Nature and Extent of involvement of Faculty and students in academic affairs/improvements

A) Faculty Members are involved in Academic Improvement by -

- Organizing & Re-organizing syllabus
- Identifying gap between Curriculum & employment market needs
- Bridging gap by conducting additional activities (teaching, assessments Assignments, visits, interviews, competitions, seminar & conferences, Magazine, Co-curricular & Extra-curricular activities, Sports, Project work, Survey etc.

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- iv) Planning Outcomes using Standards (PO's & Habit of Mind Frameworks)
- v) Designing & Mapping Assessments (Using Six Facets of Assessment)
- vi) Designing Assessment Rubrics
- vii) Designating & delivering Lectures (Using WHERETO approach)
- viii) Designing& conducting Active Learning
- ix) Assessing Self-Learning
- x) Offering constructive & positive Feedback

B) Students are involved in Academic Improvement by -

- i) Thinking critically & asking the questions
- ii) Respond positively on feedback given by the teacher on their performance
- iii) Giving feedback on teacher's performance
- iv) Giving feedback on infrastructure & facilities provided by the Institute
- v) Prepare 'Concept Maps' & 'Knowledge Organizers'
- vi) Students are open to grievances &/or suggestions for academic improvements.
- vii) Students are representing almost all committees & cells

▪ **Mechanism/ Norms and Procedure for democratic/ good Governance**

Norms	Procedures
Delegation of Powers of Principal to the faculty members	Powers are delegated to faculty members by creating more than 48 portfolios.
Clarity in objectives, outcomes, documentation etc. of all portfolios	For portfolios, written guidelines related with objectives, outcomes etc. are given to bring clarity & avoid interference.
Representation to teaching, non-teaching staff & students on the portfolios	Depending on nature of the portfolio, the representation of teaching, non-teaching staff & students have been given to improve their participation & offer opportunity for learning.
Policies of the major activities are fixed.	Policies for Governing Body, Delegation of financial powers, Budget Allocation & Utilization, Public Accounting, Recruitment, Service Rules, Staff & Students Welfare, Staff & Students Promotion, Safety & Security, GTS, Grievances, Public Information, Academic Goals Setting, Assessments, Teaching, R & D Activities, etc. are fixed.
Processes, Procedures & Mechanisms are evolved.	Processes, Procedures & Mechanisms of all activities are evolved for bringing transparency & effectiveness of resources.
Institutional leadership opted democratic processes in all kind of affairs.	Principal lead the team by putting his own example & explored distributed leadership.

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▪ Student Feedback on Institutional Governance/ Faculty performance

1. Student's feedback on Faculty performance is conducted two times in Semester (after one month of commencement & prior to one month of conclusion of Semester) in online mode by the Principal.
2. Apart from parameters related to teaching-learning processes, each feedback provides space where students can write any issues.
3. After every feedback & as per norms, faculty member with under-performance will be issued a memo from the Principal for improvements on the issues raised by the students.
4. In subsequent feedback, previous memo of same faculty is review for any improvement or not along with any new issues raised by the students.
5. Students are also giving feedback on Infrastructure & Facilities as well as Institutional Governance.
6. Any issues raised in the feedbacks are urgently cleared. For this purpose, if any new material is required is procured &/or if any corrections in existing systems, processes are attempted or new systems, processes, & mechanisms required are immediately implemented.

▪ Grievance Redressal mechanism for Faculty, staff and students

- Institute has an online portal where any aggrieved applicant may submit an application seeking Redressal of grievance.
- On receipt of an online complaint, the institution refers the complaint to the appropriate Grievance Redressal Committee, along with its comments within 15 days of receipt of complaint on the online portal.
- The Grievance Redressal Committee, as the case may be, shall fix a date for hearing the complaint which shall be communicated to the institution and the aggrieved applicant.
- An aggrieved applicant may appear either in person or authorize a representative to present his/her case.
- Grievances not resolved by the Grievance Redressal Committee shall be referred to the Ombudsperson, within the time period provided.
- Institutions will extend co-operation to the Ombudsperson or the Grievance Redressal Committee, in early Redressal of grievances; and failure to do so may be reported by the Ombudsperson to the Council, which shall take action in accordance with the provisions of Regulations.
- The Ombudsperson shall, after giving reasonable opportunities of being heard to both parties, on the conclusion of proceedings, pass such order, with reasons therefore as may be deemed fit to redress the grievance and provide such relief as may be appropriate to the aggrieved applicant.

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- The institution, as well as the aggrieved student, shall be provided with copies of the order under the signature of the Ombudsperson, and the institution shall place it for general information on its website.
- The institution shall comply with the recommendations of the Ombudsperson; and the Ombudsperson shall report to the Council any failure on the part of the institution to comply with the recommendations.
- The Ombudsperson may recommend appropriate action against the complainant, where a complaint is found to be false or frivolous.

▪ Establishment of Anti Ragging Committee

- The institution has active Anti Ragging Committee and Anti Ragging Squad. The members are -

Anti-Ragging Committee				
Sr. No.	Name	Designation	Mobile No.	Email ID
01	Prof. R. A. Kanai	Head	9604000786	profrak@rediffmail.com
02	Prof. S. A. Desai	Member	9673013737	sujitdesai37@gmail.com
03	Mrs. J. A. Admuthe	Member	9595461008	admuthe.jyotiadcdp@gmail.com
04	Mr. P. I. Nargatti	Member	7709884468	nargatti.prakashadcdp@gmail.com
05	Ms. P.S. Patil	Member	9921578009	pravinpatil@gmail.com
06	Mr. S. R. Patil	Member	8275550804	shivtejrpl@gmail.com
07	Mr. R. S. patil	Member	9423270804	rajupatil@gmail.com
08	Miss. P. R Nikam	Member	9579235210	prajaktanikam2003@gmail.com
09	Mr. S. S. Sanadi	Member	02342-243233	asshinde@gmail.com
10	Mr. S. L. Shiralkar	Member	9604254109	slshiralkar@gmail.com
11	Mr. D. V. Adsul	Member	9960674000	dipakadsul@gmail.com

Anti Ragging Squad				
Sr. No.	Name	Designation	Mobile No.	Email ID
01	Prof. S. A. Desai	Head	9673013737	sujitdesai37@gmail.com
02	Mrs. J. A. Admuthe	Member	9595461008	admuthe.jyotiadcdp@gmail.com
03	Mr. P. I. Nargatti	Member	7709884468	nargatti.prakashadcdp@gmail.com
04	Ms. P.S. Patil	Member	9921578009	pravinpatil@gmail.com

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▪ Establishment of Online Grievance Redressal Mechanism

- Institute has established online Grievance Redressal Portal for the Students, Faculty, Non-Teaching Staff, Parents, Alumni, and Management etc. The link for the online portal is – <https://www.vmedulife.com/institute/e-grievance/home/adcbp-sangli>.
- **Online Grievance Redressal Mechanism**
 - Institute has an online portal where any aggrieved applicant may submit an application seeking Redressal of grievance.
 - On receipt of an online complaint, the institution refers the complaint to the appropriate Grievance Redressal Committee, along with its comments within 15 days of receipt of complaint on the online portal.
 - The Grievance Redressal Committee, as the case may be, shall fix a date for hearing the complaint which shall be communicated to the institution and the aggrieved applicant.
 - An aggrieved applicant may appear either in person or authorize a representative to present his/her case.
 - Grievances not resolved by the Grievance Redressal Committee shall be referred to the Ombudsperson, within the time period provided.
 - Institutions will extend co-operation to the Ombudsperson or the Grievance Redressal Committee, in early Redressal of grievances; and failure to do so may be reported by the Ombudsperson to the Council, which shall take action in accordance with the provisions of Regulations.
 - The Ombudsperson shall, after giving reasonable opportunities of being heard to both parties, on the conclusion of proceedings, pass such order, with reasons therefore as may be deemed fit to redress the grievance and provide such relief as may be appropriate to the aggrieved applicant.
 - The institution, as well as the aggrieved student, shall be provided with copies of the order under the signature of the Ombudsperson, and the institution shall place it for general information on its website.
 - The institution shall comply with the recommendations of the Ombudsperson; and the Ombudsperson shall report to the Council any failure on the part of the institution to comply with the recommendations.
 - The Ombudsperson may recommend appropriate action against the complainant, where a complaint is found to be false or frivolous.

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▪ Establishment of Grievance Redressal Committee in the Institution and Appointment of Ombudsman by the MSBTE

- The institution has active Grievance Redressal Committee. The members are -

Grievance Redressal Committee			
Sr. No.	Name	Designation	Mobile No.
01	Prof. S. A. Desai	Head	9673013737
02	Miss. A. C. Patil	Co-coordinator	8408001939
03	Mr. P. I. Nargatti	Member	7709884468
04	Mr. Y. D. Dange	Member	9834524848
05	Mr. A. S. Magdum	Member	9860823120
06	Mrs. S. U. Gaikwad	Member	9156911646
07	Miss. R. V. Patil	Member	8767849803
08	Mr. S. J. Desawale	Member	8928720770
09	Miss. V. V. Kakade	Member	8805364342
10	Mr. S. S. Chougule	Member	7249736788

▪ Establishment of Internal Complaint Committee (ICC)

- The institution has active Internal Complaint Committee (ICC). The members are -

Internal Complaint Committee (ICC)		
Sr. No.	Name	Designation
01	Miss. A. C. Patil	Chairman
02	Prof. S.A. Desai	Member
03	Mr. P.I. Nargatti	Member
04	Mr. Y. D. Dange	Member
05	Mrs. S. T. sankpal	Member
06	Mrs. S. U. Gaikwad	Member
07	Mr. R. A. Mohite	Member
08	Mr. A. S. Shinde	Member
09	Mrs. P. M. Patil	Member
10	Miss. R. S. Mote	Member

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▪ Establishment of Committee for SC/ST

- The institution has active Committee for SC/ST. The members are -

Committee for SC/ST			
Sr. No.	Name	Designation	Mobile No.
01	Prof. S. A. Desai	Head	9673013737
02	Miss. A. C. Patil	Coordinator	8408001939
03	Mrs. J. A. Adhmuthe	Member	9595461008
04	Mr. P. I. Nargatti	Member	7709884468
05	Mr. Y. D. Dange	Member	9975025355
06	Mrs. S. T. Sankpal	Member	8600913986
07	Miss. R. S. Mote	Member	9370503828
08	Mr. L. G. Kambale	Member	8530586214
09	Miss. Manasvi S. Suryawanshi	Member	8856813316

▪ Internal Quality Assurance Cell

- The institution has active Internal Quality Assurance Cell. The members are -

Internal Quality Assurance Cell			
Sr. No.	Name	Designation	Mobile No.
01	Prof. S. A. Desai	Chairperson	9673013737
02	Mrs. J. A. Adhmuthe	Member	9595461008
03	Mr. P. I. Nargatti	Member	7709884468
04	Mr. Y. D. Dange	Member	9834524848
05	Mrs. S. T. Sankpal	Member	8600913986
06	Mr. A. S. Magdum	Member - Secretary	9860823120

6. Programme

- Name of Program approved by AICTE : Pharmacy
- Name of Program Accredited by NBA : Nil
- Status of Accreditation of the Courses : Nil
- Total number of Courses : 01
- No. of Courses for which applied for Accreditation: 01
- Status of Accreditation : First time applying Preliminary

(Preliminary / Applied for SAR & results awaited / Applied

For SAR & visits completed / Results of the visits awaited /

Rejected / Approved for Courses (specify the number of courses)

▪ **Programme Details:**

Sr. No.	Name of Programme	Course	Number of seats	Duration	Cut off Marks / Rank of admission during the last three years			Fee (As approved by the State Government) (2021-22)
					2019-20	2020-21	2021-22	
01	Pharmacy	Pharmacy	60	Years	37.67 (PCMB)	36.67 % (PCMB)	38.67 % (PCMB)	66,000/-

▪ **Placement Facility:**

- The Training and Placement Cell of the Annasaheb Dange College of D. Pharmacy, Ashta has been established to help undergraduates & diploma students to prepare, develop & groom for the needs of employment market.
- TPC also offers campus opportunities for recruitment by inviting industries and external agencies.
- The Placement Cell presents entire guide to the travelling agencies at each level of placement system.
- Arrangements for Pre-Placement Talks, Written Tests, Interviews and Group Discussions are made as according to the requirement of the employment market.
- In addition to this, advice letters are given to the students whenever demanded. Students are advocated with the aid of the faculty for accumulating the information from the internet site of the various Pharmaceutical Companies.

A) Campus Interviews-We have conducted the Campus Interview for Degree & Diploma students

- i) Arranged Pool Campus Interview of Inventia Pvt. Ltd., Mumbai on May 2019.
- ii) Arranged Pool Campus Interview of 3 GEN Consulting Pvt. Ltd., Pune on 6th January 2021.
- iii) Arranged Pool Campus Interview of IT Cube solutions, Pune on 14th March 2020.

B) Workshops, Seminar & Guest Lectures data-We have conducted following types of activities to promote the placements of diploma students

Sr. No.	Academic Year	Types of Activity	No. of Activity	No. of Participant benefited	Beneficiary
01	2019-20	Workshops	01	60	Final Year D Pharm Students
02	2019-20	Seminar	02	60	Final Year D Pharm Students
03	2019-20	Guest Lecture	05	110	First and Final Year D Pharm Students
04	2019-20	Webinar Series	06	130	First and Final Year D Pharm Students

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05	2020-21	Guest Lecture	04	68	Final Year D Pharm Students
06	2021-22	Workshops	03	67	Final Year D Pharm Students
07	2021-22	Guest Lecture	10	100	First and Final Year D Pharm Students
08	2021-22	Seminar	02	67	Final Year D Pharm Students

- **Campus Placement in last three years with minimum salary, maximum salary and average salary**

Sr. No.	Academic Year	Minimum salary	Maximum salary	Average salary
1	2016-17	NA	NA	NA
2	2017-18	1.2 lac /annum	1.2lac /annum	1.2lac /annum
3	2018-19	1.2 lac /annum	1.2 lac /annum	1.2 lac /annum
4	2019-20	1.2 lac /annum	1.68 lac /annum	1.4lac /annum
5	2020-21	1.5 lac/annum	2.5 lac /annum	2 lac /annum

7. Faculty

- **Permanent Faculty for D. Pharmacy Course**

Sr. No.	Name of the Faculty	Designation	Qualification
01	Mr. Sujit A. Desai	Principal	M. Pharm
02	Mr. Prakash I. Nargatti	Assistant Professor	M. Pharm
03	Mr. Yuvraj D. Dange	Assistant Professor	M. Pharm
04	Mrs. Jyoti A. Admuthe	Assistant Professor	M. Pharm
05	Mr. Anil S. Magdum	Assistant Professor	M. Pharm
06	Mrs. Sangeeta T. Sankpal	Assistant Professor	M. Pharm
07	Miss. Aishwarya C. Patil	Assistant Professor	M. Pharm

- **Adjunct Faculty for D. Pharmacy Course:** Nil

- **Permanent Faculty: Student Ratio**


Sr. No.	Course	No. of Faculty	Sanctioned Intake					Faculty: Student Ratio
			I	II	III	IV	Total	
01	D. Pharmacy	07	60	60	--	--	120	17

- **Number of Faculty Employed and Left during the last three years:**

Sr. No.	Course	No. of Faculty Employed			No. of Faculty left		
		2021-22	2020-21	2019-20	2021-22	2020-21	2019-20
01	D. Pharmacy	03	01	01	02	00	01

8. Profile of Principal & Faculty

A) Profile of Principal

Particular	Details	
Name	Sujit Arun Desai	
Date of Birth	15/08/1990	
Unique id	1-3246133553	
Education Qualifications	M. Pharm.	
Work Experience	Teaching: 08 Years, Research: 00 Years, Industry: 00 Year, Other: 00; Total: 08 Years	
Area of Specialization	Quality Assurance	
Courses taught at Under Graduate	Pharmaceutical Technology, Industrial Management, Cosmeticology, Drug Store & Business Management.	
Courses taught at Post Graduate	--	
Research guidance	30 Under Graduate	
No. of papers published	National: 20, International: 05, Conferences: 08	
Master	00	
Ph.D.	Pursuing	
Projects Carried out	Nil	
Patents	Nil	
Technology Transfer	Nil	
Research Publications	24	
No. of Books published with details	01 Author of a reference book 'Advancement in QSPR Modeling' (Mahi Publication, Ahmedabad, Dec 2018, ISBN: 978-81-939449-5-0)	

B) Profile of Faculty: Attached Annexure: I

9. Fee

▪ Details of Fee, as approved by State Fee Committee for the Institution

- The details of fees approved by the Fees Regulating Authority of State Government is as follow -

Sr. No.	Name of Course	Approved Fee for the A. Y. 2021-22		
		Tuition Fee (Rs.)	Development Fee(Rs.)	Total Fees (Rs.)
01	D. Pharmacy	59729	6271	66000/-

▪ Time schedule for payment of Fee for the entire Programme

- Fee should be paid at the time of admission for respective academic years.

▪ No. of Fee Waivers granted with amount and name of students

- The details of students admitted under TFWS quota and tuition fee waived are as follow -

Sr. No.	Name of Course	Details of Tuition Fee Waiver Scheme (For the Academic Year 2020-21)		Amount (Rs)
		No. of students	Name of the Student	
01	D. Pharmacy	03	Jadhav Tejasvini Arun	59729
			Korade Madhuri Sarjerao	59729
			Shirgave Sejal Dipak	59729

▪ Number of scholarship offered by the Institution, duration and amount

- The institute offers the all Scholarship / Free ship to the eligible students as per the State Government Norms. The details for the academic Year 2021-22 are as follows -

Sr. No.	Scheme of Scholarship	Duration	No. of Students	Total Amount (Rs)
D. Pharmacy				
1	EBC	01 Year	36	1042560
2	VJNT Scholarship / Free ship	01 Year	20	1158380
3	OBC Scholarship / Free ship	01 Year	18	450000
4	SBC Scholarship / Free ship	01 Year	01	50000
5	SC Scholarship / Free ship	01 Year	10	544000
6	ST Scholarship / Free ship	01 Year	01	54400
		Total	86	3299340

▪ Criteria for Fee Waivers/Scholarship

i) Criteria for Tuition Fee Waiver Scheme (TFWS):

Sr. No.	Particular	
01	Scheme	<ul style="list-style-type: none"> ▪ Tuition Fee Waiver Scheme (TFWS) Seats will be filled in by the Competent Authority. ▪ Seats up to maximum 5 % of sanctioned intake per course are available. ▪ These seats are supernumerary in nature. ▪ The Waiver is limited to the tuition fee as approved by the Fee Regulation Authority & All other fees except tuition fees shall be paid by the beneficiary. ▪ The Candidates admitted under this scheme is not allowed to change

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		<p>Institution /course at any stage under any circumstances.</p> <ul style="list-style-type: none"> These seats are available for admission to First Year of B. Pharmacy &D. Pharmacy course.
02	Eligibility	<ul style="list-style-type: none"> Only Maharashtra State Candidature candidates are eligible for these seats. Eligible Maharashtra State Candidates having their parent's annual income less than Rs. 8 Lakh (Rupees Eight Lakh only) from all sources shall only be eligible for these seats. The candidate shall submit Income certificate issued by Appropriate Authority.
03	Admissions Procedure	<ul style="list-style-type: none"> These seats are allotted by the Competent Authority as per inter-se merit. For this purpose, the Competent Authority shall invite applications, prepare a separate merit list for this category by following the same criteria as for Maharashtra State Candidature Candidates. In the event of non-availability of students in this category the same shall not be given to any other category of applicants.

ii) Criteria for Scholarships:

Sr. No.	Scheme	Scheme Details
01	Rajarshi Chhatrapati Shahu Maharaj Shikshan Shulkh Shishyavrutti Scheme	As per the State Government Norms. https://mahadbtmahait.gov.in/Home/Index
02	Dr. Punjabrao Deshmukh Vasatigruh Nirvah Bhatta Yojna	As per the State Government Norms. https://mahadbtmahait.gov.in/Home/Index
03	Scholarship to VJNT Students	As per the State Government Norms. https://mahadbtmahait.gov.in/Home/Index
04	Scholarship to OBC Students	As per the State Government Norms. https://mahadbtmahait.gov.in/Home/Index
05	Scholarship to SBC Students	As per the State Government Norms. https://mahadbtmahait.gov.in/Home/Index
06	Scholarship Scheme for State Minority Communities	As per the State Government Norms. https://mahadbtmahait.gov.in/Home/Index
07	Scholarship / Free ship Scheme for SC, ST Students	As per the State Government Norms. https://mahadbtmahait.gov.in/Home/Index
08	Pragati Scholarship Scheme for Girl Students (Degree, Direct Second Year Degree & Diploma)	As per the All India Council for Technical Education Norms. https://scholarships.gov.in
09	Saksham Scholarship Scheme for Specially Abled Student (Degree, Direct Second Year Degree & Diploma)	As per the All India Council for Technical Education Norms. https://scholarships.gov.in
10	Post Matric Scholarships Scheme for Minorities	As per the Central Government Norms https://scholarships.gov.in

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▪ Estimated Cost of Boarding and Lodging in Hostels

Sr. No.	Name of Hostel	Annual Fees (Rs.)
01	Girl Hostel I	22000.00
02	Girl Hostel II	27000.00
03	Boys Hostel I	22000.00
04	Boys Hostel II	16000.00

▪ Any other fee please specify

- Institute does not charge any fee other than Fees sanctioned by Fees Regulating Authority of Government of Maharashtra.

10. Admission

▪ Number of seats sanctioned with the year of approval

Sr. No.	Course	No. of Seats Sanctioned	Year of Approval
01	D. Pharmacy	60	2021-22

▪ Number of Students admitted under various categories each year in the last three years

- Following are the details of the Number of students admitted under various categories –

Sr. No.	Category	Academic Year		
		2021-22	2020-21	2019-20
01	Open	30	28	18
02	SEBC	NA	NA	09
03	SC	04	05	07
04	ST	01	01	01
05	VJNT	11	10	11
06	OBC +	13	14	11
07	SBC	1	01	03
	Total	60	59	60
08	EWS (Over & Above)	04	05	01
09	TFWS (Over & Above)	03	03	NA

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- **Number of applications received during last two years for admission under Management Quota and number admitted**
 - Following are the details of the Number of applications received during last two years for admission under Management Quota and number admitted

Institute Level Admissions (Management Quota & Seats remaining vacant after CAP)					
Sr. No.	Course	No. of Applications Received		No. of Students Admitted	
		2021-22	2020 – 21	2021-22	2020 – 21
01	D. Pharmacy	20	22	20	22

11. Admission Procedure

- **The Competent Authority for the Admission Process**
 - A) **First Year D. Pharmacy:**
 - The **Director, Directorate of Technical Education, Maharashtra State**, has been appointed by the State Government as the Competent Authority for the **Centralized Admission Process (CAP)** and shall direct the students as per their allotment through CAP to all institutions.
- **Admission Tests:**
 - For the admission to First Year D. Pharmacy course, the candidate should Pass 10+2 examinations with Physics and Chemistry as compulsory subjects along with Mathematics/Biology subject.

Details of the competent Authority for the Admission test & the Centralized Admission				
Sr. No.	Particular	Name of Competent Authority	Address of Competent Authority	Website
First Year D. Pharmacy				
01	Centralized Admission Process (CAP)	The Director, Directorate Of Technical Education , Maharashtra State	Mumbai 3, Mahapalika Marg, Post Box No.1967, Opp. Metro Cinema, Mumbai - 400 001 Phone: (022) 2264 1150, 2264 1151, 2262 0601, 2269 0602	http://www.dtemaharashtra.gov.in

- **Number of seats allotted to different Test Qualified candidate separately (AIEEE / CET State conducted test/ University tests/ CMAT/ GPAT)/ Association conducted test etc.)**
 - Allocation of seats for MHT CET and NEET qualified students within Sanctioned Intake is as follow:

Sr.No.	Name of Test	Allocation of seats within Sanctioned Intake	
		Maharashtra State Candidates	All India Seats
First Year D. Pharmacy			
01	Total marks obtained in Physics, Chemistry,	100 % of CAP seats	00

Mandatory Disclosures

	Biology / Mathematics at HSC Examination		
--	---	--	--

▪ Calendar for Admission against Management / Vacant seats:

- The Principal of the institution will be the authority to carry out the admissions for the seats of Institutional Quota & Seats remaining Vacant after the Centralized Admission process as per the directions received from the Competent authority of the respective courses.
- Admissions are made in a transparent manner and strictly as per the Inter-Se-Merit of the Candidates who have applied to the Competent Authority for verification of documents and then to the Institution.
- Aspiring Candidates fulfilling the eligibility criteria as notified by the Government and specified by the appropriate authority, from time to time, shall apply to the Principal of the respective institution for admission at the Institution level and seats remaining vacant after CAP.
- The institution after verification of all required documents will prepare and display the Inter- Se-merit lists of the Candidates
- The detail schedule for the admission to the Institutional Quota & Seats remaining Vacant after the Centralized Admission process for the **Academic Year 2021-2022** is as follow:

Sr. No.	Course	Detailed Schedule
01	First Year D. Pharmacy	Attached Annexure IIA

▪ The Policy for Cancellation of Admission, Refund of fees & Return of Documents by Institutions

- The Candidate shall apply online for cancellation and submit duly signed copy of system generated application for cancellation of admission to the institution. Once the candidate submits online request for cancellation, his/her admission shall be treated as cancelled. The Institute will consider the online request made by Candidate for cancellation as final irrespective of whether he/she has submitted duly signed copy of system generated application to the Institute. Upon such cancellation, the candidate shall lose the claim on the seat and such seat shall become available for further allotment.
- The candidate shall then become entitled to and the Institute shall refund the entire fees to the candidate after deduction of Rs.1000/- towards processing charges and return all his/her original documents submitted to the Institute within two days from submission of duly signed copy of system generated application to the Institute.
- The institution shall not entitle to recover the fees for the subsequent years from the student seeking cancellation of his admission at any point of time

12. Criteria and Weightages for Admission

- The eligibility criteria for the admission to First Year B. Pharmacy, Direct Second Year B. Pharmacy & First Year D. Pharmacy will be as per the rules and regulations framed by the Competent Authority. The eligibility criteria for admission to various courses in Academic Year 2020-21 is as follow:

Sr. No.	Course	Eligibility Criteria
01	First Year D. Pharmacy	(i) The Candidate should be an Indian National. (ii) Passed 10+2 examination with Physics and Chemistry as compulsory subjects along with Mathematics/Biology subject.

- **Cut-off Levels of percentage and percentile score of the candidates in the admission test for the last three years**
 - The cut off marks in admission test of students admitted in respective academic year are as follow -
- **Display marks scored in Test etc. and in aggregate for all candidates who were admitted**
 - The details of aggregate marks obtained in HSC or Diploma Examination is as follow -

Sr. No.	Course	A. Y. 2021-22	A. Y. 2020-21	A. Y. 2019-20
01	First Year D. Pharmacy (PCM/B)	55.35%	53.75 %	56.9996 %

13. List of Applicants

- **List of candidate whose applications have been received along with percentile / percentages score for each of the qualifying examination in separate categories for open seats.**
 - The aspirant candidate required to fill the Online Application Form and Online preference form to respective competent authority as per the notified schedule. So list of candidate who gives the preferences for institute in CAP is not available with institute.
- **List of candidate who have applied along with percentage and percentile score for Management quota seats and seats remaining vacant after CAP (merit wise)**

Sr. No.	Course	List of Candidate
03	First Year D. Pharmacy	Attached Annexure II

14. Results of Admission under Management seats/vacant seats

- **Composition of selection team for admission under Management Quota with the brief profile of members.**
 - The selection team for the admission process under Institutional Quota Seats and Seats remaining vacant after CAP round is –

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Sr. No.	Name of Member	Designation
01	Mr. S. A. Desai Principal, ADCDP Ashta	Head
02	Mr. P. I. Nargatti Asst. Professor & Head, Admission Cell, ADCDP Ashta	Member
03	Mr. Y. D. Dange Asst. Professor	Member
04	Mr. P. S. Patil Clerk, ADCDP, Ashta	Member

▪ **Score of the individual candidate admitted arranged in order or merit**

Sr. No.	Course	List & Score of Candidate
01	First Year D. Pharmacy	Attached Annexure II

▪ **List of candidate who have been offered admission**

- A list of candidate who have been offered admission under Institutional Quota Seats and Seats remaining vacant after CAP round for various courses in the A. Y. 2020-21 is–

Sr. No.	Course	List & Score of Candidate
01	First Year D. Pharmacy	Attached Annexure III

▪ **Waiting list of the candidate in order of merit to be operative from the last date of joining of the first list candidate.**

- A waiting list of candidate for the admission to various courses in the Institution under Institutional Quota Seats and Seats remaining vacant after CAP round for the A. Y. 2020-21 is as follow:

Sr. No.	Course	Name of Candidate
01	First Year D. Pharmacy	Nil

▪ **List of the candidate who joined within the date, vacancy position in each category before operation of waiting list**

- List of candidates who have joined for various courses in the A. Y. 2020-21 under Institutional Quota Seats and Seats remaining vacant after CAP round for the A. Y. 2020-21 is as follow:

Sr. No.	Course	List of Candidate who have been joined the Institute
01	First Year D. Pharmacy	Attached Annexure III

15. Information of Infrastructure and Other Resources Available

- The following are the details of Infrastructure available in the institute -

Independent Building Status : Yes

Separate Campus Status: Yes

Sr. No.	Room Type	No. of Rooms	Total Carpet Area (Sq.m)
01	Class Rooms	02	206.05
02	Tutorial rooms	01	50.64
03	Laboratories	05	514.91
04	Machine Room	01	106.65
05	Preparation Room	03	43.81
06	Computer Centre	01	103.24
07	Exam Control Center	01	35.02
08	Seminar hall	01	168.07
09	Store Rooms	02	36.03
10	Girl's Common Room	01	76.02
11	Boy's Common Room	01	102.81
12	Toilet Blocks for Boys	02	72.86
13	Toilet Blocks for Girls	02	72.86
14	Library	01	168.32
	Type of Area		Total Carpet Area (Sq.m)
01	Instructional area		1446.60
02	Administrative Area		442.26
03	Amenities Area		535.25
04	Circulation Area		625.36
05	Total Carpet Area		3049.47
06	Total Built up Area		3440.87

- Barrier Free Built Environment for disabled and elderly persons**

- Institution has barrier free environment for disabled and elderly persons. The details are –
 - Ramp Facility,
 - Special Toilet facility for Disabled / Elder person on Each Floor
 - Lift Facility
 - Wheel chair
 - Rest Room

- Occupancy Certificate**

- The institute has valid Occupancy Certificate issued by Ashta Municipal Council Ashta.

- Fire and Safety Certificate**

- The institute has valid Fire Safety Certificate issued by Indian Fire Safety System.

- Hostel Facility**

- Sanstha has separate hostel facility for the Boys and Girls.

- Library**

- Institute has a well-organized, ventilated, updated & computerized library and a fully furnished & beautifully illuminated reading room with ample space which attracts students for studying, learning,

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making notes & assignments and encourage in performing day to day activities in a serene environment. It provides easy access to books and journals. The institute has well spacious library having voluminous books covering each subject. Various national, international journals and e-journals are available in library. The library also provides the various periodicals, compact discs (CD's) and newspapers for current awareness. The information center has adequate number of computers with broadband Internet / Wi Fi connectivity along with printer is provided. We are also member of NDL. The institute also provides the basic facilities like Xerox machine, scanner etc.

- Library at Glance

Sr. No.	Particular	Details
01	Floor area of the library	168.32 sq. ft.
02	Seating capacity	20 Chairs
03	No. of Titles	154
04	No. Reference books	103
05	No. of Volumes	1316
06	Total Cost	713549/-
07	No. of Subscribed Journals (Printed)	06
08	No. of Online Journals	200
09	Method of Classification	DDC
10	Library atomization	In-house software
11	Library Timing (Mon to Sat)	9:00 am to 6:00 pm
12	During Examination (Sunday)	9:00 am to 6:00 pm
13	National Digital Library(NDL) Subscription	Available

▪ Laboratory

- The laboratories provide large area for experimental performance and research projects. The prerequisites of practical's and research activities are satisfied time to time. All the laboratories are equipped with sophisticated instruments and facilitated with required chemicals, glassware's, equipment's and lab-ware's. Major Equipment's available are –

List of Major Equipment's Available	
Department of Pharmaceutics	Department of Pharmaceutical Chemistry
Rotary Tablet Press	UV Cabinet
Disintegration Test Apparatus	Refractometer
Tablet Dissolution Test Apparatus	Polarimeter
BOD Incubator	Colorimeter
Tray Dryer	Muffle Furnace
Precision melting point	Arsenic Limit Test Apparatus
Digital balance	Nephelo Turbidity meter
Ampoule sealing machine	Flame Photometer
Magnetic stirrer 500ml & 1 Litr capacity	Potentiometer
Aseptic cabinet	Conductivity meter
Tablet coating machine	Deep Freezer
Ball mill	Department of Pharmacology
Double cone blender	Hutchinson's spirometer
Autoclave	Stethoscope
Capsule filling machine	Sphygmomanometer

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Ampoules washing machine	Sherrington's kymograph machine
Hardness tester	Sherrington drum
Friability test apparatus	Pole climbing apparatus
Clarity test apparatus	Rotarod
Digital pH meter	Analgesimeter
Bulk density	Convulsimeter
Laminar Air Flow	Histamine chamber
Ultra Sonicator	Compound Microscope
	Department of Pharmacognosy
	Microtome rotary
	Water Distillation unit
	Muffle Furnace
	Electronic Microscope
	Compound Microscope

▪ Computing Facilities

- Fully furnished computer laboratory is having 20 computers with latest Configuration connected With LAN and provide Internet speed up to 155 Mbps. Wi-Fi facility is available to Staff as Well as Student in the College Campus for 24×7. Lab is provided with Language Lab Software. Printing & scanning facility is also available for student in the Computer laboratory. The computer lab caters the Need of faculty & students for their knowledge updating of the subjects.

Sr. No.	Particular	Details
01	Internet Bandwidth	155 Mbps
02	Number and configuration of System	25
03	Total number of system connected by LAN	25
04	Major software	Language Lab, Experimental Pharmacology
05	facilities available (Conduct of online Meetings/Webinars/Workshops)	Available
06	Facilities for conduct of classes/courses in online mode (Theory & Practical)	Available
07	Innovation Cell	Available
08	Social Media Cell	Available

▪ List of facilities Available

- **Games and Sports Facilities:** The institute encourages the students to inculcate health awareness in them and provides facilities for indoor and outdoor games. The institute has playgrounds for cricket, Kabaddi and Volleyball and also indoor stadium for Badminton, Table – Tennis, Carom, Chess, and Billiards etc. Besides a ground for athletic events is also available.
- **Extra-Curricular Activities:** Institute conducts the various extracurricular activities. Institute also promote the students to participate in various activities conducted by other colleges, Sanstha, trust etc.
- **Soft Skill Development Facilities:** Institute provides the facility for the analysis of personality trait / Learning style / Employability skill analysis.

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▪ Teaching Learning Process

- We have established clear, measurable, realistic and challenging learning goals considering gap in between current curriculum outcomes and employment market needs. We have set clear, measurable and challenging assessments with performance criteria for generating evidence of achievement. This essentially consists of diverse formative assessments and feedback apart from summative assessments. We have designed learning experiences and instructions that will facilitate the student to achieve the desired results. We have adopted model that start from results, assessments and then teaching approach which ensures desired cognitive and psychomotor skill development of students. Learning process is made transparent by offering Course Description Booklet and Learning Outcome Booklet to the students.

Sr. No.	Particular	Details
01	Curricula and Syllabus for each of the Programmes as approved by the Board (D. Pharm)	Attached Annexure IV
02	Academic Calendar of the MSBTE	Attached Annexure V
03	Academic Calendar of the institute	Attached Annexure VI
04	Academic Time Table with the name of the Faculty members handling the Course	Attached Annexure VII
05	Teaching Load of each Faculty	Attached Annexure VIII

16. Enrolment and Placement details of students in the last 3 years

- The Enrolment and Placement details of students are as follow -

Enrollment Data				
Sr. No.	Class	A. Y. 2021-22	A. Y. 2020-21	A. Y. 2019 -20
01	First Year D. Pharmacy	67	67	61
Placement Data				
Sr. No.	Class	A. Y. 2020-21	A. Y. 2019 -20	A. Y. 2018 -19
01	Final Year D. Pharmacy	39	38	35

17. List of Research Projects / Consultancy Works

▪ Number of Projects carried out, funding agency, Grant received

Sr. No.	Name of Faculty (Principal Investigator)	Title of the Project	Duration (in Months)	Amount Received (In Rupees)	Name of the Funding agency
1	Mr. Yuvraj D Dange	Formulation and development of nanohydrogel containing anticancer agent.	24 months	80,000 /-	Sakal Foundation

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▪ Publications (if any) out of Research in last three years

Sr. No.	Academic Year	No. of Publications	
		National	International
01	2021-22	02	01
02	2020 -21	04	02
03	2019 -20	02	02

▪ Industry Linkage

Sr. No.	Name of Student/Staff	Academic Year	Name of Industry linked	Type of Work	Purpose
01	Mr. Sujit A Desai Principal ADCDP, Ashta	2020-21	Lipoid GmbH, Ludwigshafen, Germany	Research Project	Gift sample for Research Project

▪ MoUs with Industries

Sr. No.	Name of Collaborating Organization	Nature of Collaboration	Outcome of Collaboration
1.	Dhanvantari Ayurved Pharma, Ashta, Maharashtra	Training & Internship	Laboratory Training, Hospital visit for students & staff
2.	Dhanvantari Ayurvedic Hospital, Ashta, Maharashtra	Training & Internship	Laboratory Training, Hospital visit for students & staff
3.	S. G. PhytoPharma Pvt. Ltd., Kolhapur, Maharashtra	Training & Internship	Implant training for students & staff & placement & placement of students
4.	Symbiosis Cooperative Pharmaceutical Ltd. Kupwad Block, Sangli, Maharashtra.	Training & Internship	Implant training for students & staff & placement & placement of students
5.	Rubicon Pvt. Ltd, Pune, Maharashtra.	Training & Internship	Training, to students on below topics: Organizational Structure, Public Speaking, Presentation Skills, E-mail Etiquette, Grooming, Group Discussion, Personal Interview, Assessment will be conducted on Group Discussion and Personal Interview
6.	Innoscence Research Sdn. Bhd., Malaysia	Research Project	Identifying opportunities for conducting collaborative research & development. Exchange of academic information and materials. Promoting collaboration in field of mutual interest.
7.	Adhar Hospital, Islampur	Training & Internship	Hospital visit for students & staff

18. LoA and subsequent EoA till the current Academic Year

Sr. No.	Academic Year	LOA	EOA
01	2016 – 2017	Attached Annexure IX	NA
02	2017 – 2018	NA	Attached Annexure X
03	2018 – 2019	NA	Attached Annexure XI
04	2019 – 2020	NA	Attached Annexure XII
05	2020 – 2021	NA	Attached Annexure XIII
06	2021 – 2022	NA	Attached Annexure VIX

19. Accounted audited statement for the last three years

Sr. No.	Academic Year	EOA
01	2019 – 2020	Attached Annexure XV
02	2020– 2021	Attached Annexure
03	2021 – 2022	Attached Annexure

20. Best Practices adopted, if any

- **Academics**

- Re-organization of syllabus on basis of principles of knowledge organization
- In-House design of Learning Outcome Booklet (LOB)
- Library of ‘Knowledge Organizers’ & ‘Concept Maps’
- Embedded Formative Assessments
- Differential Assignments
- In-House Teacher Training & Teacher Support System
- Question paper mapping & monitoring
- Model Answer papers (General Feedback)

- **Use of Technology**

- Use of Learning Management Software (VM EduLife)
- Use of Google Forms for conducting Survey, Feedbacks, demographics etc.

- **Institutional Governance**

- Delegation of powers to teaching & support Staff
- Transparent & responsive feedbacks mechanism
- Student representation on all Cells or Committees
- Grievance Redress Cell for Internal Assessments
- Design of ‘Course Description Booklet’ for students

Mr.Nargatti P.I., M.Pharm.

Assistant Professor

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**Education:**

Pursuing Ph.D.: Shivaji University, Kolhapur
M.Pharm. (2014): Appasaheb Birnale College of Pharmacy, Sangli
B. Pharm. (2012): Appasaheb Birnale College of Pharmacy, Sangli

Professional Work Experience:

August 2014 to July 2016: Clinical Research Associate at Om Sai Clinical Research Pvt. Ltd. Sangli
July 2016 to till date: Asst. Professor, Annasaheb Dange College of D.Pharmacy, Ashta

Teaching	Research	Industry	Total
05 Years	00 Years	02 Years	07 Years

Professional Affiliations: Registered Pharmacist (Registration No.153112)

Subject Taught: Human Anatomy & Physiology, Health Education & Community Pharmacy, Biochemistry & Clinical Pathology, Pharmacology & Toxicology, Hospital & Clinical Pharmacy

Research Foci: Pharmacological Drug Screening, Evaluation of anticancer drugs

Number of Research Projects: NIL

Grants Received: NIL

Number of Publications: 02

Resource Person Presentations: NIL

Book Published: 02

Selected Publications-

- **Prakash Nargatti**, Sudhir Patil, Sandip Patil, Nilofar Naikwade, 'Chemopreventive potential of adrenergic blocker in behavioral stress accelerated prostate cancer development in rats', Research Journal of Pharmacy and Technology, **2021**; 14(2).
- Sudhir Patil, **Prakash Nargatti**, Tabassum Shikalgar, Nilofar Naikwade, 'Evaluation of Antidepressant activity of *Ficus carica* leaves extract in experimental animals', Research Journal of Pharmacy and Technology, **2021**; 14(3).

Mr. Dange Y. D., M. Pharm

Assistant Professor

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Education:

Ph.D. : Pursuing Ph.D. in Shivaji University (From -2017)

M.Pharm. (2016): Rajarambapu College of Pharmacy, Kasegaon.

B. Pharm. (2014): Rajarambapu College of Pharmacy, Kasegaon.

Professional Work Experience:

July 2016 to till date: Assistant Professor Annasaheb Dange College of D. Pharmacy , Ashta

Teaching	Research	Industry	Total
3.5 Years	-	-	3.5

Professional Affiliations: Registered Pharmacist (Registration No. 185125)

Subject Taught: Diploma - Pharmacognosy, Pharmaceutical organic chemistry

Research Foci: Formulation and Method Development.

Number of Research Projects: Nil

Grants Received: Rs. Nil

Number of Publications: 12

Resource Person Presentations: Nil

Patent: Nil

Selected Publications:

- Screening of the most effective Nano metal between AgNp, CuNP and Ag-cuNP, by in vitro antibacterial comparison. Journal of Nanomedicine and nanotechnology.2016; 7:13
- Formulation and Evaluation of Gastro retentive Floating Tablets of Candesartan Celexetil. Indian drug 2017; 54:31-35
- Integration of Pharmacophore Modeling Pocket Modeling to Design Dipeptidyl Peptidase-4 Inhibitors: A Modern Approach to Treat Type 2 Diabetes.
- Simultaneous Equation Method for the Estimation of Palbociclib and Letrozole by Uv-Visible Spectrophotometry. Indian drug.
- Development and Validation of UV-Spectrophotometric Method for Estimation of Metformin in Bulk and Tablet Dosage Form. IJPER.
- Optimization and validation of RP-HPLC method for simultaneous estimation of Palbociclib and Letrozole ,Journal of Toxicology Mechanism and Method
- Screening of Antisecretory & Antiulcer Protective Property of Momordica Charantia" Rsm's Cdgims, International Conference-2018 "Anveshanam" - New Era of Healthcare Management'.
- Pterocarpus marsupium: Rainbow for Life Threatened Disease. Inventi Rapid: Planta Activa.2017 (2):1-5
- A review on a cissus quadrangularis and evaluation of its in vitro Anthelmintics activity 2014 vol.3 (1) Jan –march. CIBTech Journal of Pharmaceutical Sciences.2014 Vol.3 (1):1-5.
- Nanotechnology, Nanodevice Drug Delivery System: A Review. Asian J. Pharm. Tech. 2017; 7 (2): 61-69.
- General Considerations of Design and Development of Dosage Forms: Pre-formulation Review. Asian Journal of Pharmaceutics. Jul-Sep 2017 (Suppl) 11 (3) | S1.

Mrs. Admuthe J.A., M.Pharm.

Assistant Professor

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**Education:**

M.Pharm. (2015): Appasaheb Birnale College of Pharmacy, Sangli
B. Pharm. (2010): Rajarambapu College of Pharmacy, Kasegaon

Professional Work Experience:

July 2018 to till date: Assistant Professor, SDSS's Annasaheb Dange College of D Pharmacy, Ashta, Sangli

Teaching	Research	Industry	Total
4.5 Year			4.5 Year

Professional Affiliations: Registered Pharmacist (Registration No. 117830)

Subject Taught: Diploma- Pharmaceutics- I, II, Pharmaceutical Jurisprudence, Pharmaceutical Chemistry-I

Research Foci:

Number of Research Projects: Nil

Grants Received: Nil

Number of Publications: 01

Resource Person Presentations: Nil

Selected Publications:

- Magdum J. A., Shelke S., 2018. A review on safe use of medicine in pregnancy. Indo American Journal of Pharmaceutical Science, 2018; 5(5):4799-4806.

Mr. Magdum A.S. M.Pharm.

Assistant Professor

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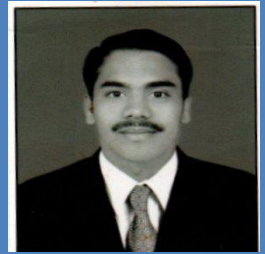
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Education:

M. Pharm.(2015):Appasaheb Birnale College of Pharmacy, Sangli

B. Pharm.(2013): Bharati Vidyapeeth College of Pharmacy, Kolhapur

D. Phram. (2009): Gulabrao Patil College of pharmacy, Miraj

Professional Work Experience:

5.2 year of experience in Development Quality Assurance (DQA) department Lupin Research Park, Pune.

Teaching	Research	Industry	Total
		5.2 years	5.2 years

Professional Affiliations: Registered Pharmacist (Registration No. 110617)

Subject Taught: Diploma- Pharmaceutics-I
: UG-

Research Foci.

Number of Research Projects: Nil

Grants Received: Rs.-Nil

Number of Publications: Nil

Resource Person Presentations: Nil

Patent: Nil

Book Published: Nil

Selected Publications: Nil

Mrs. Sangeeta T. Sankpal , M.Pharm.

Assistant Professor

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**Education:**

M.Pharm. (2020): Appasaheb Birnale College of Pharmacy, Sangli
B. Pharm. (2013): Appasaheb Birnale College of Pharmacy, Sangli
D. Pharm. (2005): Appasaheb Birnale College of Pharmacy, Sangli

Professional Work Experience:

July 2019 to till date: Associate Professor at Annasaheb Dange College of B Pharmacy, Ashta

Teaching	Research	Industry	Total
1.5 Year	02 Years	-	03.5 Years

Professional Affiliations: Registered Pharmacist (Registration No. 80466)

Subject Taught: UG- Pharmaceutical Organic Chemistry II & III, Industrial Pharmacy, Medicinal Chemistry-II

Subject Taught: Diploma- Pharmaceutical Chemistry-II, Social Pharmacy, Pharmacology

Research Foci: Synthesis of Imidazo [1,2-a]Pyrimidine derivatives and their biological evaluation

Number of Research Projects: 00

Grants Received: 00

Number of Publications: 3

Resource Person Presentations: 00

Patent: 00

Selected Publications:

- Research Paper
 - 1- "Synthesis and characterization of Novel Imidazol [1, 2-a] pyrimidine Derivatives and their Evaluation for Antiepileptic and Analgesic activity". Journal of Shanghi Jiaotong University. ISSN:1007-1172; Volume 16. Issue 11, November- 2020. Page No.404-422.
 - 2- "In-vitro Hypoglycemic Activity of Barleria prionitis L." International Journal of Scientific Research in chemistry (I JSRCH) .2020 IJSRCH I, Volume-5, Issue-5, ISSN: 2456-8457. Page No.63-70.
- Review Paper
 - 1-"Coffea Arabica: Herbal drug on Global health issue- obesity", Research Journal of Pharmacognosy and Phytochemistry. ISSN 0975-2331. Volume 12(Issue-04) October-December, 2020.

• Detail In Short**Name:**

- Designation:** Assistant Professor
- Qualification:** M. Pharm (**Pharmaceutical Chemistry**)

- **Area of Expertise:** Chemistry
- **Experience:** 1.5 Year in teaching, 2 Years Marketing, 12 Years Business[medical store]
- **Email ID:** Sankpal.sangeetaadcdp@gmail.com
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Miss. Patil A. C., M.Pharm.

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**Education:**

M.Pharm. (2019): Rajarambapu College of Pharmacy, Kasegaon, Sangli

B. Pharm. (2017): Rajarambapu College of Pharmacy, Kasegaon, Sangli

Professional Work Experience:

Nov.2021 to till date: Associate Professor at Annasaheb Dange College of D Pharmacy, Ashta

Teaching	Research	Industry	Total
02 Years	-	-	02

Professional Affiliations: Registered Pharmacist (Registration No. 217272);**Subject Taught: UG-** Pharmaceutics, Pathophysiology Herbal Drug Technology, Industrial Pharmacy-I, Industrial Pharmacy-II**Subject Taught: Diploma-** Pharmaceutics, Hospital and Clinical Pharmacy (P)**Research Foci:** Formulation and characterization of Novel drug delivery system**Number of Research Projects:** Nil**Grants Received:** Nil**Number of Publications:** 09**Resource Person Presentations:** Nil**Patent:** Nil**Selected Publications:**

- Formulation and evaluation of fast dissolving tablets of Pioglitazone, Asian journal of Pharmacy and technology (AJPT), 9(1):23-26;16 march 2019.
- Phytosomes-A novel approach in herbal drug delivery system Asian Journal of Research in pharmaceutical Science (AJPS),8(3):151-154, 24 oct.2018
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SANT DNYANESHWAR SHIKSHAN SANSTHA'S
ANNASAHEB DANGE COLLEGE OF D PHARMACY

Ashta, Tal: Walwa, Dist: Sangli, Maharashtra, India - 416301

**Final General Merit List for Institute Quota Seats of
First Year D. Pharmacy Admission 2021-22**

Sr. No.	Merit No.	Application ID	Candidate Name	Candidature Type	Gender	Merit Marks PCM/B	Category For Admission
1.	1	DEN21534771	PATIL NAMRATA JAYSING	A	FEMALE	75.67	OPEN
2.	2	DEN21603152	NALAWADE SANIKA VINAYAK	A	FEMALE	73.00	OPEN
3.	3	DEN21598468	PATIL ARJUN ANIL	A	MALE	71.33	OPEN
4.	4	DEN21538393	KADAM PRAJYOTI BHIMRAO	A	FEMALE	71.00	OPEN
5.	5	DEN21628924	KAVATHEKAR SAMMED SANTOSH	A	MALE	67.00	OPEN
6.	7	DEN21574961	NIKAM PRAJAKTA RAJENDRA	A	FEMALE	64.33	OPEN
7.	6	DEN21501943	SHINDE SUNNY ANIL	A	MALE	64.00	OPEN
8.	8	DEN21619053	PAWAR ADITYA CHANDRAKANT	A	MALE	59.33	OPEN
9.	9	DEN21517510	DESAWALE SACHIN JALINDHAR	A	MALE	55.67	OPEN
10.	10	DEN21614028	GAVADE ASHWINKUMAR CHHAGANRAO	A	MALE	49.67	NT-C
11.	11	DEN21657396	MOHITE TEJASVINI SARJERAO	A	FEMALE	41.33	OPEN
12.	12	DEN21514274	PATIL PRATIK MAHADEV	A	MALE	39.33	OPEN

Date: 22/10/2021

Place: Ashta




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SANT DNYANESHWAR SHIKSHAN SANSTHA'S
ANNASAHAB DANGE COLLEGE OF D PHARMACY

Ashta, Tal: Walwa, Dist: Sangli, Maharashtra, India - 416301

**Final General Merit List for Seats Remaining Vacant after CAP rounds to First
Year D. Pharmacy Admission 2021-22**

Sr. No.	Merit No.	Application ID	Candidate Name	Candidature Type	Gender	Merit Marks PCM/B	Category For Admission
1.	1	DEN21658854	PATIL RUTURAJ RANGRAO	A	MALE	83.66	OPEN
2.	2	DEN21640521	JANKAR GOURAV BANDU	A	MALE	73.66	NT-C
3.	3	DEN21531179	HUJARE VAISHNAVI RAMCHANDRA	A	FEMALE	71.00	OPEN
4.	4	DEN21657946	PATIL VARSHALI DINKAR	A	FEMALE	65.00	OPEN
5.	5	DEN21503495	TUPE SAKSHI SANTOSH	A	FEMALE	62.33	OPEN
6.	6	DEN21624817	BHAGWAT VAISHNAVI VIJAY	A	FEMALE	59.66	OBC
7.	7	DEN21631872	SHIRGAVE SWARANJALI SATISH	A	FEMALE	38.66	OPEN
8.	8	DEN21502589	GAIKWAD LATA BALAVANT	A	FEMALE	37.66	OPEN

Date: 22/10/2021

Place: Ashta




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**ANNASAHB DANGE COLLEGE OF D PHARMACY, ASHTA**

(Approved by AICTE, New Delhi, Govt. of Maharashtra and Affiliated to MSBTE, Mumbai)

Ref. No. **ADCDP/2021-22/17(C)**Date: **17/10/2021****Admissions Notice for filling of Vacant Seats of
First Year D. Pharmacy for the Academic Year 2021-22**

- As per the notifications issued by Directorate of Technical Education Maharashtra State, the **Institute level round for First Year D. Pharm course**, for the academic Year 2021-22 is scheduled on Monday, 18/10/2021 for the **Institutional Quota Seats and Seats remaining Vacant after CAP Round II.**

- **Eligibility:** As per the admission notice issued by the competent authority - Directorate of Technical Education Maharashtra State.

Schedule of Activities for Admission to First Year of Diploma in Pharmacy (D. Pharmacy)

Sr. No.	Activity	Schedule	
		First Date	Last Date
01	Display of Provisional Vacant Seats for Institutional Quota Seats & Seats remaining vacant after CAP Round II.	17/10/2021	17/10/2021 (Upto 05.00 pm)
02	Registration of application by the Eligible Candidate for admission.	18/10/2021 (From 09.00 am onwards)	18/10/2021 (Upto 01.00 pm)
03	Documents verification and confirmation of Application Form	18/10/2021 (From 01.00 pm onwards)	18/10/2021 (Upto 02.00 pm)
04	Display of the provisional merit list for Maharashtra State / All India Candidate on website & College Notice Board.	18/10/2021	18/10/2021 (Up to 02.30 pm)
05	Submission of grievances if any, for all type of Candidates.	18/10/2021 (From 02.30 pm)	18/10/2021 (Up to 03.00 pm)
06	Display of the Final Merit lists of Maharashtra State / All India Candidates on website.	18/10/2021	18/10/2021 (Up to 3.30 pm)
07	Conduct of Admission Process	18/10/2021 (From 03.30 pm onwards)	21/10/2021 (Up to 05.00 pm)
08	Cut-off Date for all type of admissions for the Academic Year 2021-22	21/10/2021	21/10/2021

Note:

- Candidate must be present in person only.





ANNASAHEB DANGE COLLEGE OF D PHARMACY, ASHTA

(Approved by AICTE, New Delhi, Govt. of Maharashtra and Affiliated to MSBTE, Mumbai)

- The candidate must bring Receipt cum Acknowledgment for admission.
- If candidate has already taken admission in other college, submit Provisional Allotment Letter with Receipt cum Acknowledgment of confirmation of Admission and Bonafied Certificate.
- The candidate should bring all original documents for the admission process.
- If candidate has already taken the admission in other college, he / she shall produce the original Bonafied Certificate and Xerox copies of all such documents attested by the Head / Principal of the concerned institute. Such candidate shall required to pay the fees at the time of admission and such candidate shall be permitted to submit the required original documents on or before 21st October 2021 (03.00 pm) otherwise his / her admission will stand cancel and fees paid shall be forfeited.
- The candidate has to pay prescribed fees as finalized by Fees Regulating Authority at the time of admission.
- Candidate should cancel previous admission (if any) immediately at his/ her own risk and cost to confirm the allotted admission in this institute.
- The round will be conducted as per the Admission Information broacher for Academic Year 2021-22 issued by Government of Maharashtra Higher and Technical Education Department and Directorate of Technical Education Maharashtra State.
- For more detail candidate can visit following websites:
 - i) First Year D Pharmacy: <https://posthscdiploma2021.dtemaharashtra.gov.in/StaticPages/HomePage>
 - ii) College Website: www.adcdp.in

Date: 17/10/2021

Place: Ashta




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**ANNASHEB DANGE COLLEGE OF D PHARMACY, ASHTA**

(Approved by AICTE, New Delhi, Govt. of Maharashtra and Affiliated to MSBTE, Mumbai)

Ref. No. ADCDP/2021-22/10(D)

Date: 13/10/2021

**Revised Admissions Notice for filling of Vacant Seats of
First Year D. Pharmacy for the Academic Year 2021-22**

- As per the notifications issued by Directorate of Technical Education Maharashtra State, the **Institute level round for First Year D. Pharm course**, for the academic Year 2021-22 is scheduled on **Saturday, 23/10/2021 for the Institutional Quota Seats & Seats remaining Vacant after CAP Round II.**
- **Eligibility:** As per the admission notice issued by the competent authority - Directorate of Technical Education Maharashtra State.

Schedule of Activities for Admission to First Year of Diploma in Pharmacy (D. Pharmacy)

Sr. No.	Activity	Schedule	
		First Date	Last Date
01	Display of Provisional Vacant Seats for Institutional Quota Seats & Seats remaining vacant after CAP Round II.	17/10/2021	17/10/2021 (Upto 05.00 pm)
02	Registration of application by the Eligible Candidate for admission.	18/10/2021 (From 09.00 am onwards)	22/10/2021 (Upto 11.00 am)
03	Documents verification and confirmation of Application Form	18/10/2021 (From 01.00 pm onwards)	22/10/2021 (Upto 02.00 pm)
04	Display of the provisional merit list for Maharashtra State / All India Candidate on website & College Notice Board.	22/10/2021	22/10/2021 (Up to 03.00 pm)
05	Submission of grievances if any, for all type of Candidates.	22/10/2021 (From 03.00 pm)	22/10/2021 (Up to 05.00 pm)
06	Display of the Final Merit lists of Maharashtra State / All India Candidates on website.	22/10/2021	22/10/2021 (Up to 06.00 pm)
07	Conduct of Admission Process	23/10/2021 (From 09.00 am onwards)	23/10/2021 (Up to 05.00 pm)
08	Cut-off Date for all type of admissions for the Academic Year 2021-22	25/10/2021	25/10/2021

Note:

- Candidate must be present in person only.





ANNASHEB DANGE COLLEGE OF D PHARMACY, ASHTA

(Approved by AICTE, New Delhi, Govt. of Maharashtra and Affiliated to MSBTE, Mumbai)

- The candidate must bring Receipt cum Acknowledgment for admission.
- If candidate has already taken admission in other college, submit Provisional Allotment Letter with Receipt cum Acknowledgment of confirmation of Admission and Bonafied Certificate.
- The candidate should bring all original documents for the admission process.
- If candidate has already taken the admission in other college, he / she shall produce the original Bonafied Certificate and Xerox copies of all such documents attested by the Head / Principal of the concerned institute. Such candidate shall required to pay the fees at the time of admission and such candidate shall be permitted to submit the required original documents on or before 21st October 2021 (03.00 pm) otherwise his / her admission will stand cancel and fees paid shall be forfeited.
- The candidate has to pay prescribed fees as finalized by Fees Regulating Authority at the time of admission.
- Candidate should cancel previous admission (if any) immediately at his/ her own risk and cost to confirm the allotted admission in this institute.
- The round will be conducted as per the Admission Information broacher for Academic Year 2021-22 issued by Government of Maharashtra Higher and Technical Education Department and Directorate of Technical Education Maharashtra State.
- For more detail candidate can visit following websites:
 - i) First Year D Pharmacy: <https://posthscdiploma2021.dtemaharashtra.gov.in/StaticPages/HomePage>
 - ii) College Website: www.adcdp.in

Date: 18/10/2021

Place: Ashta




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ANNASAHEB DANGE COLLEGE OF D PHARMACY

Ashta, Tal: Walwa, Dist: Sangli, Maharashtra, India - 416301

**Final General Merit List for Institute Quota Seats of
First Year D. Pharmacy Admission 2021-22**

Sr. No.	Merit No.	Application ID	Candidate Name	Candidature Type	Gender	Merit Marks PCM/B	Category For Admission
1.	1	DEN21534771	PATIL NAMRATA JAYSING	A	FEMALE	75.67	OPEN
2.	2	DEN21603152	NALAWADE SANIKA VINAYAK	A	FEMALE	73.00	OPEN
3.	3	DEN21598468	PATIL ARJUN ANIL	A	MALE	71.33	OPEN
4.	4	DEN21538393	KADAM PRAJYOTI BHIMRAO	A	FEMALE	71.00	OPEN
5.	5	DEN21628924	KAVATHEKAR SAMMED SANTOSH	A	MALE	67.00	OPEN
6.	7	DEN21574961	NIKAM PRAJAKTA RAJENDRA	A	FEMALE	64.33	OPEN
7.	6	DEN21501943	SHINDE SUNNY ANIL	A	MALE	64.00	OPEN
8.	8	DEN21619053	PAWAR ADITYA CHANDRAKANT	A	MALE	59.33	OPEN
9.	9	DEN21517510	DESAWALE SACHIN JALINDHAR	A	MALE	55.67	OPEN
10.	10	DEN21614028	GAVADE ASHWINKUMAR CHHAGANRAO	A	MALE	49.67	NT-C
11.	11	DEN21657396	MOHITE TEJASVINI SARJERAO	A	FEMALE	41.33	OPEN
12.	12	DEN21514274	PATIL PRATIK MAHADEV	A	MALE	39.33	OPEN

Date: 22/10/2021

Place: Ashta




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SANT DNYANESHWAR SHIKSHAN SANSTHA'S
ANNASHEB DANGE COLLEGE OF D PHARMACY

Ashta, Tal: Walwa, Dist: Sangli, Maharashtra, India - 416301

Final General Merit List for Seats Remaining Vacant after CAP rounds to First Year D. Pharmacy Admission 2021-22

Sr. No.	Merit No.	Application ID	Candidate Name	Candidature Type	Gender	Merit Marks PCM/B	Category For Admission
1.	1	DEN21658854	PATIL RUTURAJ RANGRAO	A	MALE	83.66	OPEN
2.	2	DEN21640521	JANKAR GOURAV BANDU	A	MALE	73.66	NT-C
3.	3	DEN21531179	HUJARE VAISHNAVI RAMCHANDRA	A	FEMALE	71.00	OPEN
4.	4	DEN21657946	PATIL VARSHALI DINKAR	A	FEMALE	65.00	OPEN
5.	5	DEN21503495	TUPE SAKSHI SANTOSH	A	FEMALE	62.33	OPEN
6.	6	DEN21624817	BHAGWAT VAISHNAVI VIJAY	A	FEMALE	59.66	OBC
7.	7	DEN21631872	SHIRGAVE SWARANJALI SATISH	A	FEMALE	38.66	OPEN
8.	8	DEN21502589	GAIKWAD LATA BALAVANT	A	FEMALE	37.66	OPEN

Date: 22/10/2021

Place: Ashta




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D. Pharmacy, Ashta.

Annexure IV

SYLLABUS

D.Pharm.

ORDINANCE, SCHEME & SYLLABUS FOR DIPLOMA IN PHARMACY

Course Title:	Diploma in Pharmacy
Abbreviation:	D. Pharm.
Type of Course:	A Two years Diploma course
Pattern:	Yearly
Award of the Degree:	Diploma will be awarded for those passing in both the years as per rules and regulations.

O-D. Ph. 1. DURATION OF THE COURSE: The duration of the course shall be for two academic years, with each academic year spread over a period of not less than one hundred and eighty working days in addition to 500 hours practical training spread over a period of not less than 3 months.

O-D. Ph.2. ELIGIBILITY FOR ADMISSION: No. Candidate shall be admitted to Diploma in Pharmacy Pt. I unless he/she had passed any of the following examinations in all the optional subjects and compulsory subjects (Physics, Chemistry, Biology and /or Mathematics including English as one of the Compulsory subjects):

- Intermediate examination in Science; The First Year of the three year degree course in Science; 10+2 Examination(Academic stream) in Science;
- Pre-degree examination; any other qualification approved by the Pharmacy Council of India as equivalent to any of the above exam.

Admission of candidates to the Diploma in Pharmacy Part - I shall be made in order of merit on the basis of 'Pre-Pharmacy Test' conducted in accordance with the scheme of Examinations and syllabus laid-down by the University.

O- D. Ph.3. ELIGIBILITY FOR APPEARING IN EXAMINATION

- Eligibility for appearing at the Diploma in Pharmacy Part-I Examination: Only such candidates who produce-certificate from the Head of the Academic Institution in which he/she has undergone the Diploma in Pharmacy Part-I course, in proof of his/her having regularly and satisfactorily undergone the course of study by attending not less than 75% of the classes held both in theory and in practical separately in each, shall be eligible for appearing at the Diploma in Pharmacy (Part-I) examination.
- Eligibility for appearing at the Diploma in Pharmacy Part-II Examination: Only such candidates who produce certificate from the Head of the academic institution in which he/she has undergone the Diploma in Pharmacy Part-II course, in proof of his/her having regularly and satisfactorily attending not less than 75% of the classes held both in theory and practicals separately in each subject, shall be eligible for appearing at the Diploma in Pharmacy (Part-II) examination.
- A candidate can have a relaxation of 10% attendance on medical ground by producing a certificate from medical officer of government hospital and a 5% relaxation by the vice chancellor on the recommendation of Dean, faculty.

O-D. Ph. 4.GENERAL

- (A) **Course of Study:** The course of study for Diploma in Pharmacy part-I and Diploma in pharmacy part-II shall include the subjects as given in the Tables I & II below. The number of hours devoted to each subject for its teaching is given against columns 2 and 3 of the Tables below.

TABLE-I Diploma in Pharmacy (Part-I)

Subject	Theory		Practical	
	hours /year	Hrs. / week	hours /year	Hrs. / week
Pharmaceutics-I	75	3	100	4
Pharmaceutical Chemistry-I	75	3	75	3
Pharmacognosy	75	3	75	3
Biochemistry & Clinical Pathology	50	2	75	3
Human Anatomy & Physiology	75	3	50	2
Health Education & community pharmacy	50	2		
	400	16	375	15

TABLE-II Diploma in Pharmacy (Part-II)

Subject	Theory		Practical	
	hours /year	Hrs. / week	hours /year	Hrs. / week
Pharmaceutics-II	75	3	100	4
Pharmaceutical Chemistry-II	100	4	75	3
Pharmacology & Toxicology	75	3	50	2
Pharmaceutical Jurisprudence	50	2	-	
Drug store and Business Management	75	3	-	
Hospital & Clinical Pharmacy	75	3	50	2
	450	18	275	11

- (b) Examinations: There shall be an examination for Diploma in Pharmacy (part-I) to examine students of the first year course and an examination for Diploma in Pharmacy (part-II) to examine students of the second year course. Each examination may be held twice every year. The first examination in every year shall be the annual examination and the second examination shall be supplementary examination of the Diploma in Pharmacy (part-I) or Diploma in pharmacy (Part-II) as the case may be. The examinations shall be of written and practical (including oral) nature. Carrying maximum marks for each part of subject, as indicated in Table III and IV:R-29(A) (Plan and scheme of examination for Diploma in Pharmacy).

O-D. Ph.5. PRACTICAL TRAINING**Diploma in Pharmacy (Part-III)**

- (a) Period and other conditions of practical training:

After having appeared in Part-II examination of Diploma in Pharmacy conducted by Board/University or other approved examination Body or any other course accepted as being equivalent by the Pharmacy Council of India, a candidate shall be eligible to undergo practical training in one or more of the following institutions namely:

Hospitals/Dispensaries run by Central/State Government/Municipal corporations/ central Government Health scheme and Employees state Insurance scheme. A pharmacy, chemist and Druggist licensed under the Drugs and cosmetics Rules, 1945 made under the Drugs and Cosmetics Act, 1940 (23 of 1940). The institutions referred in sub-regulation(1) shall be eligible to impart training subject to the condition that the number of student pharmacists that may be taken in any Hospital, pharmacy, Chemist and Druggist licensed under the Drugs and cosmetics Rules, 1945 made under the

Drugs and cosmetics Act, 1940 shall not exceed two where there is one registered pharmacist engaged in the work in which the student pharmacist is undergoing practical training, where there is more than one registered pharmacist similarly engaged, the number shall not exceed one for each additional such registered pharmacist. Hospital and Dispensary other than those specified in sub-regulation (1) for the purpose of giving practical training shall have to be recognized by pharmacy council of India on fulfilling the conditions specified in Appendix-D to these regulations.

In the course of practical training, the trainees shall have exposure to: Working knowledge of keeping of records required by various acts concerning the profession of pharmacy and Practical experience in the manipulation of pharmaceutical apparatus in common use, the reading, translation and copying of prescription including checking of dose, the dispensing of prescriptions illustrating the commoner methods of administering medicaments; the storage of drugs and medical preparations. The practical training shall be not less than five hundred hours spread over a period of not less than three months provided that not less than two hundred and fifty hours and devoted to actual dispensing of prescriptions.

(b) Procedure to be followed prior to commencing of the training:

The head of the academic training institution, shall supply application in triplicate in 'Practical Training Contract Form for Qualification as pharmacist' to candidate eligible to undertake the said practical training, the contract form shall be as specified in Appendix-E to these regulations.

The head of an academic training institution shall fill section I of the contract Form. The trainee shall fill section II of the said contract Form and the Head of the institution agreeing to impart the training (hereinafter referred to as the Apprentice Master) shall fill section III of the said contract Form.

It shall be the responsibility of the trainee to ensure that one copy (hereinafter referred to as the first copy of the contract Form) so filled is submitted to Head of the academic training institution and the other two copies (hereinafter referred to as the second copy and the third copy) shall be filled with Apprentice Master (if he so desires) or with the trainee pending completion of the training.

- (c) Certificate of Passing Diploma in Pharmacy (part-III) on satisfactory completion of the apprentice period, the Apprentice Master shall fill Section IV of the second copy and third copy of contract form and cause it to be sent to the head of the academic training institution who shall suitably enter in the first copy of the entries from the second copy and third copy and shall fill section V of the three copies of contract form and thereafter handover both the second copy and the third copy to the trainee. Thus, if completed in all respect, shall be regarded as a certificate of having successfully completed the course of Diploma in Pharmacy (part-III).

O-D. Ph.6. Working out of Result

(a) Mode of examinations:

Each theory and practical examination in the subject mentioned in Table-III and IV shall be of three hours duration. A candidate who fails in theory or practical examination shall reappear in such theory or practical paper(s) as the case may be. Practical examination shall also consist of viva voce (oral) examination.

(b) Award of sessional marks and maintenance of records:

A regular record of both theory and practical class work and examinations conducted in an institution imparting training for Diploma in Pharmacy Part-I and Diploma in pharmacy Part-II courses, shall be maintained for each student in the institution and 20 marks for each theory and 20 marks for each practical subject shall be allotted as sessional.

There shall be at least three periodic sessional examinations during each academic year. The highest aggregate of any two performances shall form the basis of calculating sessional marks.

The sessional marks in practicals shall be allotted on the following basis:

Actual performance in the sessional examination.	10
Day to day assessment in the practical class work.	10

- (c) Minimum marks for passing the examination: A student shall not be declared to have passed Diploma in Pharmacy examination unless he/she secures at least 40% marks in each of the subject separately in theory examination, including sessional marks and at least 40% marks in each of the practical examination including sessional marks. The candidates securing 60% marks or above in aggregate in

all subjects in a single attempt at the Diploma in Pharmacy (part-I) or Diploma in Pharmacy (part-II) examinations shall be declared to have passed in first class the Diploma in Pharmacy (part-I) or Diploma in Pharmacy (part-II) examinations, as the case may be. Candidates securing 75% marks or above in any subject or subjects provided he/she passes in all the subjects in single attempt, will be given distinction in that subjects(s).

- (d) Eligibility for Promotion to Diploma in Pharmacy (Pt. II): All candidates who have appeared for all the subjects and passed the Diploma in pharmacy part-I class. However failure in more than two subjects (each Theory paper or practical examination shall be considered as a subject) shall debar him/her from promotion to the Diploma in Pharmacy Part-II class. Such candidates shall be examined in the failing subjects only at subsequent. A candidate who fails to pass D Pharm Part - I exam. in four attempts shall not allowed to continue the course.
- (e) Improvement of sessional marks: Candidates who wish to improve sessional marks can do so by appearing in two additional sessional examinations during the next academic year. The average score of the two examinations shall be the basis for improved sessional marks in theory. The sessional of practicals shall be improved by appearing in additional practical examinations. Marks awarded to a candidate for day to day assessment in the practical class, can not be improved unless he/she attends regular course of study again.
- (f) Certificate of passing examination for Diploma in Pharmacy (part-II): Certificate of having passes the examination for the Diploma in pharmacy Part-II shall be granted by the Examining Authority to a successful student.
- (g) Certificate of Diploma in Pharmacy: A certificate of Diploma in pharmacy shall be granted by the Examining Authority to successful candidate on producing certificate of having passed the Diploma in Pharmacy part-I and Part-II and satisfactory completion of practical training for Diploma in pharmacy (part-III).
- (h) The chairman and at least one expert member of examining committee of the Examining Authority Concerned with appointment of examiners and conduct of pharmacy examination should be persons possessing pharmacy Qualifications.

PLAN AND SCHEME OF EXAMINATION FOR THE DIPLOMA IN PHARMACY

(Based on effective teaching for 180 working days in one academic session)

Table-III Diploma in pharmacy (part-I) Examination

Subject	Max. Marks in Theory			Max. Marks in Practical		
	Examination	Sessional	Total	Examination	Sessional	Total
Pharmaceutics-I	80	20	100	80	20	100
Pharmaceutical Chemistry-I	80	20	100	80	20	100
Pharmacognosy	80	20	100	80	20	100
Biochem. & Clinical Pathology	80	20	100	80	20	100
Human Anatomy & Physiology	80	20	100	80	20	100
Health Education & community pharmacy	80	20	100			
			600			500

TABLE-IV Diploma in Pharmacy (Part-II)

Subject	Max. Marks in Theory			Max. Marks in Practical		
	Examination	Sessional	Total	Examination	Sessional	Total
Pharmaceutics-II	80	20	100	80	20	100
Pharmaceutical Chemistry-II	80	20	100	80	20	100
Pharmacology & Toxicology	80	20	100	80	20	100
Pharmaceutical Jurisprudence	80	20	100			
Drug store and Business Management	80	20	100			
Hospital & Clinical Pharmacy	80	20	100	80	20	100
			600			400

Note: Each paper shall consist of six questions out of which five shall be attempted. Half of the total number of papers in each year will be set and assessed by external examiners and the remaining half will be set and assessed by the internal examiners. There shall be one external and one internal examiner for each practical Examination.

SYLLABUS

DIPLOMA IN PHARMACY (PART-I)

1.1 PHARMACEUTICS I

Theory (75 Hours)

Introduction of different dosage forms. Their classification with examples-their relative applications. Familiarization with new drug delivery systems. Introduction to Pharmacopoeias with special reference to the Indian Pharmacopoeia.

Metrology-System of weights and measures. Calculations including conversion from one to another system. Percentage calculations and adjustment of products .Use of alligation method in calculations .Isotonic solutions.

Packaging of pharmaceuticals-Desirable features of a container and types of containers. Study of glass & plastics as materials for containers and rubber as a material for closure-their merits and demerits. Introduction to aerosol packaging.

Size reduction, objectives, and factors affecting size reduction, methods of size reduction- study of Hammer mill, ball mill, Fluid energy mill and Disintegrator.

Size separation-size separation by sifting. Official standards for powders. Sedimentation methods of size separation. Construction and working of Cyclone separator.

Mixing and Homogenization-Liquid mixing and powder mixing, Mixing of semisolids. Study of silverson Mixer-Homogenizer, planetary Mixer; Agitated powder mixer; Triple Roller Mill; Propeller Mixer, colloid Mill and Hand Homogeniser. Double cone mixer.

Clarification and Filtration-Theory of filtration, Filter media; Filter aids and selection of filters. Study of the following filtration equipments-Filter Press, sintered filters, Filter candles, Metafilter.

Extraction and Galenicals-

(a) Study of percolation and maceration and their modification, continuous hot extraction-Application in the preparation of tinctures and extracts.

(b) Introduction to Ayurvedic dosage forms.

Heat process-Evaporation-Definition-Factors affecting evaporation-study of evaporating still and Evaporating pan.

Distillation-Simple distillation and Fractional distillation, steam distillation and vacuum distillation. Study of vacuum still, preparation of purified water I.P. and water for Injection I.P. construction and working of the still used for the same.

Introduction to drying process-Study of Tray Dryers; Fluidized Bed Dryer, Vacuum Dryer and Freeze Dryer.

Sterilization-Concept of sterilization and its differences from disinfection-Thermal resistance of microorganisms. Detailed study of the following sterilization process.

Sterilization with moist heat, Dry heat sterilization, Sterilization by radiation, Sterilization by filtration and Gaseous sterilization.

Aseptic techniques-Applications of sterilization process in hospitals particularly with reference to surgical dressings and intravenous fluids. Precautions for safe and effective handling of sterilization equipment.

Processing of Tablets-Definition; different type of compressed tables and their properties. Processes involved in the production of tablets; Tablets excipients ; Defects in tablets; Evaluation of Tablets; Physical standards including Disintegration and Dissolution. Tablet coating-sugar coating; films coating, enteric coating and micro-encapsulation (Tablet coating may be de.. in an elementary manner).

Processing of Capsules-Hard and soft gelatin capsules; different sizes of capsules; filling of capsules; handling and storage of capsules. Special applications of capsules.

Study of immunological products like sera, vaccines, toxoids & their preparations.

PRACTICAL (100 hours)

Preparation (minimum number stated against each of the following categories illustrating different techniques involved.

1. Aromatic waters³
2. Solutions ⁴
3. Spirits²
4. Tinctures⁴
5. Extracts²
6. Creams²
7. Cosmetic preparations³
8. Capsules²
9. Tables²
10. Preparations involving²
11. Ophthalmic preparations²
12. Preparations involving aseptic techniques²

Books recommended:(Latest editions)

- 1.) Remington's Pharmaceutical Sciences.
- 2.) The Extra Pharmacopoeia-Martindale.

1.2 PHARMACEUTICAL CHEMISTRY-I

THEORY (75 Hours)

General discussion on the following inorganic compounds including important physical and chemical properties, medicinal and pharmaceutical uses, storage conditions and chemical incompatibility.

Acids, bases and buffers-Boric acid, Hydrochloric acid, Strong Ammonium hydroxide, Sodium hydroxide and official buffers.

Antioxidants- Hypophosphorous acid, Sulphur dioxide, Sodium bisulphite, Sodium meta-bisulphite, Sodium thiosulphate, Nitrogen and Sodium nitrite.

Gastrointestinal agents-

Acidifying agents- Dilute Hydrochloric acid.

Antacids- Sodium bicarbonate, Aluminum hydroxide gel, Aluminum phosphate, Calcium carbonate, Magnesium carbonate, Magnesium trisilicate, Magnesium oxide, Combinations of antacid preparations.

Protective and Adsorbents- Bismuth sub carbonate and Kaolin.

Saline cathartics- Sodium potassium tartrate and Magnesium sulphate.

Topical Agents-

Protective- Talc, Zinc Oxide, Calamine, Zinc stearate, Titanium dioxide, silicone polymers.

Antimicrobials and Astringents- Hydrogen peroxide*, Potassium permanganate, Chlorinated lime, Iodine, Solutions of Iodine, Povidone-iodine, Boric acid, Borax, Silver nitrate, Mild silver protein, Mercury yellow, Mercuric oxide, Ammoniated mercury.

Sulphur and its compounds- Sublimed sulphur, Percipitated sulphur, Selenium sulphide.

Astringents- Alum and Zinc Sulphate.

Dental Products- Sodium fluoride, Stannous fluoride, Calcium carbonate, Sodium meta phosphate, Di-calcium phosphate, Strontium chloride, Zinc chloride.

Inhalants- Oxygen, Carbon dioxide, Nitrous oxide.

Respiratory stimulants- Ammonium carbonate.

Expectorants and Emetics-Ammonium chloride*, Potassium iodide, Antimony potassium tartrate.

Antidotes- Sodium nitrite.

Major Intra and Extra cellular electrolytes-

Electrolytes used for replacement therapy- Sodium chloride and its preparations, Potassium chloride and its preparations.

Physiological acid-base balance and electrolytes used- Sodium acetate, Potassium Acetate, Sodium bicarbonate Inj., Sodium citrate, Potassium citrate, Sodium lactate injection, Ammonium chloride and its injection.

Combination of oral electrolyte powders and solutions.

Inorganic official compounds of Iron, Iodine and Calcium, Ferrous Sulphate and Calcium Gluconate.

Radio pharmaceuticals and contrast media- Radio activity-Alpha; Beta and Gamma Radiations, Biological effects of radiations, Measurement of radio activity, G.M. Counter, Radio isotopes-their uses, Storage and precautions with special reference to the official preparations. Radio opaque contrast media-Barium sulfate.

Quality control of Drugs and pharmaceuticals-Importance of quality control, significant errors, methods used for quality control, sources of impurities in pharmaceuticals. Limit tests for Arsenic, Chloride, Sulfate, Iron and Heavy metals.

Identification tests for cations and anions as per Indian Pharmacopoeia.

PRACTICAL (75 hours)

1. Identification tests for inorganic compounds particularly drugs and pharmaceuticals.
2. Limit test for chloride, Sulfate, Arsenic, Iron and Heavy metals.
3. Assay of inorganic pharmaceuticals involving each of the following methods of compounds marked with (*) under theory.
 - i. Acid-Base titrations(at least 3)
 - ii. Redox titrations (one each of permanganometry and iodimetry).
 - iii. Precipitation titrations (at least 2)
 - iv. Complexometric titration (Calcium and Magnesium).

Books recommended (Latest editions)

1. Indian pharmacopoeia.

1.3 PHARMACOGNOSY

THEORY (75 Hours)

1. Definition, history and scope of Pharmacognosy including indigenous system of medicine.
2. Various systems of classification of drugs and natural origin.
3. Adulteration and drug evaluation; significance of pharmacopoeial standards.
4. Brief outline of occurrence, distribution, outline of isolation, identification tests, therapeutic effects and pharmaceutical application of alkaloids, terpenoids, glycosides, volatile oils, tannins and resins.
5. Occurrence, distribution, organoleptic evaluation, chemical constituents including tests wherever applicable and therapeutic efficacy of following categories of drugs.

- (a) **Laxatives**- Aloes, Rhubarb, Castor oil, Ispaghula, Senna.
- (b) **Cardiotonics**- Digitalis, Arjuna.
- (c) **Carminatives & G.I. regulators**- Umbelliferous fruits, Coriander, Fennel, Ajowan, Cardamom, Ginger, Black pepper, Asafoetida, Nutmeg, Cinnamon, Clove.
- (d) **Astringents**- Catechu.
- (e) **Drugs acting on nervous system**- Hyoscyamus, Belladonna, Aconite, Ashwagandha, Ephedra, Opium, Cannabis, Nux-vomica.
- (f) **Antihypertensive**- Rauwolfia.
- (g) **Antitussives**- Vasaka, Tolu balsam, Tulsi.
- (h) **Antirheumatics**- Guggal, Colchicum.
- (i) **Antitumour**- Vinca.
- (j) **Antileprotics**- Chaulmoogra oil.
- (k) **Antidiabetics**- Pterocarpus, Gymnema sylvestre.
- (l) **Diuretics**- Gokhru, Punarnava.
- (m) **Antidysenterics**- Ipecacuanha.
- (n) **Antiseptics and disinfectants**- Benzoin, Myrrh, Neem, Curcuma.
- (o) **Antimalarials**- Cinchona.
- (p) **Oxytocics**- Ergot.
- (q) **Vitamins**- Shark liver oil and Amla.
- (r) **Enzymes**- Papaya, Diastase, Yeast.
- (s) **Perfumes and flavoring agents**- peppermint oil, Lemon oil, Orange oil, lemon grass oil, sandal wood.

Pharmaceutical aids-Honey, Arachis oil, starch, kaolin, pectin, olive oil. Lanolin, Beeswax, Acacia, Tragacanth, sodium Alginate, Agar, Guar gum, Gelatin.

Miscellaneous- Liquorice, Garlic, picrorhiza, Dirscorea, Linseed, shatavari, shankpushpi, pyrethrum, Tobacco.

Collection and preparation of crude drugs for the market as exemplified by Ergot, opium, Rauwolfia, Digitalis, senna.

Study of source, preparation and identification of fibers used in sutures and surgical dressings-cotton, silk, wool and regenerated fibers.

Gross anatomical studies of-senna, Datura, cinnamon, cinchona, fennel, clove, Ginger, Nuxvomica & ipecacuanha.

PRACTICAL (75 hours)

1. Identification of drugs by morphological characters. Physical and chemical tests for evaluation of drugs wherever applicable.
2. Gross anatomical studies(t.s.)of the following drugs :Senna, Datura, cinnamon, cinchona, coriander, fennel, clove, Ginger, Nux-vomica, Ipecacuanha.
3. Identification of fibers and surgical dressing.

1.4 BIOCHEMISTRY AND CLINICAL PATHOLOGY

THEORY (50 Hours)

Introduction to biochemistry. Brief chemistry and role of proteins, polypeptides and amino acids, classification, Qualitative tests, Biological value, Deficiency diseases.

Carbohydrates: Brief chemistry and role of carbohydrates, classification, qualitative tests, Diseases related to carbohydrate metabolism.

Lipids: Brief chemistry and role of lipids, classification and qualitative tests. Diseases related to lipids metabolism.

Vitamins: Brief chemistry and role of vitamins and coenzymes. Role of minerals and water in life processes.

Enzymes: Brief concept of enzymatic action. factors affecting it.

Therapeutics: Introduction to pathology of blood and urine. Lymphocytes and platelets, their role in health and disease. Erythrocytes-Abnormal cells and their significance. Abnormal constituents of urine and their significance in diseases.

PRACTICAL (75 Hours)

1. Detection and identification of proteins. Amino acids, carbohydrates and lipids.
2. Analysis of normal and abnormal constituents of Blood and Urine (Glucose, urea, creatine, creatinine, cholesterol, alkaline phosphatase, acid phosphatase, Bilirubin, SGPT, SGOT, calcium, Diastase, Lipase).
3. Examination of sputum and faeces (microscopic & staining).
4. Practice in injecting drugs by intramuscular, subcutaneous and intravenous routes, withdrawal of blood samples.

1.5 HUMAN ANATOMY AND PHYSIOLOGY

THEORY(75 Hours)

Scope of Anatomy and physiology. Definition of various terms used in Anatomy. Structure of cell, function of its components with special reference to mitochondria and microsomes.

Elementary tissues: Elementary tissues of the body, i.e. epithelial tissue, muscular tissue, connective tissue and nervous tissue.

Skeletal System: Structure and function of Skeleton .Classification of joints and their function. Joint disorders.

Cardiovascular System: Composition of blood, functions of blood elements. Blood group and coagulation of blood. Brief information regarding disorders of blood. Name and functions of lymph glands. Structure and functions of various parts of the heart .Arterial and venous system with special reference to the names and positions of main arteries and veins. Blood pressure and its recording. Brief information about cardiovascular disorders.

Respiratory system: Various parts of respiratory system and their functions, physiology of respiration.

Urinary System: Various parts of urinary system and their functions, structure and functions of kidney. Physiology of urine formation. Patho-physiology of renal diseases and edema.

Muscular System: Structure of skeletal muscle, physiology of muscle contraction. Names, positions, attachments and functions of various skeletal muscles. physiology of neuromuscular junction.

Central Nervous System: Various parts of central nervous system, brain and its parts, functions and reflex action. Anatomy and physiology of automatic nervous system.

Sensory Organs: Elementary knowledge of structure and functions of the organs of taste, smell, ear, eye and skin. Physiology of pain.

Digestive System: names of various parts of digestive system and their functions. structure and functions of liver, physiology of digestion and absorption.

Endocrine System: Endocrine glands and Hormones. Location of glands, their hormones and functions. pituitary, thyroid. Adrenal and pancreas

Reproductive system: Physiology and Anatomy of Reproductive system.

PRACTICALS (50 hours)

1. Study of the human Skelton.
2. Study with the help of charts and models of the following system and organs:

Digestive system	Respiratory system	Ear
Cardiovascular system	Urinary system	
Reproductive system	Eye	
3. Microscopic examination of epithelial tissue, cardiac muscle, smooth muscle, skeletal muscle. Connective tissue and nervous tissues.
4. Examination of blood films for TLC.DLC and malarial parasite.
5. Determination of RBCs, clotting time of blood, erythrocyte sedimentation rate and Hemoglobin value.
6. Recording of body temperature, pulse, heart-rate, blood pressure and ECG.

1.6 HEALTH EDUCATION AND COMMUNITY PHARMACY

THEORY (50 hours)

Concept of health: Definition of physical health, mental health, social health, spiritual health determinants of health, indicatory of health, concept of disease, natural history of diseases, the disease agents, concept of prevention of diseases.

Nutrition and health: Classification of foods, requirements, diseases induced due to deficiency of proteins, vitamins and minerals-treatment and prevention.

Demography and family planning: Demography cycle, fertility, family planning, contraceptive methods, behavioral methods, natural family planning methods, chemical methods, mechanical methods, hormonal contraceptives, population problem of India.

First aid: Emergency treatment in shock, snake-bite, burns, poisoning, heart disease, fractures and resuscitation methods, Elements of minor surgery and dressings.

Environment and health: Source of water supply, water pollution, purification of water, health and air, noise, light-solid waste disposal and control-medical entomology, arthropod borne diseases and their control. rodents, animals and diseases.

Fundamental principles of microbiology: Classification of microbes, isolation, staining techniques of organisms of common diseases.

Communicable diseases: Causative agents, mode of transmission and prevention. Respiratory infections-chicken pox, measles, influenza, diphtheria, whooping cough and tuberculosis.

Intestinal infection-poliomyelitis, Hepatitis, cholera, Typhoid, food poisoning, Hookworm infection.

Arthropod borne infections-plague, Malaria, filariases.

Surface infection-Rabies, Trachoma, Tetanus, Leprosy.

Sexually transmitted diseases-Syphilis, Gonorrhoea, AIDS.

Non-communicable diseases: causative agents, prevention, care and control.

Epidemiology: Its scope, methods, uses, dynamics of disease transmission. Immunity and immunization: Immunological products and their dose schedule. Principles of disease control and prevention, hospital acquired infection, prevention and control. Disinfection, types of disinfection procedures, for-faces, urine, sputum, room linen, dead-bodies, instruments.

2.1 PHARMACEUTICS II

(Dispensing Pharmacy)

THEORY (75 Hours)

Prescriptions-Reading and understanding of prescriptions; Latin terms commonly used (Detailed study is not necessary), Modern methods of prescribing, adoption of metric system. Calculations involved in dispensing.

Incompatibilities in prescriptions- study of various types of incompatibilities-physical, chemical and therapeutic.

Posology- Dose and dosage of drugs, factors influencing dose, calculations of doses on the basis of age, sex, surface area and veterinary doses.

Dispensed Medications: (Note: A detailed study of the following dispensed medication is necessary. Methods of preparation with theoretical and practical aspects, use of appropriate containers and closures. special labeling requirements and storage conditions should be high-lighted).

Powders-Type of powders-Advantages and disadvantages of powders, Granules, cachets and tablet triturates. preparation of different types of powders encountered in prescriptions. Weighing methods, possible errors in weighing, minimum weighable amounts and weighing of a material below the minimum weighable amount, geometric dilution and proper usage and care of dispensing balance.

Liquid oral Dosage forms:

Monophasic-Theoretical aspects including commonly used vehicles, essential adjuvant like stabilizers, colorants and flavors, with examples.

Review of the following monophasic liquids with details of formulation and practical methods. Liquids for internal administration Liquids for external administration or used on mucous membranes

Mixtures and concentrates, Gargles

Syrups Mouth washes

Douches

Sprays

Throat-paints

Ear Drops

Liniments

Elixirs

Nasal drops

Lotions.

Biphasic Liquid Dosage Forms:

Suspensions (elementary study)-Suspensions containing diffusible solids and liquids and their preparations. Study of the adjuvant used like thickening agents, wetting agents, their necessity and quantity to be incorporated ,suspensions of precipitate forming liquids like tinctures, their preparations and stability. suspensions produced by chemical reaction. An introduction to flocculated /non-flocculated suspension system.

Emulsions-Types of emulsions, identification of emulsion system, formulation of emulsions, selection of emulsifying agent. Instabilities in emulsions, preservation of emulsions.

Semi-Solid Dosage Forms:

Ointments: Types of ointments, classification and selection of dermatological vehicles. Preparation and stability of ointments by the following processes:

Trituration

chemical reaction

fusion

Emulsification.

Pastes: Differences between ointments and pastes, Bases of pastes. preparation of pastes and their preservation .

Jellies: An introduction to the different types of jellies and their preparation.

An elementary study of poultice.

Suppositories and pessaries-Their relative merits and demerits, types of suppositories, suppository bases , classification, properties. preparation and packing of suppositories. Use of suppositories of drug absorption.

Dental and cosmetic preparations: Introduction to Dentifrices, facial cosmetics, Deodorants. Anti-perspirants, shampoo, Hair dressings and Hair removers.

Sterile Dosage forms:

Parenteral dosage forms-Definition, General requirements for parenteral dosage forms. Types of parenteral formulations, vehicles, adjuvant, processing and personnel, Facilities and quality control. Preparation of Intravenous fluids and admixtures-Total parenteral nutrition, Dialysis fluids.

Sterility testing: particulate matter monitoring- Faculty seal packaging.

Ophthalmic products: study of essential characteristics of different ophthalmic preparations. Formulation: additives, special precautions in handling and storage of ophthalmic products.

PRACTICAL (100 hours)

Dispensing of at least 100 products covering a wide range of preparations such as mixtures, emulsion, solutions, liniments, E.N.T. preparations. Ointments, suppositories, powders, incompatible prescriptions etc.

Books recommended: (Latest editions)

1. Indian Pharmacopoeia.
2. British pharmacopoeia.
3. National formularies(N.F.I.,B.N.P)
4. Remington's pharmaceutical sciences.
5. Martindale's Extra pharmacopoeia.

2.2 PHARMACEUTICAL CHEMISTRY II

THEORY (100 hours)

1. Introduction to the nomenclature of organic chemical systems with particular reference to hetero-cyclic system containing up to 3 rings.
2. The chemistry of following pharmaceutical organic compounds covering their nomenclature, chemical structure, uses and the important physical and chemical properties(chemical structure of only those compounds marked with asterisk (*). The stability and storage conditions and the different type of pharmaceutical formulations of these drugs and their popular brand names.

Antiseptics and Disinfectants-Proflavine*, Benzalkonium chloride, Cetrimide, Phenol, chloroxylonol, Formaldehyde solution, Hexachlophene, Nitrofurantoin.

Sulphonamides- Sulphadiazine, Sulphaguanidine, Phthalylsulphathiazole, Succinylsulphathiazole, Sulphadimethoxine, Sulphamethoxypyridazine, Co-trimoxazole, sulfacetamide*

Antileprotic Drugs- Clofazimine, Thiambutosine, Dapsone*, solapsone,

Anti-tubercular Drugs- Isoniazid*, PAS*, Streptomycin, Rifampicin, Ethambutol*, Thiacetazone, Ethionamide, cycloserine, pyrazinamide*.

Antimoebic and Anthelmintic Drugs- Emetine, Metronidazole, Halogenated hydroxyquinolines, Diloxanide furoate, Paromomycin, Piperazine*, Mebendazole, D.E.C.*

Antibiotics- Benzyl penicillin*, Phenoxy methyl penicillin*, Benzathine penicillin, Ampicillin*, Cloxacillin, Carbencicillin, Gentamicin, Neomycin, Erythromycin, Tetracycline, Cephalixin, Cephaloridine, Cephalothin, Griseofulvin, Chloramphenicol.

Antifungal agents- Udecylenic acid, Tolnaftate, Nystatin, Amphotericin, Hamycin.

Antimalarial Drugs-Chloroquine*, Amodiaquine, Primaquine, Proguanil, Pyrimethamine*, Quinine, Trimethoprim.

Tranquilizers-Chlorpromazine*, Prochlorperazine, Trifluoperazine, Thiothixene, Haloperidol*, Triperidol, Oxypertine, Chlordizepoxide, Diazepam*, Lorazepam, Meprobamate.

Hypnotics- Phenobarbitone*, Butobarbitone, Cylobarbitone, Nitrazepam, Glutethimide*, Methypylon, Paraldehyde, Triclofosodium.

General Anaesthetics-Halothane*, Cyclopropane*, Diethyl ether*, Methohexital sodium, Thiopecal sodium, Trichloroethylene.

Antidepressant Drugs- Amitriptyline, Nortriptyline, Imperamine*, Phepeline, Tranylcypromine.

Analeptics- Theophylline, Caffeine*, Coramine*, Dextro-amphetamine.

Adrenergic drugs- Adrenaline*, Noradrenaline, Isoprenaline*, Phenylephrine, Salbutamol, Terbutaline, Ephedrine*, Pseudoephedrine.

Adrenergic antagonist- Tolazoline, Propranolol*, Practolol.

Cholinergic Drugs- Neostigmine*, Pyridostigmine, Pralidoxime, Pilocarpine, Physostigmine*.

Cholinergic Antagonists- Atropine*, Hyoscine, Homatropine, Propantheline*, Benztropine, Tropicamide, Biperiden*.

Diuretic Drugs- Furosemide*, Chlorothiazide, Hydrochlorothiazide*, Benzthiazide, Urea*, Mannitol*, Ethacrynic Acid.

Cardiovascular Drugs- Ethylnitrite*, Glyceryl trinitrate, Alpha methyl dopa, Guanethidine, Clofibrate, Quinidine.

Hypoglycemic Agents- Insulin, Chlorpropamide*, Tolbutamide, Glibenclamide, Phenformin*, Metformin.

Coagulants and Anti coagulants- Heparin, Thrombin, Menadione*, Bisphydroxy-coumarin, Warfarin sodium.

Local Anaesthetics- Lignocaine*, Procaine*, Benzocaine,

Histamine and anti Histaminic Agents- Histamine, Diphenhydramine*, Promethazine, Cyproheptadine, Mepyramine*, Pheniramine, Chlorpheniramine*,

Analgesics and Anti-pyretics-Morphine, Pethidine, Codeine, Methadone, Aspirin*, Paracetamol, Analgin, Dextropropoxyphene, Pentazocine.

Non-steroidal anti-inflammatory agents- Indomethacin*, Phenylbutazone*, Oxyphenbutazone, Ibuprofen.

Thyroxine and Antithyroids- Thyroxine*, Methimazole, Methyl thiouracil, Propylthiouracil.

Diagnostic Agents- Lophanolic Acid, Propyl iodone, Sulfobromophthalen-sodium, Indigotindisulfonate, Indigo Carmine, Evans blue, Congo Red, Fluorescein sodium.

Anticonvulsants, cardiac glycosides, Antiarrhythmic, Antihypertensives & Vitamins.

Steroidal Drugs- Betamethasone, Cortisone, Hydrocortisone, Prednisolone, Progesterone, Testosterone, Oestradiol, Nandrolone.

Anti-Neoplastic Drugs- Actinomycin, Azathioprine, Busulphan, Chlorambucil, Cisplatin, Cyclophosphamide, Daunorubicin Hydrochloride, Fluorouracil, Mercaptopurine, Methotrexate, Mytomycin.

Books Recommended: (Latest editions)

1. Pharmacopoeia of India.
2. British Pharmaceutical codex.
3. Martindale's Extra pharmacopoeia.

PRACTICAL (75 hours)

1. Systematic qualitative testing of organic drugs involving solubility determination, melting point and/or boiling point, detection of elements and functional groups (10 compounds).
2. Official identification tests for certain groups of drugs included in the I.P. like barbiturates, sulfonamides, Phenothiazines, Antibiotics etc.(8 compounds).
3. Preparation of three simple organic preparations.

2.3 PHARMACOLOGY & TOXICOLOGY

THEORY (75 hours)

Introduction to pharmacology, scope of pharmacology.

Routes of administration of drugs, their advantages and disadvantages. Various processes of absorption of drugs and the factors affecting them. Metabolism, distribution and excretion of drugs.

General mechanism of drugs action and their factors which modify drugs action. Pharmacological classification of drugs. The discussion of drugs should emphasize the following aspects:

Drugs acting on the central Nervous system:

General anaesthetics- adjunction to anaesthesia, intravenous anaesthetics.
 Analgesic antipyretics and non-steroidal
 Anti-inflammatory drugs- Narcotic analgesics.
 Antirheumatic and anti-gout remedies.
 Sedatives and Hypnotics, psychopharmacological agents, anticonvulsants, analeptics.
 Centrally acting muscle relaxants and anti parkinsonism agents.
 Local anesthetics.
 Drugs acting on autonomic nervous system.
 Cholinergic drugs, Anticholinergic drugs, anticholinesterase drugs.
 Adrenergic drugs and adrenergic receptor blockers.
 Neurone blockers and ganglion blockers.
 Neuromuscular blockers, used in myasthenia gravis.
 Drugs acting on eye: Mydriatics, drugs used in glaucoma.

Drugs acting on respiratory system

Respiratory stimulants, Bronchodilators, Nasal decongestants, Expectorants and Antitussive agents.

Autocoids: physiological role of histamine and serotonin, Histamine and Antihistamines, prostaglandins.

Cardio vascular drugs

Cardiotonics, Antiarrhythmic agents, Anti-anginal agents, Antihypertensive agents, peripheral Vasodilators and drugs used in atherosclerosis.
 Drugs acting on the blood and blood forming organs. Haematinics, coagulants and anticoagulants, Haemostatic , Blood substitutes and plasma expanders.

Drugs affecting renal function- Diuretics and anti-diuretics.

Hormones and hormone antagonists- Hypoglycemic agents, Anti--thyroid drugs, sex hormones and oral contraceptives , corticosteroids.

Drugs acting on digestive system-carminatives, digest ants, Bitters, Antacids and drugs used in peptic ulcer, purgatives ,and laxatives, Antidiarrhoeals, Emetics, Anti-emetics, Antispasmodics.

Chemotherapy of microbial diseases:

Urinary antiseptics, sulphonamides, penicillin, streptomycin, Tetracyclines and other antibiotics. Anti-tubercular agents, Antifungal agents, antiviral drugs, anti-leprotic drugs.
 Chemotherapy of protozoal diseases, Anthelmintic drugs.
 Chemotherapy of cancer.

Disinfectants and antiseptics.

PHARMACOLOGY

PRACTICAL (50 hours)

1. The first six of the following experiments will be done by the students while
2. the remaining will be demonstrated by the teacher.
3. Effect of potassium and calcium ions, acetylcholine and adrenaline on frog's heart.
4. Effect of acetyl choline on rectus abdomens muscle of frog and guinea pig ileum.
5. Effect of spasmogens and relaxants on rabbits intestine.
6. Effect of local anaesthetics on rabbit cornea.
7. Effect of mydriatics and miotics on rabbit's eye.
8. To study the action of strychnine on frog.
9. Effect of digitalis on frog's heart.
10. Effect of hypnotics in mice.

11. Effect of convulsants and anticonvulsant in mice or rats.
12. Test for pyrogens.
13. Taming and hypnosis potentiating effect of chlorpromazine in mice/rats.
14. Effect of diphenhydramine in experimentally produced asthma in guinea pigs.

2.4 PHARMACEUTICAL JURISPRUDENCE

THEORY (50 hours)

Origin and nature of pharmaceutical legislation in India, its scope and objectives. Evolution of the "Concept of pharmacy" as an integral part of the Health care system.

Principles and significance of professional Ethics. Critical study of the code of pharmaceutical Ethics drafted by pharmacy council of India.

Pharmacy Act,1948-The General study of the pharmacy Act with special reference to Education Regulations ,Working of state and central councils, constitution of these councils and functions, Registration procedures under the Act.

The Drugs and Cosmetics Act,1940-General study of the Drugs and cosmetics Act and the Rules there under. Definitions and salient features related to retail and whole sale distribution of drugs. The powers of Inspectors, the sampling procedures and the procedure and formalities in obtaining licenses under the rule. Facilities to be provided for running a pharmacy effectively. General study of the schedules with special reference to schedules C,C1,F,G,J,H,P and X and salient features of labeling and storage conditions of drugs.

The Drugs and Magic Remedies (objectionable Advertisement)Act, 1954-General study of the Act, objectives , special reference to be laid on Advertisements, magic remedies and objections¹ and permitted advertisements -diseases which cannot be claimed to be cured.

Narcotic Drugs and psychotropic substances Act,1985-A brief study of the act with special reference to its objectives, offences and punishment.

Brief introduction to the study of the following acts:

Latest Drugs (price control) order in force.

Poisons Act 1919(as amended to date)

Medicinal and Toilet preparations (excise Duties) Act, 1955 (as amended to date).

Medical Termination of Pregnancy Act, 1971(as amended to date).

Books recommended:(Latest editions)

Bare Acts of the said laws published by Government.

2.5 DRUG STORE AND BUSINESS MANAGEMENT

THEORY (75 hours)

Part I Commerce (50 hours)

Introduction-Trade, Industry and commerce, Functions and subdivision of commerce, Introduction to Elements for Economics and Management. Forms of Business Organizations. Channels of Distribution.

Drug House Management-selection of site, space Lay-out and legal requirements. Importance and objectives of purchasing, selection of suppliers, credit information, tenders, contracts and price determination and legal requirements thereto. Codification, handling of drug stores and other hospital supplies. Inventory Control-objects and importance, modern techniques like ABC, VED analysis, the lead time, inventory carrying cost, safety stock, minimum and maximum stock levels, economic order quantity, scrap and surplus disposal.

Sales promotion, Market Research, Salesmanship, qualities of a salesman, Advertising and Window Display.

Recruitment, training, evaluation and compensation of the pharmacist.

Banking and Finance-Service and functions of bank, Finance planning and sources of finance.

Part II Accountancy (25 hours)

Introduction to the accounting concepts and conventions. Double entry Book Keeping, Different kinds of accounts. Cash Book. General Ledger and Trial Balance. Profit and Loss Account and Balance Sheet. Simple techniques of analyzing financial statements. Introduction to Budgeting.

Books Recommended: (Latest editions)

2.6 HOSPITAL AND CLINICAL PHARMACY

THEORY (75 hours)

Part-I: Hospital Pharmacy:

Hospital-Definition, Function, classifications based on various criteria, organization, Management and health delivery system in India.

Hospital Pharmacy: Definition Functions and objectives of Hospital pharmaceutical services. Location, Layout, Flow chart of materials and men.

Personnel and facilities requirements including equipments based on individual and basic needs. Requirements and abilities required for Hospital pharmacists.

Drug Distribution system in Hospitals. Out-patient service,

In-patient services- types of services detailed discussion of unit Dose system, Floor ward stock system, satellite pharmacy services, central sterile services, Bed side pharmacy.

Manufacturing: Economical considerations, estimation of demand.

Sterile manufacture-Large and small volume parenterals, facilities, requirements, layout production planning, man-power requirements.

Non-sterile manufacture-Liquid orals, externals, Bulk concentrates. Procurement of stores and testing of raw materials.

Nomenclature and uses of surgical instruments and Hospital Equipments and health accessories.

P.T.C.(pharmacy Therapeutic Committee)

Hospital Formulary system and their organization, functioning, composition.

Drug Information service and Drug Information Bulletin.

Surgical dressing like cotton, gauze, bandages and adhesive tapes including their pharmacopoeial tests for quality. Other hospital supply eg. I.V.sets, B.G. sets, Ryals tubes, Catheters, Syringes etc

Application of computers in maintenance of records, inventory control, medication monitoring, drug information and data storage and retrieval in hospital retail pharmacy establishment.

Part II: Clinical Pharmacy:

Introduction to Clinical pharmacy practice- Definition, scope.

Modern dispensing aspects- Pharmacists and patient counseling and advice for the use of common drugs, medication history.

Common daily terminology used in the practice of Medicine.

Disease, manifestation and patho-physiology including salient symptoms to understand the disease like Tuberculosis, Hepatitis, Rheumatoid Arthritis, Cardio-vascular diseases, Epilepsy, Diabetes, Peptic Ulcer, Hypertension.

Physiological parameters with their significance.

Drug Interactions: Definition and introduction. Mechanism of Drug Interaction. Drug-drug interaction with reference to analgesics, diuretics, cardiovascular drugs, Gastro-intestinal agents. Vitamins and Hypoglycemic agents. Drug-food interaction.

Adverse Drug Reaction: Definition and significance. Drug-Induced diseases and Teratogenicity.

Drugs in Clinical Toxicity- Introduction, general treatment of poisoning, systemic antidotes, Treatment of insecticide poisoning, heavy metal poison, Narcotic drugs, Barbiturate, Organo-phosphorus poisons.

Drug dependences, drug abuse, addictive drugs and their treatment, complications.

Bio-availability of drugs, including factors affecting it.

Books Recommended:(Latest editions)

1. Remington's pharmaceutical sciences.
2. Testing of raw materials used in (1).
3. Evaluation of surgical dressings.
4. Sterilization of surgical instruments, glassware and other hospital supplies.
5. Handling and use of data processing equipments.



PHARMACY COUNCIL OF INDIA

(Constituted under the Pharmacy Act, 1948)

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Ref. No.14-55/2021-PCI(A) 3642-45

23 SEP 2021

✓ To

- All institutions approved for D.Pharm Course.
- All State Governments (Technical Education and Health Departments) and admission making authorities.
- All Examining Authorities.

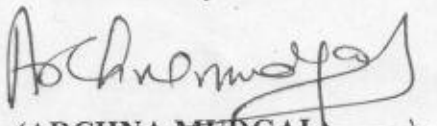
Sub: "Syllabus framed under Regulation 7, List of prescribed equipments and apparatus under Appendix-A of The Education Regulations, 2020 for Diploma Course in Pharmacy."

Sir/Madam

With reference to the subject cited above, it is informed that -

- With due approval of the Ministry of Health and Family Welfare, Government of India, PCI has notified the Education Regulations, 2020 for Diploma course in Pharmacy in the Gazette of India, Extraordinary No. 435, Part-III, Section-4, dt.16.10.2020.
- As empowered under regulation 7 and Appendix-A of ER-20, the PCI has framed the syllabus. A copy of the same titled as under is enclosed as **Annexure-I**.
"Syllabus framed under Regulation 7, List of prescribed equipments and apparatus under Appendix-A of The Education Regulations, 2020 for Diploma Course in Pharmacy."
- It is for implementation and strict compliance from 2021-2022 academic session.

Yours faithfully


(ARCHANA MUDGAL)
Registrar-cum-Secretary



Pharmacy Council of India New Delhi

**“Syllabus framed under Regulation 7,
List of prescribed equipments and
apparatus under Appendix-A of
The Education Regulations, 2020
For Diploma Course in Pharmacy”**

COMMITTEE MEMBERS

S. No.	Name	Affiliation	Role
1.	Dr. B. Suresh	President, Pharmacy Council of India, New Delhi	Ex-Officio
2.	Dr. Shailendra Saraf	Vice President, Pharmacy Council of India, New Delhi	Ex-Officio
3.	Dr. V. Gopal	Member, Pharmacy Council of India, (Puducherry)	Convener
4.	Dr. B. Jayakar	Member, Pharmacy Council of India, (Tamil Nadu)	Member
5.	Sri Kumar Ajay	Member, Pharmacy Council of India, (Bihar)	Member
6.	Dr. H. Lalhlenmawia	Member, Pharmacy Council of India, (Mizoram)	Member
7.	Dr. R. Debnath	Member, Pharmacy Council of India, (West Bengal)	Member
8.	Shri Annada Sankar Das	Member, Pharmacy Council of India, (Orissa)	Member
9.	Dr. Priyashree Sunita	Member, Pharmacy Council of India, (Jharkhand)	Member
10.	Dr. Mannava Radhakrishna Murthy	Member, Pharmacy Council of India, (Andhra Pradesh)	Member
11.	Shri Prakash Jeevandas Wanjari	Member, Pharmacy Council of India, (Maharashtra)	Member
12.	Shri K.R. Dinesh Kumar	Member, Pharmacy Council of India, (Kerala)	Member
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14.	Shri Raj Vaidya	Community Pharmacist, Hindu Pharmacy, Goa	Member
15.	Dr. R.N. Gupta	Professor, Birla Institute of Technology, Ranchi, Jharkhand.	Member
16.	Dr. K.P. Arun	Associate Professor, JSS College of Pharmacy, Ooty, Tamil Nadu	Member
17.	Dr. Neeraj Upmanyu	Professor & Dean, School of Pharmacy & Research, People's University Bhopal, Madhya Pradesh	Special Invitee

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1. Preamble

“Revamping the curriculum, pedagogy, assessment, and student support” is one of the vision statements and recommendations of the National Education Policy (NEP) of Govt. of India for attaining enhanced learning experiences by the students. In light of this, Pharmacy Council of India, the apex body regulating the pharmacy education in the country, committed to revise the education regulations of Diploma in Pharmacy (D.Pharm) program and thus, the ‘Education Regulations 2020’ (ER-2020) has been notified in the Gazette of India in October 2020. This new regulation has given due consideration for the fact that, universally the role of pharmacist has undergone continuous evolution from ‘dispenser of medicines’ to ‘medicine expert’ in the multidisciplinary health care team.

Accordingly, the courses (course means the subject) of the existing education regulations (ER-91) have been revisited, compared with the present and future needs of the society, expectations of the healthcare team and other stakeholders from the pharmacists were assessed, feedback from the experts in the pharmacy and other healthcare professions were sought. Thus, the course of study prescribed in ER-2020 is an amalgamation of all such exercises to arrive at a curriculum structure for D.Pharm that is more relevant to the current practice standards, dynamic to accommodate and address the upcoming changes.

Though the total number of courses across the program remain 21 as that of ER-91, the number of theory courses is reduced from 12 to 11 in the new regulation, while the number of practical courses is increased from 9 to 10. Further, the theory teaching hours across the program have been reduced from 850 to 825, while the practical hours have been increased from 750 to 800 in the new regulation. Three practical courses have been introduced for the first time in ER-2020. Further, about 275 hours have been assigned for the first time in D.Pharm curriculum for ‘Tutorial’ activities. All such changes explicitly reveal that the ER-2020 is intended to provide a little edge to the experiential learning through the practical courses and encourages the small group teaching-learning, self-directed learning, etc. in the tutorial hours.

Introduction of ‘Pharmacotherapeutics’ courses (theory and practical) is one of the revolutionary changes in the new curriculum, that will help the students to hone their knowledge and skills in the area of pharmaceutical care services which will certainly redefine the roles of the D.Pharm qualified pharmacists in both community and hospital settings. Also, the introduction of ‘Social Pharmacy’ courses (theory and practical) will provide insights about the primary and preventive healthcare concepts in the country and the potential roles of pharmacists in such healthcare segments.

In this backdrop, the Council has formulated a Committee which comprised of 16 Members who have rich experiences in various domains such as education, hospital

pharmacy practice, community pharmacy practice, clinical pharmacy practice, administrative and regulatory affairs to design the syllabus for the individual theory and practical courses as per the curriculum framework defined in ER-2020. The Committee with its clear understanding about the philosophy and objectives of the ER-2020, drafted the syllabus for individual theory and practical courses with utmost care to avoid repetitions, redundancy, over/under utilization of hours, etc. Every course is defined with scope, set of course objectives and course outcomes which will help to understand the significance and the expectations of the course from both teachers and students. Lots of scope has been given in the syllabus for the active learning by the students through the assignment topics and field visit activities which will enhance their critical thinking, searching scientific literatures, interpretational skills and communication skills.

According to the ER-2020 curriculum framework, the students do not earn any credits based on the academic hours they spend. However, as per the conventional methodology of credit calculations, the curriculum of ER-2020 shall be deemed equivalent to 80 credits that shall be used for the administrative purposes, wherever necessary.

Further, the 'Competencies for the Indian D.Pharm Holders' based on the knowledge, skill, attitude and value that are essential for the successful practice of the profession have been derived. These competencies have also been mapped with the individual courses of the curriculum based on the expected outcomes of the individual course. Thus, the courses and the competencies are interlaced in such a way that multiple courses contribute to build one competency and one course contributes to build more than one competency, which reveal the strength of the competency mapping.

The Council strongly believes that the ER-2020 regulations, curriculum and syllabus will uplift the knowledge and skills of the students on par with the contemporary and future professional demands and enable them to be a successful practitioner in the chosen field of pharmacy.

By considering the substantial changes and inclusion of advanced and current subject matters in the new syllabus, the Council shall conduct series of meetings, seminars, conferences, workshops, and webinars for the faculty members handling D.Pharm courses and equip them to deliver such new courses / topics more effectively and efficiently.

The Council appreciate all the efforts of the Members for successfully bringing out the Education Regulations 2020, curriculum and syllabus. Also, profound gratitude to all the stakeholders who contributed directly or indirectly in completing this task.

2. Competencies for the Indian D.Pharm Holders

Competency is defined as “A distinct composite of knowledge, skill, attitude and value that is essential to the practice of the profession in real life contexts”.

The candidates who successfully complete the Diploma in Pharmacy (D.Pharm) program of Education Regulations 2020 (ER-2020), from the institutions approved by the Pharmacy Council of India are expected to attain the following professional competencies.

1. Review Prescriptions
2. Dispense Prescription / Non-Prescription Medicines
3. Provide Patient Counselling / Education
4. Hospital and Community Pharmacy Management
5. Expertise on Medications
6. Proficiency on drugs / pharmaceuticals
7. Entrepreneurship and Leadership
8. Deliver Primary and Preventive Healthcare
9. Professional, Ethical and Legal Practice
10. Continuing Professional Development

1. Review Prescriptions: The student should receive and handle prescriptions in a professional manner and be able to check for their completeness and correctness. Also, the prescribers should be contacted for any clarifications and corrections in the prescriptions with suggestions if any.

2. Dispense Prescription / Non-Prescription Medicines: The student should be able to dispense the various scheduled drugs / medicines as per the implications of the Drug & Cosmetics Act and Rules thereunder. Also, the non-prescription medicines (over-the-counter drugs) should be dispensed judiciously to the patients as required.

3. Provide Patient Counselling / Education: The student should be able to effectively counsel / educate the patients / caretakers about the prescription / non-prescription medicines and other health related issues. Effective communication includes using both oral and written communication skills and various communication techniques.

4. Hospital and Community Pharmacy Management: The student should be able to manage the drug distribution system as per the policies and guidelines of the hospital pharmacy, good community pharmacy practice and the recommendations of regulatory agencies. Also, be able to manage the procurement, inventory, and distribution of medicines in hospital / community pharmacy settings.

5. Expertise on Medications: The student should be able to provide an expert opinion on medications to health care professionals on safe and effective medication-use, relevant policies and procedures based on available evidences.

6. Proficiency on Pharmaceutical Formulations: The student should be able to describe the chemistry, characteristics, types, merits and demerits of both drugs and excipients used in pharmaceutical formulations based on her/his knowledge and scientific resources.

7. Entrepreneurship and Leadership: The student should be able to acquire the entrepreneurial skills in the dynamic professional environments. Also, be able to achieve leadership skills through teamwork and sound decision-making skills.

8. Deliver Primary and Preventive Healthcare: The student should be able to contribute to various healthcare programs of the nation including disease prevention initiatives to improve public health. Also contribute to the promotion of national health policies.

9. Professional, Ethical and Legal Practice: The student should be able to deliver professional services in accordance with legal, ethical, and professional guidelines with integrity.

10. Continuing Professional Development: The student should be able to recognize the gaps in the knowledge and skills in the effective delivery of professional services from time to time and be self-motivated to bridge such gaps by attending continuing professional development programs.

3. Competency Mapping with the Courses (Part I, II & III) of Education Regulations 2020

Competencies	Pharmaceutics	Pharmaceutical Chemistry	Pharmacognosy	Human Anatomy & Physiology	Social Pharmacy	Pharmacology	Community Pharmacy & Management	Biochemistry & Clinical Pathology	Pharmacotherapeutics	Hospital & Clinical Pharmacy	Pharmacy Law & Ethics	Practical Training
1. Review the Prescriptions	√	√	√	√		√	√	√	√	√	√	√
2. Dispense Prescription / Non-Prescription Medicines	√	√	√		√	√	√	√	√	√	√	√
3. Provide Patient Counselling / Education	√	√	√	√	√	√	√	√	√	√	√	√
4. Hospital and Community Pharmacy Management					√		√			√	√	√
5. Expertise on Medications	√	√	√	√	√	√	√	√	√	√	√	√
6. Proficiency on Pharmaceutical Formulations	√	√	√			√			√			√
7. Entrepreneurship and Leadership							√			√		√
8. Deliver Primary and Preventive Healthcare				√	√	√	√	√	√	√	√	√
9. Professional, Ethical and Legal Practice					√		√		√	√	√	√
10. Continuing Professional Development	√	√	√		√	√	√		√	√	√	√

4. ER-2020 D.Pharm Syllabus – An Overview

The ER-2020 D.Pharm Syllabus has the following structure in every course. Though the theory and practical courses are not mutually exclusive, as per the Regulations, the theory and practical are to be considered as individual courses.

Scope: These are broader statements on the purpose of the course in the curriculum, key contents of the course that will contribute to the specific knowledge and or skill developments. The teacher is expected to orient the students about the scope of the particular course at the beginning and intermittently.

Course Objectives: The course objectives describe the key topics that are intended by the teacher to be covered in the course. In general, these are more specific than the scope and broader than the course outcomes. The teacher is expected to discuss the objectives of the course with the students and break-down the course objectives into micro levels as objectives of a specific topic / objectives of a specific lecture, etc. Such an exercise shall make the students to understand the significance of the course / topic / lecture and enhance their attention on the course / topic / lecture.

Course Outcomes: The course outcomes are more specific than the course objectives describe that describe the abilities of the students to perform/act, upon successful completion of the course. Hence, conventionally the course outcomes are described with verbs that are measurable or observable actions. The teacher is expected to describe the desired outcomes of the particular course, so that the students shall understand the various assessment criteria, modalities, and parameters. This also serves as a broader guideline for the teachers for preparing the assessment plan. A well-structured assessment plan associated with the course outcomes shall enable to mapping with the professional competencies and their attainment levels that are attributed to the program outcomes.

Theory Courses: The theory courses basically provide concepts and explain the relationships between the concepts. Understanding of the theoretical courses enable the students to identify the problems in real life situation and make a plan for addressing such problems. Also, the theory course helps to understand what is not known and thus is the tool for accumulation of knowledge. The syllabus of the theory courses has been systematically and logically described as different chapters and the minimum number of hours to be spent on teaching are mentioned chapter wise and course wise. The teachers shall further distribute the total hours of any given chapter among the sub-topics as required by the subject matter.

Practical Courses: The practical courses are designed for applying the theoretical knowledge in the given experimental / simulated conditions. The practical courses deepen the understanding of theories, develop the skills, hone professional competencies, provide opportunities to observe, think and analyse problem solving methods. Further, they help to gain experience with the real things in practice. The teachers shall train the students in actual / simulated practical conditions.

Tutorials: The purpose of the tutorial hour is typically to engage the students in smaller groups in order to pay a closer attention on their learning process. This is an opportunity for the students to complete their assignments, develop specific skills, discuss any problems in the study topics in a less formal way. During the tutorial hour, the students shall exchange their ideas within the small group and learn to accept constructive criticism and listen to others. Also, the tutorial hour enables the teachers to closely monitor the progress of the individual student and provide additional academic support to individuals, if necessary.

Assignments: The purpose the assignments are to encourage the students for self-directed learning. Further, the assignments will provoke critical thinking, enhance the skills such as literature search, data mining, data interpretation, report formatting, time-management, and written communication. This is also a mode of self-assessment for the student about the level of understanding of the concepts of a particular course. The teachers shall apply their knowledge and wisdom in choosing the assignment topics at a micro level in alignment with the topics given in the syllabus. The assignments shall be evaluated against a set of criteria. A typical format for the assessment of an assignment is given in Appendix-1.

Field Visits: The purpose of field visits is to provide a real-world experience to the students. The field visits will help them to realize that what they learn within the walls of the classroom / laboratory can help them solve the problems they see in the world around them. Also, this is helpful to the teachers to widen their horizons of knowledge and broadening the scope of the syllabus. Every student shall submit a report describing their objectives, experience, learning points, etc. pertaining to the field trip in the typical format given in Appendix-2.

Recommended Books: For each course, a list of recommended books is given in the syllabus. The list shall be considered as an important and common resource for the teaching-learning process, but not the complete list. It is always encouraged to use the latest edition of the books specified. Further, the teachers and students are encouraged to explore more primary, secondary, and tertiary resources as required.

Practical Training: The goal of the practical training for the students is to provide a real-time, supervised experience on the professional tasks emphasised in their course of study. Further, it helps them to apply their acquired knowledge and skills in the professional working environment. The practical training intensively prepares the students with adequate competencies and qualifications required for the career opportunity in the future.

Thus, the ER 2020 D.Pharm syllabus is designed to nurture the students in all the three domains of Bloom's Taxonomy viz. cognitive (knowledge), affective (attitude) and psychomotor (skills). Further, it also provides ample of scope to the students for different learning styles viz. visual, auditory and kinaesthetic, i.e., 'see, hear and do'.

The summary of the curriculum, courses and other activities and their metrics across the ER-2020 D.Pharm program (Part I, II & III) are given here.

Criteria	Metrics
Number of subject areas (considering both theory & practical together)	11
Number of theory courses	11
Number of practical courses	10
Number of theory hours	825
Number of practical hours	600
Number of practical training hours	500
Number of tutorial hours	275
Number of course outcomes for theory courses	45
Number of course outcomes for practical courses	40
Number of courses which have given assignments	9
Number of assignment topics given	75
Number of assignments reports each student shall submit	27
Number of courses which have field visit	5
Number of field visit reports each student shall submit	9
Number of professional competencies	10

5. Guidelines for the conduct of theory examinations

Sessional Examinations

There shall be two or more periodic sessional (internal assessment) examinations during each academic year. The duration of the sessional exam shall be 90 minutes. The highest aggregate of any two performances shall form the basis of calculating the sessional marks. The scheme of the question paper for theory sessional examinations shall be as given below.

I. Long Answers (Answer 3 out of 4)	3 x 5 = 15
II. Short Answers (Answer 5 out of 6)	5 x 3 = 15
III. Objective type Answers (Answer all 10 out of 10) (Multiple Choice Questions / Fill-in the Blanks / One word OR one Sentence questions)	10 x 1 = 10
Total	= 40 marks

Internal assessment: The marks secured by the students out of the total 40 shall be reduced to 20 in each sessional, and then the internal assessment shall be calculated based on the best two averages for 20 marks.

Final Board / University Examinations

The scheme of the question paper for the theory examinations conducted by the examining authority (Board / University) shall be as given below. The duration of the final examination shall be 3 hours.

I. Long Answers (Answer 6 out of 7)	= 6 x 5 = 30
II. Short Answers (Answer 10 out of 11)	= 10 x 3 = 30
III. Objective type Answers (Answer all 20) (Multiple Choice Questions / Fill-in the Blanks / One word OR one Sentence questions)	= 20 x 1 = 20
Total	= 80 marks

6. Guidelines for the conduct of practical examinations

Sessional Examinations

There shall be two or more periodic sessional (internal assessment) practical examinations during each academic year. The duration of the sessional exam shall be three hours. The highest aggregate of any two performances shall form the basis of calculating the sessional marks. The scheme of the question paper for practical sessional examinations shall be as given below.

I. Synopsis	=	10
II. Experiments	=	50*
III. Viva voce	=	10
IV. Practical Record Maintenance	=	10

Total	=	80 marks

* The marks for the experiments shall be divided into various categories, viz. major experiment, minor experiment, spotters, etc. as per the requirement of the course.

Internal assessment: The marks secured by the students out of the total of 80 shall be reduced to 10 in each sessional, and then the internal assessment shall be calculated based on the best two averages for 10 marks from the sessional and other 10 marks shall be awarded as per the details given below.

Actual performance in the sessional examination	=	10 marks
Assignment marks (Average of three)	=	5 marks*
Field Visit Report marks (Average for the reports)	=	5 marks\$

Total	=	20 marks

*, \$ Only for the courses given with both assignments and field visit/s

Note:

1. For the courses having either assignments or field visit/s, the assessments of assignments or field visit/s shall be done directly for 10 marks and added to the sessional marks.
2. For the courses not having both assignment and field visit, the whole 20 marks shall be calculated from the sessional marks.

Final Board / University Examinations

The scheme of the question paper for the practical examinations conducted by the examining authority (Board / University) shall be as given below. The duration of the final examination shall be 3 hours.

I. Synopsis	=	10
II. Experiments	=	60*
III. Viva voce	=	10

Total	=	80 marks

* The marks for the experiments shall be divided into various categories, viz. major experiment, minor experiment, spotters, etc. as per the requirement of the course.

7. ER-2020 D.Pharm Syllabus – Part I

S. No.	Course Code	Name of the Course	Total Theory / Practical Hours	Total Tutorial Hours	Theory / Practical Hours per Week	Tutorial Hours per Week
1.	ER20-11T	Pharmaceutics – Theory	75	25	3	1
2.	ER20-11P	Pharmaceutics – Practical	75	-	3	-
3.	ER20-12T	Pharmaceutical Chemistry – Theory	75	25	3	1
4.	ER20-12P	Pharmaceutical Chemistry – Practical	75	-	3	-
5.	ER20-13T	Pharmacognosy – Theory	75	25	3	1
6.	ER20-13P	Pharmacognosy – Practical	75	-	3	-
7.	ER20-14T	Human Anatomy & Physiology – Theory	75	25	3	1
8.	ER20-14P	Human Anatomy & Physiology – Practical	75	-	3	-
9.	ER20-15T	Social Pharmacy – Theory	75	25	3	1
10.	ER20-15P	Social Pharmacy – Practical	75	-	3	-

PHARMACEUTICS – THEORY

Course Code: ER20-11T

75 Hours (3 Hours/week)

Scope: This course is designed to impart basic knowledge and skills on the art and science of formulating and dispensing different pharmaceutical dosage forms.

Course Objectives: This course will discuss the following aspects of pharmaceutical dosage forms

1. Basic concepts, types and need
2. Advantages and disadvantages, methods of preparation / formulation
3. Packaging and labelling requirements
4. Basic quality control tests, concepts of quality assurance and good manufacturing practices

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Describe about the different dosage forms and their formulation aspects
2. Explain the advantages, disadvantages, and quality control tests of different dosage forms
3. Discuss the importance of quality assurance and good manufacturing practices

Chapter	Topics	Hours
1	<ul style="list-style-type: none">• History of the profession of Pharmacy in India in relation to Pharmacy education, industry, pharmacy practice, and various professional associations.• Pharmacy as a career• Pharmacopoeia: Introduction to IP, BP, USP, NF and Extra Pharmacopoeia. Salient features of Indian Pharmacopoeia	7
2	Packaging materials: Types, selection criteria, advantages and disadvantages of glass, plastic, metal, rubber as packaging materials	5
3	Pharmaceutical aids: Organoleptic (Colouring, flavouring, and sweetening) agents Preservatives: Definition, types with examples and uses	3
4	Unit operations: Definition, objectives/applications, principles, construction, and workings of: Size reduction: hammer mill and ball mill Size separation: Classification of powders according to IP, Cyclone separator, Sieves and standards of sieves	9

	Mixing: Double cone blender, Turbine mixer, Triple roller mill and Silverson mixer homogenizer Filtration: Theory of filtration, membrane filter and sintered glass filter Drying: working of fluidized bed dryer and process of freeze drying Extraction: Definition, Classification, method, and applications	
5	Tablets – coated and uncoated, various modified tablets (sustained release, extended-release, fast dissolving, multi-layered, etc.)	8
	Capsules - hard and soft gelatine capsules	4
	Liquid oral preparations - solution, syrup, elixir, emulsion, suspension, dry powder for reconstitution	6
	Topical preparations - ointments, creams, pastes, gels, liniments and lotions, suppositories, and pessaries	8
	Nasal preparations, Ear preparations	2
	Powders and granules - Insufflations, dusting powders, effervescent powders, and effervescent granules	3
	Sterile formulations – Injectables, eye drops and eye ointments	6
	Immunological products: Sera, vaccines, toxoids, and their manufacturing methods.	4
6	Basic structure, layout, sections, and activities of pharmaceutical manufacturing plants Quality control and quality assurance: Definition and concepts of quality control and quality assurance, current good manufacturing practice (cGMP), Introduction to the concept of calibration and validation	5
7	Novel drug delivery systems: Introduction, Classification with examples, advantages, and challenges	5

PHARMACEUTICS – PRACTICAL

Course Code: ER20-11P

75 Hours (3 Hours/week)

Scope: This course is designed to train the students in formulating and dispensing common pharmaceutical dosage forms.

Course Objectives: This course will discuss and train the following aspects of preparing and dispensing various pharmaceutical dosage forms

1. Calculation of working formula from the official master formula

2. Formulation of dosage forms based on working formula
3. Appropriate Packaging and labelling requirements
4. Methods of basic quality control tests

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Calculate the working formula from the given master formula
2. Formulate the dosage form and dispense in an appropriate container
3. Design the label with the necessary product and patient information
4. Perform the basic quality control tests for the common dosage forms

Practicals

1. Handling and referring the official references: Pharmacopoeias, Formularies, etc. for retrieving formulas, procedures, etc.
2. Formulation of the following dosage forms as per monograph standards and dispensing with appropriate packaging and labelling
 - **Liquid Oral:** Simple syrup, Piperazine citrate elixir, Aqueous Iodine solution
 - **Emulsion:** Castor oil emulsion, Cod liver oil emulsion
 - **Suspension:** Calamine lotion, Magnesium hydroxide mixture
 - **Ointment:** Simple ointment base, Sulphur ointment
 - **Cream:** Cetrimide cream
 - **Gel:** Sodium alginate gel
 - **Liniment:** Turpentine liniment, White liniment BPC
 - **Dry powder:** Effervescent powder granules, Dusting powder
 - **Sterile Injection:** Normal Saline, Calcium gluconate Injection
 - **Hard Gelatine Capsule:** Tetracycline capsules
 - **Tablet:** Paracetamol tablets
3. Formulation of at least five commonly used cosmetic preparations – e.g. cold cream, shampoo, lotion, toothpaste etc
4. Demonstration on various stages of tablet manufacturing processes
5. Appropriate methods of usage and storage of all dosage forms including special dosage such as different types of inhalers, spacers, insulin pens
6. Demonstration of quality control tests and evaluation of common dosage forms viz. tablets, capsules, emulsion, sterile injections as per the monographs

Assignments

The students shall be asked to submit written assignments on the following topics (One assignment per student per sessional period. i.e., a minimum of THREE assignments per student)

1. Various systems of measures commonly used in prescribing, compounding and dispensing practices
2. Market preparations (including Fixed Dose Combinations) of each type of dosage forms, their generic name, minimum three brand names and label contents of the dosage forms mentioned in theory/practical
3. Overview of various machines / equipments / instruments involved in the formulation and quality control of various dosage forms / pharmaceutical formulations.
4. Overview of extemporaneous preparations at community / hospital pharmacy vs. manufacturing of dosage forms at industrial level
5. Basic pharmaceutical calculations: ratios, conversion to percentage fraction, alligation, proof spirit, isotonicity

Field Visit

The students shall be taken for an industrial visit to pharmaceutical industries to witness and understand the various processes of manufacturing of any of the common dosage forms viz. tablets, capsules, liquid orals, injectables, etc. Individual reports from each student on their learning experience from the field visit shall be submitted.

PHARMACEUTICAL CHEMISTRY – THEORY

Course Code: ER20-12T

75 Hours (3 Hours/week)

Scope: This course is designed to impart basic knowledge on the chemical structure, storage conditions and medicinal uses of organic and inorganic chemical substances used as drugs and pharmaceuticals. Also, this course discusses the impurities, quality control aspects of chemical substances used in pharmaceuticals.

Course Objectives: This course will discuss the following aspects of the chemical substances used as drugs and pharmaceuticals for various disease conditions

1. Chemical classification, chemical name, chemical structure
2. Pharmacological uses, doses, stability and storage conditions
3. Different types of formulations / dosage form available and their brand names
4. Impurity testing and basic quality control tests

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Describe the chemical class, structure and chemical name of the commonly used drugs and pharmaceuticals of both organic and inorganic nature
2. Discuss the pharmacological uses, dosage regimen, stability issues and storage conditions of all such chemical substances commonly used as drugs
3. Describe the quantitative and qualitative analysis, impurity testing of the chemical substances given in the official monographs
4. Identify the dosage form & the brand names of the drugs and pharmaceuticals popular in the marketplace

Chapter	Topic	Hours
1	Introduction to Pharmaceutical chemistry: Scope and objectives Sources and types of errors: Accuracy, precision, significant figures Impurities in Pharmaceuticals: Source and effect of impurities in Pharmacopoeial substances, importance of limit test, Principle and procedures of Limit tests for chlorides, sulphates, iron, heavy metals and arsenic.	8
2	Volumetric analysis: Fundamentals of volumetric analysis, Acid-base titration, non-aqueous titration, precipitation titration, complexometric titration, redox titration Gravimetric analysis: Principle and method.	8

3	Inorganic Pharmaceuticals: Pharmaceutical formulations, market preparations, storage conditions and uses of <ul style="list-style-type: none"> ● Haematinics: Ferrous sulphate, Ferrous fumarate, Ferric ammonium citrate, Ferrous ascorbate, Carbonyl iron ● Gastro-intestinal Agents: Antacids :Aluminium hydroxide gel, Magnesium hydroxide, Magaldrate, Sodium bicarbonate, Calcium Carbonate, Acidifying agents, Adsorbents, Protectives, Cathartics ● Topical agents: Silver Nitrate, Ionic Silver, Chlorhexidine Gluconate, Hydrogen peroxide, Boric acid, Bleaching powder, Potassium permanganate ● Dental products: Calcium carbonate, Sodium fluoride, Denture cleaners, Denture adhesives, Mouth washes ● Medicinal gases: Carbon dioxide, nitrous oxide, oxygen 	7
4	Introduction to nomenclature of organic chemical systems with particular reference to heterocyclic compounds containing up to Three rings	2
Study of the following category of medicinal compounds with respect to classification, chemical name, chemical structure (compounds marked with*) uses, stability and storage conditions, different types of formulations and their popular brand names		
5	Drugs Acting on Central Nervous System <ul style="list-style-type: none"> ● Anaesthetics: Thiopental Sodium*, Ketamine Hydrochloride*, Propofol ● Sedatives and Hypnotics: Diazepam*, Alprazolam*, Nitrazepam, Phenobarbital* ● Antipsychotics: Chlorpromazine Hydrochloride*, Haloperidol*, Risperidone*, Sulpiride*, Olanzapine, Quetiapine, Lurasidone ● Anticonvulsants: Phenytoin*, Carbamazepine*, Clonazepam, Valproic Acid*, Gabapentin*, Topiramate, Vigabatrin, Lamotrigine ● Anti-Depressants: Amitriptyline Hydrochloride*, Imipramine Hydrochloride*, Fluoxetine*, Venlafaxine, Duloxetine, Sertraline, Citalopram, Escitalopram, Fluvoxamine, Paroxetine 	9
6	Drugs Acting on Autonomic Nervous System <ul style="list-style-type: none"> ● Sympathomimetic Agents: <i>Direct Acting:</i> Nor-Epinephrine*, Epinephrine, Phenylephrine, 	9

	<p>Dopamine*, Terbutaline, Salbutamol (Albuterol), Naphazoline*, Tetrahydrozoline. Indirect Acting Agents: Hydroxy Amphetamine, Pseudoephedrine. Agents With Mixed Mechanism: Ephedrine, Metaraminol</p> <ul style="list-style-type: none"> ● Adrenergic Antagonists: Alpha Adrenergic Blockers: Tolazoline, Phentolamine ● Phenoxybenzamine, Prazosin. Beta Adrenergic Blockers: Propranolol*, Atenolol*, Carvedilol ● Cholinergic Drugs and Related Agents: Direct Acting Agents: Acetylcholine*, Carbachol, And Pilocarpine. Cholinesterase Inhibitors: Neostigmine*, Edrophonium Chloride, Tacrine Hydrochloride, Pralidoxime Chloride, Echothiopate Iodide ● Cholinergic Blocking Agents: Atropine Sulphate*, Ipratropium Bromide <p>Synthetic Cholinergic Blocking Agents: Tropicamide, Cyclopentolate Hydrochloride, Clidinium Bromide, Dicyclomine Hydrochloride*</p>	
7	<p>Drugs Acting on Cardiovascular System</p> <ul style="list-style-type: none"> ● Anti-Arrhythmic Drugs: Quinidine Sulphate, Procainamide Hydrochloride, Verapamil, Phenytoin Sodium*, Lidocaine Hydrochloride, Lorcaïnide Hydrochloride, Amiodarone and Sotalol ● Anti-Hypertensive Agents: Propranolol*, Captopril*, Ramipril, Methyldopate Hydrochloride, Clonidine Hydrochloride, Hydralazine Hydrochloride, Nifedipine, ● Antianginal Agents: Isosorbide Dinitrate 	5
8	<p>Diuretics: Acetazolamide, Frusemide*, Bumetanide, Chlorthalidone, Benzthiazide, Metolazone, Xipamide, Spironolactone</p>	2
9	<p>Hypoglycemic Agents: Insulin and Its Preparations, Metformin*, Glibenclamide*, Glimepiride, Pioglitazone, Repaglinide, Gliflozins, Gliptins</p>	3
10	<p>Analgesic And Anti-Inflammatory Agents: Morphine Analogues, Narcotic Antagonists; Nonsteroidal Anti-Inflammatory Agents (NSAIDs) - Aspirin*, Diclofenac, Ibuprofen*, Piroxicam, Celecoxib, Mefenamic Acid, Paracetamol*, Aceclofenac</p>	3
11	<p>Anti-Infective Agents</p> <ul style="list-style-type: none"> ● Antifungal Agents: Amphotericin-B, Griseofulvin, Miconazole, Ketoconazole*, Itraconazole, Fluconazole*, Naftifine Hydrochloride 	8

	<ul style="list-style-type: none"> ● Urinary Tract Anti-Infective Agents: Norfloxacin, Ciprofloxacin, Ofloxacin*, Moxifloxacin, ● Anti-Tubercular Agents: INH*, Ethambutol, Para Amino Salicylic Acid, Pyrazinamide, Rifampicin, Bedaquiline, Delamanid, Pretomanid* ● Antiviral Agents: Amantadine Hydrochloride, Idoxuridine, Acyclovir*, Foscarnet, Zidovudine, Ribavirin, Remdesivir, Favipiravir ● Antimalarials: Quinine Sulphate, Chloroquine Phosphate*, Primaquine Phosphate, Mefloquine*, Cycloguanil, Pyrimethamine, Artemisinin ● Sulfonamides: Sulfanilamide, Sulfadiazine, Sulfamethoxazole, Sulfacetamide*, Mafenide Acetate, Cotrimoxazole, Dapsone* 	
12	Antibiotics: Penicillin G, Amoxicillin*, Cloxacillin, Streptomycin, Tetracyclines: Doxycycline, Minocycline, Macrolides: Erythromycin, Azithromycin, Miscellaneous: Chloramphenicol* Clindamycin	8
13	Anti-Neoplastic Agents: Cyclophosphamide*, Busulfan, Mercaptopurine, Fluorouracil*, Methotrexate, Dactinomycin, Doxorubicin Hydrochloride, Vinblastine Sulphate, Cisplatin*, Dromostanolone Propionate	3

PHARMACEUTICAL CHEMISTRY – PRACTICAL

Course Code: ER20-12P

75 Hours (3 Hours/week)

Scope: This course is designed to impart basic training and hands-on experiences to synthesis chemical substances used as drugs and pharmaceuticals. Also, to perform the quality control tests, impurity testing, test for purity and systematic qualitative analysis of chemical substances used as drugs and pharmaceuticals.

Course Objectives: This course will provide the hands-on experience on the following aspects of chemical substances used as drugs and pharmaceuticals

1. Limit tests and assays of selected chemical substances as per the monograph
2. Volumetric analysis of the chemical substances
3. Basics of preparatory chemistry and their analysis
4. Systematic qualitative analysis for the identification of the chemical drugs

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Perform the limit tests for various inorganic elements and report
2. Prepare standard solutions using the principles of volumetric analysis
3. Test the purity of the selected inorganic and organic compounds against the monograph standards
4. Synthesize the selected chemical substances as per the standard synthetic scheme
5. Perform qualitative tests to systematically identify the unknown chemical substances

Practicals

S. No.	Experiment
1	Limit test for <ul style="list-style-type: none">• Chlorides; sulphate; Iron; heavy metals
2	Identification tests for Anions and Cations as per Indian Pharmacopoeia
3	Fundamentals of Volumetric analysis Preparation of standard solution and standardization of Sodium Hydroxide, Potassium Permanganate
4	Assay of the following compounds <ul style="list-style-type: none">• Ferrous sulphate- by redox titration• Calcium gluconate-by complexometric• Sodium chloride-by Modified Volhard's method• Ascorbic acid by iodometry• Ibuprofen by alkalimetry
5	Fundamentals of preparative organic chemistry Determination of Melting point and boiling point of organic compounds
6	Preparation of organic compounds <ul style="list-style-type: none">• Benzoic acid from Benzamide• Picric acid from Phenol
7	Identification and test for purity of pharmaceuticals Aspirin, Caffeine, Paracetamol, Sulfanilamide
8	Systematic Qualitative analysis experiments (4 substances)

Assignments

The students shall be asked to submit the written assignments on the following topics (One assignment per student per sessional period. i.e., a minimum of THREE assignments per student)

1. Different monographs and formularies available and their major contents
2. Significance of quality control and quality assurance in pharmaceutical industries
3. Overview on Green Chemistry
4. Various software programs available for computer aided drug discovery
5. Various instrumentations used for characterization and quantification of drug

PHARMACOGNOSY – THEORY

Course Code: ER20-13T

75 Hours (3 Hours/week)

Scope: This course is designed to impart knowledge on the medicinal uses of various drugs of natural origin. Also, the course emphasizes the fundamental concepts in the evaluation of crude drugs, alternative systems of medicine, nutraceuticals, and herbal cosmetics.

Course Objectives: This course will discuss the following aspects of drug substances derived from natural resources.

1. Occurrence, distribution, isolation, identification tests of common phytoconstituents
2. Therapeutic activity and pharmaceutical applications of various natural drug substances and phytoconstituents
3. Biological source, chemical constituents of selected crude drugs and their therapeutic efficacy in common diseases and ailments
4. Basic concepts in quality control of crude drugs and various system of medicines
5. Applications of herbs in health foods and cosmetics

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Identify the important/common crude drugs of natural origin
2. Describe the uses of herbs in nutraceuticals and cosmeceuticals
3. Discuss the principles of alternative system of medicines
4. Describe the importance of quality control of drugs of natural origin

Chapter	Topic	Hours
1	Definition, history, present status and scope of Pharmacognosy	2
2	Classification of drugs: <ul style="list-style-type: none">• Alphabetical• Taxonomical• Morphological• Pharmacological• Chemical• Chemo-taxonomical	4
3	Quality control of crude drugs: <ul style="list-style-type: none">• Different methods of adulteration of crude drugs• Evaluation of crude drugs	6

4	Brief outline of occurrence, distribution, isolation, identification tests, therapeutic activity and pharmaceutical applications of alkaloids, terpenoids, glycosides, volatile oils, tannins and resins.		6
5	Biological source, chemical constituents and therapeutic efficacy of the following categories of crude drugs.		30
	Laxatives	Aloe, Castor oil, Ispaghula, Senna	
	Cardiotonic	Digitalis, Arjuna	
	Carminatives and G.I. regulators	Coriander, Fennel, Cardamom, Ginger, Clove, Black Pepper, Asafoetida, Nutmeg, Cinnamon	
	Astringents	Myrobalan, Black Catechu, Pale Catechu	
	Drugs acting on nervous system	Hyoscyamus, Belladonna, Ephedra, Opium, Tea leaves, Coffee seeds, Coca	
	Anti-hypertensive	Rauwolfia	
	Anti-tussive	Vasaka, Tolu Balsam	
	Anti-rheumatics	Colchicum seed	
	Anti-tumour	Vinca, Podophyllum	
	Antidiabetics	Pterocarpus, Gymnema	
	Diuretics	Gokhru, Punarnava	
	Anti-dysenteric	Ipecacuanha	
	Antiseptics and disinfectants	Benzoin, Myrrh, Neem, Turmeric	
	Antimalarials	Cinchona, Artemisia	
	Oxytocic	Ergot	
	Vitamins	Cod liver oil, Shark liver oil	
	Enzymes	Papaya, Diastase, Pancreatin, Yeast	
Pharmaceutical Aids	Kaolin, Lanolin, Beeswax, Acacia, Tragacanth, Sodium alginate, Agar, Guar gum, Gelatine		
Miscellaneous	Squill, Galls, Ashwagandha, Tulsi, Guggul		
6	Plant fibres used as surgical dressings: Cotton, silk, wool and regenerated fibres Sutures – Surgical Catgut and Ligatures		3
7	● Basic principles involved in the traditional systems of medicine like: Ayurveda, Siddha, Unani and Homeopathy ● Method of preparation of Ayurvedic formulations like: Arista, Asava, Gutika, Taila, Churna, Lehya and Bhasma		8

8	Role of medicinal and aromatic plants in national economy and their export potential	2
9	Herbs as health food: Brief introduction and therapeutic applications of: Nutraceuticals, Antioxidants, Pro-biotics, Pre-biotics, Dietary fibres, Omega-3-fatty acids, Spirulina, Carotenoids, Soya and Garlic	4
10	Introduction to herbal formulations	4
11	Herbal cosmetics: Sources, chemical constituents, commercial preparations, therapeutic and cosmetic uses of: Aloe vera gel, Almond oil, Lavender oil, Olive oil, Rosemary oil, Sandal Wood oil	4
12	Phytochemical investigation of drugs	2

PHARMACOGNOSY – PRACTICAL

Course Code: ER20-13P

75 Hours (3 Hours/week)

Scope: This course is designed to train the students in physical identification, morphological characterization, physical and chemical characterization, and evaluation of commonly used herbal drugs.

Course Objectives: This course will provide hands-on experiences to the students in

1. Identification of the crude drugs based on their morphological characteristics
2. Various characteristic anatomical characteristics of the herbal drugs studied through transverse section
3. Physical and chemical tests to evaluate the crude drugs

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Identify the given crude drugs based on the morphological characteristics
2. Take a transverse section of the given crude drugs
3. Describe the anatomical characteristics of the given crude drug under microscopical conditions
4. Carry out the physical and chemical tests to evaluate the given crude drugs

Practicals

1. Morphological Identification of the following drugs:

Ispaghula, Senna, Coriander, Fennel, Cardamom, Ginger, Nutmeg, Black Pepper, Cinnamon, Clove, Ephedra, Rauwolfia, Gokhru, Punarnava, Cinchona, Agar.

2. Gross anatomical studies (Transverse Section) of the following drugs:

Ajwain, Datura, Cinnamon, Cinchona, Coriander, Ashwagandha, Liquorice, Clove, Curcuma, Nux_vomica, Vasaka

3. Physical and chemical tests for evaluation of any FIVE of the following drugs:

Asafoetida, Benzoin, Pale catechu, Black catechu, Castor oil, Acacia, Tragacanth, Agar, Guar gum, Gelatine.

Assignments

The students shall be asked to submit the written assignments on the following topics (One assignment per student per sessional period. i.e., a minimum of THREE assignments per student)

1. Market preparations of various dosage forms of Ayurvedic, Unani, Siddha, Homeopathic (Classical and Proprietary), indications, and their labelling requirements
2. Market preparations of various herbal formulations and herbal cosmetics, indications, and their labelling requirements
3. Herb-Drug interactions documented in the literature and their clinical significances

Field Visit

The students shall be taken in groups to a medicinal garden to witness and understand the nature of various medicinal plants discussed in theory and practical courses. Additionally, they shall be taken in groups to the pharmacies of traditional systems of medicines to understand the availability of various dosage forms and their labelling requirements. Individual reports from each student on their learning experience from the field visit shall be submitted.

HUMAN ANATOMY AND PHYSIOLOGY – THEORY

Course Code: ER20-14T

75 Hours (3 Hours/week)

Scope: This course is designed to impart basic knowledge on the structure and functions of the human body. It helps in understanding both homeostasis mechanisms and homeostatic imbalances of various systems of the human body.

Course Objectives: This course will discuss the following:

1. Structure and functions of the various organ systems and organs of the human body
2. Homeostatic mechanisms and their imbalances in the human body
3. Various vital physiological parameters of the human body and their significances

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Describe the various organ systems of the human body
2. Discuss the anatomical features of the important human organs and tissues
3. Explain the homeostatic mechanisms regulating the normal physiology in the human system
4. Discuss the significance of various vital physiological parameters of the human body

Chapter	Topic	Hours
1	Scope of Anatomy and Physiology Definition of various terminologies	2
2	Structure of Cell: Components and its functions	2
3	Tissues of the human body: Epithelial, Connective, Muscular and Nervous tissues – their sub-types and characteristics.	4
4	Osseous system: structure and functions of bones of axial and appendicular skeleton Classification, types and movements of joints, disorders of joints	3 3
5	Haemopoietic system <ul style="list-style-type: none">• Composition and functions of blood• Process of Hemopoiesis• Characteristics and functions of RBCs, WBCs, and platelets• Mechanism of Blood Clotting• Importance of Blood groups	8

6	Lymphatic system <ul style="list-style-type: none"> • Lymph and lymphatic system, composition, function and its formation. • Structure and functions of spleen and lymph node. 	3
7	Cardiovascular system <ul style="list-style-type: none"> • Anatomy and Physiology of heart • Blood vessels and circulation (Pulmonary, coronary and systemic circulation) • Cardiac cycle and Heart sounds, Basics of ECG • Blood pressure and its regulation 	8
8	Respiratory system <ul style="list-style-type: none"> • Anatomy of respiratory organs and their functions. • Regulation, and Mechanism of respiration. • Respiratory volumes and capacities – definitions 	4
9	Digestive system <ul style="list-style-type: none"> • Anatomy and Physiology of the GIT • Anatomy and functions of accessory glands • Physiology of digestion and absorption 	8
10	Skeletal muscles <ul style="list-style-type: none"> • Histology • Physiology of muscle contraction • Disorder of skeletal muscles 	2
11	Nervous system <ul style="list-style-type: none"> • Classification of nervous system • Anatomy and physiology of cerebrum, cerebellum, mid brain • Function of hypothalamus, medulla oblongata and basal ganglia • Spinal cord-structure and reflexes • Names and functions of cranial nerves. • Anatomy and physiology of sympathetic and parasympathetic nervous system (ANS) 	8
12	Sense organs - Anatomy and physiology of <ul style="list-style-type: none"> • Eye • Ear • Skin • Tongue • Nose 	6
13	Urinary system <ul style="list-style-type: none"> • Anatomy and physiology of urinary system • Physiology of urine formation • Renin - angiotensin system • Clearance tests and micturition 	4

14	Endocrine system (Hormones and their functions) <ul style="list-style-type: none"> ● Pituitary gland ● Adrenal gland ● Thyroid and parathyroid gland ● Pancreas and gonads 	6
15	Reproductive system <ul style="list-style-type: none"> ● Anatomy of male and female reproductive system ● Physiology of menstruation ● Spermatogenesis and Oogenesis ● Pregnancy and parturition 	4

HUMAN ANATOMY AND PHYSIOLOGY – PRACTICAL

Course Code: ER20-14P

75 Hours (3 Hours/week)

Scope: This course is designed to train the students and instil the skills for carrying out basic physiological monitoring of various systems and functions.

Course Objectives: This course will provide hands-on experience in the following:

1. General blood collection techniques and carrying out various haematological assessments and interpreting the results
2. Recording and monitoring the vital physiological parameters in human subjects and the basic interpretations of the results
3. Microscopic examinations of the various tissues permanently mounted in glass slides
4. Discuss the anatomical and physiological characteristics of various organ systems of the body using models, charts, and other teaching aids

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Perform the haematological tests in human subjects and interpret the results
2. Record, monitor and document the vital physiological parameters of human subjects and interpret the results
3. Describe the anatomical features of the important human tissues under the microscopical conditions
4. Discuss the significance of various anatomical and physiological characteristics of the human body

Practicals

1. Study of compound microscope
2. General techniques for the collection of blood
3. Microscopic examination of Epithelial tissue, Cardiac muscle, Smooth muscle, Skeletal muscle, Connective tissue, and Nervous tissue of ready / pre-prepared slides.
4. Study of Human Skeleton-Axial skeleton and appendicular skeleton
5. Determination of
 - a. Blood group
 - b. ESR
 - c. Haemoglobin content of blood
 - d. Bleeding time and Clotting time
6. Determination of WBC count of blood
7. Determination of RBC count of blood
8. Determination of Differential count of blood
9. Recording of Blood Pressure in various postures, different arms, before and after exertion and interpreting the results
10. Recording of Body temperature (using mercury, digital and IR thermometers at various locations), Pulse rate/ Heart rate (at various locations in the body, before and after exertion), Respiratory Rate
11. Recording Pulse Oxygen (before and after exertion)
12. Recording force of air expelled using Peak Flow Meter
13. Measurement of height, weight, and BMI
14. Study of various systems and organs with the help of chart, models, and specimens
 - a) Cardiovascular system
 - b) Respiratory system
 - c) Digestive system
 - d) Urinary system
 - e) Endocrine system
 - f) Reproductive system
 - g) Nervous system
 - h) Eye
 - i) Ear
 - j) Skin

SOCIAL PHARMACY – THEORY

Course Code: ER20-15T

75 Hours (3 Hours/week)

Scope: This course is designed to impart basic knowledge on public health, epidemiology, preventive care, and other social health related concepts. Also, to emphasize the roles of pharmacists in the public health programs.

Course Objectives: This course will discuss about basic concepts of

1. Public health and national health programs
2. Preventive healthcare
3. Food and nutrition related health issues
4. Health education and health promotion
5. General roles and responsibilities of pharmacists in public health

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Discuss about roles of pharmacists in the various national health programs
2. Describe various sources of health hazards and disease preventive measures
3. Discuss the healthcare issues associated with food and nutritional substances
4. Describe the general roles and responsibilities of pharmacists in public health

Chapter	Topic	Hours
1	Introduction to Social Pharmacy <ul style="list-style-type: none">• Definition and Scope. Social Pharmacy as a discipline and its scope in improving the public health. Role of Pharmacists in Public Health. (2)• Concept of Health -WHO Definition, various dimensions, determinants, and health indicators. (3)• National Health Policy – Indian perspective (1)• Public and Private Health System in India, National Health Mission (2)• Introduction to Millennium Development Goals, Sustainable Development Goals, FIP Development Goals (1)	9
2	Preventive healthcare – Role of Pharmacists in the following <ul style="list-style-type: none">• Demography and Family Planning (3)• Mother and child health, importance of breastfeeding, ill effects of infant milk substitutes and bottle feeding (2)• Overview of Vaccines, types of immunity and immunization (4)	18

	<ul style="list-style-type: none"> • Effect of Environment on Health – Water pollution, importance of safe drinking water, waterborne diseases, air pollution, noise pollution, sewage and solid waste disposal, occupational illnesses, Environmental pollution due to pharmaceuticals (7) • Psychosocial Pharmacy: Drugs of misuse and abuse – psychotropics, narcotics, alcohol, tobacco products. Social Impact of these habits on social health and productivity and suicidal behaviours (2) 	
3	Nutrition and Health <ul style="list-style-type: none"> • Basics of nutrition – Macronutrients and Micronutrients (3) • Importance of water and fibres in diet (1) • Balanced diet, Malnutrition, nutrition deficiency diseases, ill effects of junk foods, calorific and nutritive values of various foods, fortification of food (3) • Introduction to food safety, adulteration of foods, effects of artificial ripening, use of pesticides, genetically modified foods (1) • Dietary supplements, nutraceuticals, food supplements – indications, benefits, Drug-Food Interactions (2) 	10
4	<p>Introduction to Microbiology and common microorganisms (3)</p> <p>Epidemiology: Introduction to epidemiology, and its applications. Understanding of terms such as epidemic, pandemic, endemic, mode of transmission, outbreak, quarantine, isolation, incubation period, contact tracing, morbidity, mortality, . (2)</p> <p>Causative agents, epidemiology and clinical presentations and Role of Pharmacists in educating the public in prevention of the following communicable diseases:</p> <ul style="list-style-type: none"> • Respiratory infections – chickenpox, measles, rubella, mumps, influenza (including Avian-Flu, H1N1, SARS, MERS, COVID-19), diphtheria, whooping cough, meningococcal meningitis, acute respiratory infections, tuberculosis, Ebola (7) • Intestinal infections – poliomyelitis, viral hepatitis, cholera, acute diarrheal diseases, typhoid, amebiasis, worm infestations, food poisoning (7) 	28

	<ul style="list-style-type: none"> • Arthropod-borne infections - dengue, malaria, filariasis and, chikungunya (4) • Surface infections – trachoma, tetanus, leprosy (2) • STDs, HIV/AIDS (3) 	
5	Introduction to health systems and all ongoing National Health programs in India, their objectives, functioning, outcome, and the role of pharmacists.	8
6	Pharmacoeconomics – Introduction, basic terminologies, importance of pharmacoeconomics	2

SOCIAL PHARMACY – PRACTICAL

Course Code: ER20-15P

75 Hours (3 Hours/week)

Scope: This course is designed to provide simulated experience in various public health and social pharmacy activities.

Course Objectives: This course will train the students on various roles of pharmacists in public health and social pharmacy activities in the following areas:

1. National immunization programs
2. Reproductive and child health programs
3. Food and nutrition related health programs
4. Health education and promotion
5. General roles and responsibilities of the pharmacists in public health
6. First Aid for various emergency conditions including basic life support and cardiopulmonary resuscitation

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Describe the roles and responsibilities of pharmacists in various National health programs
2. Design promotional materials for public health awareness
3. Describe various health hazards including microbial sources
4. Advice on preventive measures for various diseases
5. Provide first aid for various emergency conditions

Note: Demonstration / Hands-on experience / preparation of charts / models / promotional materials / role plays / enacting / e-brochures / e-flyers / podcasts / video podcasts / any other innovative activities to understand the concept of various elements of social pharmacy listed here. (At least one activity to be carried out for each one of the following):

Practicals

1. National immunization schedule for children, adult vaccine schedule, Vaccines which are not included in the National Immunization Program.
2. RCH – reproductive and child health – nutritional aspects, relevant national health programmes.
3. Family planning devices
4. Microscopical observation of different microbes (readymade slides)
5. Oral Health and Hygiene
6. Personal hygiene and etiquettes – hand washing techniques, Cough and sneeze etiquettes.
7. Various types of masks, PPE gear, wearing/using them, and disposal.
8. Menstrual hygiene, products used
9. First Aid – Theory, basics, demonstration, hands on training, audio-visuals, and practice, BSL (Basic Life Support) Systems [SCA - Sudden Cardiac Arrest, FBAO - Foreign Body Airway Obstruction, CPR, Defibrillation (using AED) (Includes CPR techniques, First Responder).
10. Emergency treatment for all medical emergency cases viz. snake bite, dog bite, insecticide poisoning, fractures, burns, epilepsy etc.
11. Role of Pharmacist in Disaster Management.
12. Marketed preparations of disinfectants, antiseptics, fumigating agents, antilarval agents, mosquito repellents, etc.
13. Health Communication: Audio / Video podcasts, Images, Power Point Slides, Short Films, etc. in regional language(s) for mass communication / education / Awareness on 5 different communicable diseases, their signs and symptoms, and prevention.
14. Water purification techniques, use of water testing kit, calculation of Content/percentage of KMnO_4 , bleaching powder to be used for wells/tanks
15. Counselling children on junk foods, balanced diets – using Information, Education and Communication (IEC), counselling, etc. (Simulation Experiments).
16. Preparation of various charts on nutrition, sources of various nutrients from Locally available foods, calculation of caloric needs of different groups (e.g. child, mother, sedentary lifestyle, etc.). Chart of glycemic index of foods.
17. Tobacco cessation, counselling, identifying various tobacco containing products through charts/pictures

Assignment

The students shall be asked to submit the written assignments on the following topics (One assignment per student per sessional period. i.e., a minimum of THREE assignments per student)

1. An overview of Women's Health Issues
2. Study the labels of various packed foods to understand their nutritional contents
3. Breastfeeding counselling, guidance – using Information, Education and Communication (IEC)
4. Information about the organizations working on de-addiction services in the region (city / district, etc.)
5. Role of a pharmacist in disaster management – A case study
6. Overview on the National Tuberculosis Elimination Programme (NTEP)
7. Drug disposal systems in the country, at industry level and citizen level
8. Various Prebiotics or Probiotics (dietary and market products)
9. Emergency preparedness: Study of local Government structure with respect to Fire, Police departments, health department
10. Prepare poster/presentation for general public on any one of the Health Days. e.g. Day, AIDS Day, Handwashing Day, ORS day, World Diabetes Day, World Heart Day, etc.
11. List of home medicines, their storage, safe handling, and disposal of unused medicines
12. Responsible Use of Medicines: From Purchase to Disposal
13. Collection of newspaper clips (minimum 5) relevant to any one topic and its submission in an organized form with collective summary based on the news items
14. Read a minimum of one article relevant to any theory topic, from Pharma /Science/ or other Periodicals and prepare summary of it for submission
15. Potential roles of pharmacists in rural India

Field Visits

The students shall be taken in groups to visit any THREE of the following facilities to witness and understand the activities of such centres/facilities from the perspectives of the topics discussed in theory and/or practical courses. Individual reports from each student on their learning experience from the field visits shall be submitted.

1. Garbage Treatment Plant
2. Sewage Treatment Plant
3. Bio-medical Waste Treatment Plant
4. Effluent Treatment Plant
5. Water purification plant
6. Orphanage / Elderly-Care-Home / School and or Hostel/Home for persons with disabilities
7. Primary health care centre

8. ER-2020 D.Pharm Syllabus – Part II

S. No.	Course Code	Name of the Course	Total Theory / Practical Hours	Total Tutorial Hours	Theory / Practical Hours per Week	Tutorial Hours per Week
1.	ER20-21T	Pharmacology – Theory	75	25	3	1
2.	ER20-21P	Pharmacology – Practical	50	-	2	-
3.	ER20-22T	Community Pharmacy & Management – Theory	75	25	3	1
4.	ER20-22P	Community Pharmacy & Management – Practical	75	-	3	-
5.	ER20-23T	Biochemistry & Clinical Pathology – Theory	75	25	3	1
6.	ER20-23P	Biochemistry & Clinical Pathology – Practical	50	-	2	-
7.	ER20-24T	Pharmacotherapeutics – Theory	75	25	3	1
8.	ER20-24P	Pharmacotherapeutics – Practical	25	-	1	-
9.	ER20-25T	Hospital & Clinical Pharmacy – Theory	75	25	3	1
10.	ER20-25P	Hospital & Clinical Pharmacy – Practical	25	-	1	-
11.	ER20-26T	Pharmacy Law & Ethics	75	25	3	1

PHARMACOLOGY – THEORY

Course Code: ER20-21T

75 Hours (3 Hours/week)

Scope: This course provides basic knowledge about different classes of drugs available for the pharmacotherapy of common diseases. The indications for use, dosage regimen, routes of administration, pharmacokinetics, pharmacodynamics, and contraindications of the drugs discussed in this course are vital for successful professional practice.

Course Objectives: This course will discuss the following:

1. General concepts of pharmacology including pharmacokinetics, pharmacodynamics, routes of administration, etc.
2. Pharmacological classification and indications of drugs
3. Dosage regimen, mechanisms of action, contraindications of drugs
4. Common adverse effects of drugs

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Describe the basic concepts of pharmacokinetics and pharmacodynamics
2. Enlist the various classes and drugs of choices for any given disease condition
3. Advise the dosage regimen, route of administration and contraindications for a given drug
4. Describe the common adverse drug reactions

Chapter	Topic	Hours
1	General Pharmacology <ul style="list-style-type: none">• Introduction and scope of Pharmacology• Various routes of drug administration - advantages and disadvantages• Drug absorption - definition, types, factors affecting drug absorption• Bioavailability and the factors affecting bioavailability• Drug distribution - definition, factors affecting drug distribution• Biotransformation of drugs - Definition, types of biotransformation reactions, factors influencing drug metabolisms• Excretion of drugs - Definition, routes of drug excretion• General mechanisms of drug action and factors modifying drug action	10

2	Drugs Acting on the Peripheral Nervous System <ul style="list-style-type: none"> • Steps involved in neurohumoral transmission • Definition, classification, pharmacological actions, dose, indications, and contraindications of <ul style="list-style-type: none"> a) Cholinergic drugs b) Anti-Cholinergic drugs c) Adrenergic drugs d) Anti-adrenergic drugs e) Neuromuscular blocking agents f) Drugs used in Myasthenia gravis g) Local anaesthetic agents h) Non-Steroidal Anti-Inflammatory drugs (NSAIDs) 	11
3	Drugs Acting on the Eye <p>Definition, classification, pharmacological actions, dose, indications and contraindications of</p> <ul style="list-style-type: none"> • Miotics • Mydriatics • Drugs used in Glaucoma 	2
4	Drugs Acting on the Central Nervous System <p>Definition, classification, pharmacological actions, dose, indications, and contraindications of</p> <ul style="list-style-type: none"> • General anaesthetics • Hypnotics and sedatives • Anti-Convulsant drugs • Anti-anxiety drugs • Anti-depressant drugs • Anti-psychotics • Nootropic agents • Centrally acting muscle relaxants • Opioid analgesics 	8
5	Drugs Acting on the Cardiovascular System <p>Definition, classification, pharmacological actions, dose, indications, and contraindications of</p> <ul style="list-style-type: none"> • Anti-hypertensive drugs • Anti-anginal drugs • Anti-arrhythmic drugs • Drugs used in atherosclerosis and • Congestive heart failure • Drug therapy for shock 	6

6	Drugs Acting on Blood and Blood Forming Organs Definition, classification, pharmacological actions, dose, indications, and contraindications of <ul style="list-style-type: none"> • Hematinic agents • Anti-coagulants • Anti-platelet agents • Thrombolytic drugs 	4
7	Definition, classification, pharmacological actions, dose, indications, and contraindications of <ul style="list-style-type: none"> • Bronchodilators • Expectorants • Anti-tussive agents • Mucolytic agents 	2
8	Drugs Acting on the Gastro Intestinal Tract Definition, classification, pharmacological actions, dose, indications, and contraindications of <ul style="list-style-type: none"> • Anti-ulcer drugs • Anti-emetics • Laxatives and purgatives • Anti-diarrheal drugs 	5
9	Drugs Acting on the Kidney Definition, classification, pharmacological actions, dose, indications, and contraindications of <ul style="list-style-type: none"> • Diuretics • Anti-Diuretics 	2
10	Hormones and Hormone Antagonists Physiological and pathological role and clinical uses of <ul style="list-style-type: none"> • Thyroid hormones • Anti-thyroid drugs • Parathormone • Calcitonin • Vitamin D • Insulin • Oral hypoglycemic agents • Estrogen • Progesterone • Oxytocin • Corticosteroids 	8

11	Autocoids <ul style="list-style-type: none"> • Physiological role of Histamine, 5 HT and Prostaglandins • Classification, clinical uses, and adverse effects of antihistamines and 5 HT antagonists 	3
12	Chemotherapeutic Agents: Introduction, basic principles of chemotherapy of infections, infestations and neoplastic diseases, Classification, dose, indication and contraindications of drugs belonging to following classes: <ul style="list-style-type: none"> • Penicillins • Cephalosporins • Aminoglycosides • Fluoroquinolones • Macrolides • Tetracyclines • Sulphonamides • Anti-tubercular drugs • Anti-fungal drugs • Anti-viral drugs • Anti-amoebic agents • Anthelmintics • Anti-malarial agents • Anti-neoplastic agents 	12
13	Biologicals Definition, types, and indications of biological agents with examples	2

PHARMACOLOGY – PRACTICAL

Course Code: ER20-21P

50 Hours (2 Hours/week)

Scope: This course provides the basic understanding about the uses, mechanisms of actions, dose dependent responses of drugs in simulated virtual animal models and experimental conditions.

Course Objectives: This course will demonstrate / provide hands-on experience in the virtual platform using appropriate software on the following

1. Study of pharmacological effects of drugs like local anaesthetics, mydriatic and mitotic on rabbit eye
2. Screening the effects of various drugs acting in the central nervous system
3. Study of drug effects on isolated organs / tissues
4. Study of pyrogen testing on rabbit

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Study and report the local anaesthetic, mydriatic and mitotic effects of the given drug on the rabbit eye
2. Choose appropriate animal experiment model to study the effects of the given drugs acting on the central nervous system and submit the report
3. Perform the effects of given tissues (simulated) on isolated organs / tissues and interpret the results
4. Interpret the dose dependent responses of drugs in various animal experiment models

Practicals

Introduction to the following topics pertaining to the experimental pharmacology have to be discussed and documented in the practical manuals.

1. Introduction to experimental pharmacology
2. Study of laboratory animals
(a) Mice; (b) Rats; (c) Guinea pigs; (d) Rabbits
3. Commonly used instruments in experimental pharmacology
4. Different routes of administration of drugs in animals
5. Types of pre-clinical experiments: In-Vivo, In-Vitro, Ex-Vivo, etc.
6. Techniques of blood collection from animals

Experiments

Note: Animals shall not be used for doing / demonstrating any of the experiments given. The given experiments shall be carried-out / demonstrated as the case may be, ONLY with the use of software program(s) such as 'Ex Pharm' or any other suitable software

1. Study of local anaesthetics on rabbit eye
2. Study of Mydriatic effect on rabbit eye
3. Study of Miotic effect on rabbit eye
4. Effect of analgesics using Analgesiometer
5. Study of analgesic activity by writhing test
6. Screening of anti-convulsant using Electro Convulsiometer
7. Screening of Muscle relaxants using Rota-Rod apparatus
8. Screening of CNS stimulants and depressants using Actophotometer
9. Study of anxiolytic activity using elevated plus maze method
10. Study of effect of drugs (any 2) on isolated heart
11. Effect of drugs on ciliary motility on frog's buccal cavity
12. Pyrogen testing by rabbit method

Assignments

The students shall be asked to submit written assignments on the following topics (One assignment per student per sessional period. i.e., a minimum of THREE assignments per student)

1. Introduction to Allergy Testing
2. Introduction to Toxicity Studies
3. Drug Facts Labels of US FDA
4. Pre-clinical studies in new drug development
5. Medicines and meals: Before or After food
6. Pre-clinical studies in new drug development
7. Drugs available as paediatric formulations
8. Drug information apps

COMMUNITY PHARMACY AND MANAGEMENT – THEORY

Course Code: ER20-22T

75 Hours (3 Hours/week)

Scope: The course is designed to impart basic knowledge and skills to provide various pharmaceutical care services to patients and general practitioners in the community setup.

Course Objectives: This course will discuss the following:

1. Establishing and running a community pharmacy and its legal requirements
2. Professional aspects of handling and filling prescriptions
3. Patient counselling on diseases, prescription and or non-prescription medicines
4. Scope for performing basic health screening in community pharmacy settings

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Describe the establishment, legal requirements, and effective administration of a community pharmacy
2. Professionally handle prescriptions and dispense medications
3. Counsel patients about the disease, prescription and or non-prescription medicines
4. Perform basic health screening on patients and interpret the reports in the community pharmacy settings

Chapter	Topic	Hours
1	Community Pharmacy Practice – Definition, history and development of community pharmacy - International and Indian scenarios	2
2	Professional responsibilities of community pharmacists Introduction to the concept of Good Pharmacy Practice and SOPs.	3
3	Prescription and prescription handling <ul style="list-style-type: none">• Definition, parts of prescriptions, legality of prescriptions, prescription handling, labelling of dispensed medications (Main label, ancillary label, pictograms), brief instructions on medication usage• Dispensing process, Good Dispensing Practices, dispensing errors and strategies to minimize them	7

4	Communication skills <ul style="list-style-type: none"> • Definition, types of communication skills • Interactions with professionals and patients • Verbal communication skills (one-to-one, over the telephone) • Written communication skills • Body language • Patient interview techniques 	6
5	Patient counselling <ul style="list-style-type: none"> • Definition and benefits of patient counselling • Stages of patient counselling - Introduction, counselling content, counselling process, and closing the counselling session • Barriers to effective counseling - Types and strategies to overcome the barriers • Patient counselling points for chronic diseases/disorders - Hypertension, Diabetes, Asthma, Tuberculosis, Chronic obstructive pulmonary disease, and AIDS • Patient Package Inserts - Definition, importance and benefits, Scenarios of PPI use in India and other countries • Patient Information leaflets - Definition and uses 	10
6	Medication Adherence Definition, factors influencing non-adherence, strategies to overcome non-adherence	2
7	Health Screening Services in Community Pharmacy Introduction, scope, and importance of various health screening services - for routine monitoring of patients, early detection, and referral of undiagnosed cases	5
9	Over The Counter (OTC) Medications <ul style="list-style-type: none"> • Definition, need and role of Pharmacists in OTC medication dispensing • OTC medications in India, counseling for OTC products • Self-medication and role of pharmacists in promoting the safe practices during self-medication • Responding to symptoms, minor ailments, and advice for self-care in conditions such as - Pain management, Cough, Cold, Diarrhea, Constipation, Vomiting, Fever, Sore throat, Skin disorders, Oral health (mouth ulcers, dental pain, gum swelling) 	15

10	Community Pharmacy Management <ul style="list-style-type: none"> • Legal requirements to set up a community pharmacy • Site selection requirements • Pharmacy designs and interiors • Vendor selection and ordering • Procurement, inventory control methods, and inventory management • Financial planning and management • Accountancy in community pharmacy – Day book, Cash book • Introduction to pharmacy operation softwares – usefulness and availability • Customer Relation Management (CRM) • Audits in Pharmacies • SOP of Pharmacy Management • Introduction to Digital Health, mHealth and Online pharmacies 	25
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COMMUNITY PHARMACY AND MANAGEMENT – PRACTICAL

Course Code: ER20-22P

75 Hours (3 Hours/week)

Scope: The course is designed to train the students and improve professional skills to provide various pharmaceutical care services in community pharmacy.

Course Objectives: This course will train the students in the following

1. Professional handling and filling prescriptions
2. Patient counselling on diseases and minor ailments
3. Patient counselling on prescription and / or non-prescription medicines
4. Preparation of counselling materials such as patient information leaflets
5. Performing basic health screening tests

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Handle and fill prescriptions in a professional manner
2. Counsel patients on various diseases and minor ailments
3. Counsel patients on prescription and or non-prescription medicines
4. Design and prepare patient information leaflets
5. Perform basic health screening tests

Practicals

Note: The following practicals shall be carried out in the model community pharmacy with appropriate simulated scenarios and materials. Students shall be trained through role plays wherever necessary. The activities of the students shall be assessed / evaluated using a structured objective assessment form.

1. Handling of prescriptions with professional standards, reviewing prescriptions, checking for legal compliance and completeness (minimum 5)
2. Identification of drug-drug interactions in the prescription and follow-up actions (minimum 2)
3. Preparation of dispensing labels and auxiliary labels for the prescribed medications (minimum 5)
4. Providing the following health screening services for monitoring patients / detecting new patients (one experiment for each activity)
 - Blood Pressure Recording, Capillary Blood Glucose Monitoring, Lung function assessment using Peak Flow Meter and incentive spirometer, recording capillary oxygen level using Pulse Oximeter, BMI measurement
5. Providing counselling to simulated patients for the following chronic diseases / disorders including education on the use of devices such as insulin pen, inhalers, spacers, nebulizers, etc. where appropriate (one experiment for each disease)
 - Type 2 Diabetes Mellitus, Primary Hypertension, Asthma, Hyperlipidaemia, Rheumatoid Arthritis
6. Providing counselling to simulated patients for the following minor ailments (any three)
 - Headache, GI disturbances (Nausea, Vomiting, Dyspepsia, diarrhoea, constipation), Worm infestations, Pyrexia, Upper Respiratory Tract infections, Skin infections, Oral and dental disorders.
- 7 Appropriate handling of dummy dosage forms with correct administration techniques - oral liquids with measuring cup/cap/dropper, Eye Drops, Inhalers, Nasal drops, Insulin pen, nebulizers, different types of tablets, patches, enemas, suppositories
- 8 Use of Community Pharmacy Software and digital health tools

Assignments

The students shall be asked to submit written assignments on the following topics (One assignment per student per sessional period. i.e., a minimum of THREE assignments per student)

1. SOPs for various activities in Community Pharmacy (as discussed in Theory and Practical)

2. List out the various abbreviations, short forms used in prescriptions and their interpretation
3. Patient Information Leaflet for a given chronic disease / disorder
4. Patient Information Leaflet for prescription / non-prescription medicines
5. Preparation of window / shelf display materials for the model community pharmacy
6. Overview of Software available for retail pharmacy management including billing, inventory, etc.
7. Dosage / Medication Reminder Aids
8. Overview on the operations and marketing strategies of various online pharmacies
9. Overview on the common fixed dose combinations
10. Overview on the medications requiring special storage conditions
11. Role of Community Pharmacists in preventing Antimicrobial Resistance
12. Jan Aushadhi and other Generic Medicine initiatives in India
13. Global Overview of Online Pharmacies
14. Community Pharmacy Practice Standards: Global Vs. Indian Scenario
15. Overview of pharmacy associations in India

Field Visit

The students shall be taken in groups to visit community pharmacies and medicine distributors to understand and witness the professional activities of the community pharmacists, and supply chain logistics. Individual reports from each student on their learning experience from the field visit shall be submitted.

BIOCHEMISTRY & CLINICAL PATHOLOGY – THEORY

Course Code: ER20-23T

75 Hours (3 Hours/week)

Scope: This course is designed to impart basic knowledge on the study of structure and functions of biomolecules and the chemical processes associated with living cells in normal and abnormal states. The course also emphasizes on the clinical pathology of blood and urine.

Course Objectives: This course will discuss the following at the fundamental level

1. Structure and functions of biomolecules
2. Catalytic activity, diagnostic and therapeutic importance of enzymes
3. Metabolic pathways of biomolecules in health and illness (metabolic disorders)
4. Biochemical principles of organ function tests and their clinical significance
5. Qualitative and quantitative determination of biomolecules / metabolites in the biological sample
6. Clinical pathology of blood and urine

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Describe the functions of biomolecules
2. Discuss the various functions of enzymes in the human system
3. Explain the metabolic pathways of biomolecules in both physiological and pathological conditions
4. Describe the principles of organ function tests and their clinical significances
5. Determine the biomolecules / metabolites in the given biological samples, both qualitatively and quantitatively
6. Describe the clinical pathology of blood and urine

Chapter	Topic	Hours
1	Introduction to biochemistry: Scope of biochemistry in pharmacy; Cell and its biochemical organization.	2
2	Carbohydrates <ul style="list-style-type: none">• Definition, classification with examples, chemical properties• Monosaccharides - Structure of glucose, fructose, and galactose• Disaccharides - structure of maltose, lactose, and sucrose• Polysaccharides - chemical nature of starch and glycogen• Qualitative tests and biological role of carbohydrates	5

3	Proteins <ul style="list-style-type: none"> • Definition, classification of proteins based on composition and solubility with examples • Definition, classification of amino acids based on chemical nature and nutritional requirements with examples • Structure of proteins (four levels of organization of protein structure) • Qualitative tests and biological role of proteins and amino acids • Diseases related to malnutrition of proteins. 	5
4	Lipids <ul style="list-style-type: none"> • Definition, classification with examples • Structure and properties of triglycerides (oils and fats) • Fatty acid classification - Based on chemical and nutritional requirements with examples • Structure and functions of cholesterol in the body • Lipoproteins - types, composition and functions in the body • Qualitative tests and functions of lipids 	5
5	Nucleic acids <ul style="list-style-type: none"> • Definition, purine and pyrimidine bases • Components of nucleosides and nucleotides with examples • Structure of DNA (Watson and Crick model), RNA and their functions 	4
6	Enzymes <ul style="list-style-type: none"> • Definition, properties and IUB and MB classification • Factors affecting enzyme activity • Mechanism of action of enzymes, Enzyme inhibitors • Therapeutic and pharmaceutical importance of enzymes 	5
7	Vitamins <ul style="list-style-type: none"> • Definition and classification with examples • Sources, chemical nature, functions, coenzyme form, recommended dietary requirements, deficiency diseases of fat-and water-soluble vitamins 	6
8	Metabolism (Study of cycle/pathways without chemical structures) <ul style="list-style-type: none"> • Metabolism of Carbohydrates: Glycolysis, TCA cycle and glycogen metabolism, regulation of blood glucose 	20

	<p>level. Diseases related to abnormal metabolism of Carbohydrates</p> <ul style="list-style-type: none"> • Metabolism of lipids: Lipolysis, β-oxidation of Fatty acid (Palmitic acid) ketogenesis and ketolysis. Diseases related to abnormal metabolism of lipids such as Ketoacidosis, Fatty liver, Hypercholesterolemia • Metabolism of Amino acids (Proteins): General reactions of amino acids and its significance—Transamination, deamination, Urea cycle and decarboxylation. Diseases related to abnormal metabolism of amino acids, Disorders of ammonia metabolism, phenylketonuria, alkaptonuria and Jaundice. • Biological oxidation: Electron transport chain and Oxidative phosphorylation 	
9	Minerals: Types, Functions, Deficiency diseases, recommended dietary requirements	05
10	<p>Water and Electrolytes</p> <ul style="list-style-type: none"> • Distribution, functions of water in the body • Water turnover and balance • Electrolyte composition of the body fluids, Dietary intake of electrolyte and Electrolyte balance • Dehydration, causes of dehydration and oral rehydration therapy 	05
11	Introduction to Biotechnology	01
12	<p>Organ function tests</p> <ul style="list-style-type: none"> • Functions of kidney and routinely performed tests to assess the functions of kidney and their clinical significances • Functions of liver and routinely performed tests to assess the functions of liver and their clinical significances • Lipid profile tests and its clinical significances 	06
13	<p>Introduction to Pathology of Blood and Urine</p> <ul style="list-style-type: none"> • Lymphocytes and Platelets, their role in health and disease • Erythrocytes - Abnormal cells and their significance • Normal and Abnormal constituents of Urine and their significance 	06

BIOCHEMISTRY & CLINICAL PATHOLOGY – PRACTICAL

Course Code: ER20-23P

50 Hours (2 Hours/week)

Scope: This course is designed to train the students in the qualitative testing of various biomolecules and testing of biological samples for determination of normal and abnormal constituents

Course Objectives: This course will train and provide hands-on experiences on the following

1. Qualitative determination of biomolecules / metabolites in simulated biological samples
2. Determination of normal and abnormal constituents of simulated blood and urine samples

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Qualitatively determine the biomolecules / metabolites in the given biological samples
2. Determine the normal and abnormal constituents in blood and urine samples and interpret the results of such testing

Practicals

1. Qualitative analysis of carbohydrates (4 experiments)
2. Qualitative analysis of Proteins and amino acids (4 experiments)
3. Qualitative analysis of lipids (2 experiments)
4. Qualitative analysis of urine for normal and abnormal constituents (4 experiments)
5. Determination of constituents of urine (glucose, creatinine, chlorides) (2 experiments)
6. Determination of constituents of blood/serum (simulated) (Creatine, glucose, cholesterol, Calcium, Urea, SGOT/SGPT) (5 experiments)
7. Study the hydrolysis of starch from acid and salivary amylase enzyme (1 experiment)

Assignments

The students shall be asked to submit written assignments on Various Pathology Lab Reports (One assignment per student per sessional period. i.e., a minimum of THREE assignments per student)

PHARMACOTHERAPEUTICS - THEORY

Course Code: ER20-24T

75 Hours (3 Hours/week)

Scope: This course is designed to impart basic knowledge on etiopathogenesis of common diseases and their management along with quality use of medicines.

Course Objectives: This course will discuss about

1. Etiopathogenesis of selected common diseases and evidence-based medicine therapy
2. Importance of individualized therapeutic plans based on diagnosis
3. Basic methods for assessing the clinical outcomes of drug therapy

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Help assessing the subjective and objective parameters of patients in common disease conditions
2. Assist other healthcare providers to analyse drug related problems and provide therapeutic interventions
3. Participate in planning the rational medicine therapy for common diseases
4. Design and deliver discharge counselling for patients

Chapter	Topic	Hours
1	Pharmacotherapeutics – Introduction, scope, and objectives. Rational use of Medicines, Evidence Based Medicine, Essential Medicines List, Standard Treatment Guidelines (STGs)	8
2	Definition, etiopathogenesis, clinical manifestations, non-pharmacological and pharmacological management of the diseases associated with	
	(a) Cardiovascular System <ul style="list-style-type: none">• Hypertension• Angina and Myocardial infarction• Hyperlipidaemia• Congestive Heart Failure	8
	(b) Respiratory System <ul style="list-style-type: none">• Asthma• COPD	4
	(c) Endocrine System <ul style="list-style-type: none">• Diabetes• Thyroid disorders - Hypo and Hyperthyroidism	5
	(d) Central Nervous System <ul style="list-style-type: none">• Epilepsy	8

	<ul style="list-style-type: none"> • Parkinson's disease • Alzheimer's disease • Stroke • Migraine 	
	(e) Gastro Intestinal Disorders <ul style="list-style-type: none"> • Gastro oesophageal reflux disease • Peptic Ulcer Disease • Alcoholic liver disease • Inflammatory Bowel Diseases (Crohn's Disease and Ulcerative Colitis) 	8
	(f) Haematological disorders <ul style="list-style-type: none"> • Iron deficiency anaemia • Megaloblastic anaemia 	4
	(g) Infectious diseases <ul style="list-style-type: none"> • Tuberculosis • Pneumonia • Urinary tract infections • Hepatitis • Gonorrhoea and Syphilis • Malaria • HIV and Opportunistic infections • Viral Infections (SARS, CoV2) 	12
	(h) Musculoskeletal disorders <ul style="list-style-type: none"> • Rheumatoid arthritis • Osteoarthritis 	3
	(i) Dermatology <ul style="list-style-type: none"> • Psoriasis • Scabies • Eczema 	3
	(j) Psychiatric Disorders <ul style="list-style-type: none"> • Depression • Anxiety • Psychosis 	4
	(k) Ophthalmology <ul style="list-style-type: none"> • Conjunctivitis (bacterial and viral) • Glaucoma 	2
	(l) Anti-microbial Resistance	2
	(m) Women's Health <ul style="list-style-type: none"> • Polycystic Ovary Syndrome • Dysmenorrhea • Premenstrual Syndrome 	4

PHARMACOTHERAPEUTICS – PRACTICAL

Course Code: ER20-24P

25 Hours (1 Hour/week)

Scope: This course is designed to train the students in the basic skills required to support the pharmaceutical care services for selected common disease conditions.

Course Objectives: This course will train the students on

1. How to prepare a SOAP (Subjective, Objective, Assessment and Plan) note for clinical cases of selected common diseases
2. Patient counselling techniques/methods for common disease conditions

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Write SOAP (Subjective, Objective, Assessment and Plan) notes for the given clinical cases of selected common diseases
2. Counsel the patients about the disease conditions, uses of drugs, methods of handling and administration of drugs, life-style modifications, and monitoring parameters.

Practicals

I. Preparation and discussion of SOAP (Subjective, Objective, Assessment and Plan) notes for at least SIX clinical cases (real / hypothetical) of the following disease conditions.

1. Hypertension
2. Angina Pectoris
3. Myocardial Infarction
4. Hyperlipidaemia
5. Rheumatoid arthritis
6. Asthma
7. COPD
8. Diabetes
9. Epilepsy
10. Stroke
11. Depression
12. Tuberculosis
13. Anaemia (any one type as covered in theory)
14. Viral infection (any one type as covered in theory)
15. Dermatological conditions (any one condition as covered in theory)

- II. Patient counselling exercises using role plays based on the real / hypothetical clinical case scenarios. The students are expected to provide counselling on disease condition, medications, life-style modifications, monitoring parameters, etc. and the same shall be documented. (Minimum 5 cases)
- III. Simulated cases to enable dose calculation of selected drugs in paediatrics, and geriatrics under various pathological conditions. (Minimum 4 cases)

HOSPITAL AND CLINICAL PHARMACY – THEORY

Course Code: ER20-25T

75 Hours (3 Hours/week)

Scope: This course is designed to impart fundamental knowledge and professional skills required for facilitating various hospital and clinical pharmacy services.

Course Objectives: This course will discuss and train the students in the following

1. Hospital and Hospital Pharmacy organization and set-ups
2. Basics of hospital pharmacy services including the procurement, supply chain, storage of medicines and medical supplies
3. Basics of clinical pharmacy including introduction to comprehensive pharmaceutical care services
4. Basic interpretations of common laboratory results used in clinical diagnosis towards optimizing the drug therapy

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Explain about the basic concepts of hospital pharmacy administration
2. Manage the supply chain and distribution of medicines within the hospital settings
3. Assist the other healthcare providers in monitoring drug therapy and address drug related problems
4. Interpret common lab investigation reports for optimizing drug therapy

S. No.	Topic	Hours
1	Hospital Pharmacy <ul style="list-style-type: none">• Definition, scope, national and international scenario• Organisational structure• Professional responsibilities, Qualification and experience requirements, job specifications, work-load requirements and inter professional relationships• Good Pharmacy Practice (GPP) in hospital• Hospital Pharmacy Standards (FIP Basel Statements, AHSP)• Introduction to NAQS guidelines and NABH Accreditation and Role of Pharmacists	6
2	Different Committees in the Hospital <ul style="list-style-type: none">• Pharmacy and Therapeutics Committee - Objectives, Composition, and functions• Hospital Formulary - Definition, procedure for development and use of hospital formulary	4

	<ul style="list-style-type: none"> • Infection Control Committee – Role of Pharmacist in preventing Antimicrobial Resistance 	
4	Supply Chain and Inventory Control <ul style="list-style-type: none"> • Preparation of Drug lists - High Risk drugs, Emergency drugs, Schedule H1 drugs, NDPS drugs, reserved antibiotics • Procedures of Drug Purchases – Drug selection, short term, long term, and tender/e-tender process, quotations, etc. • Inventory control techniques: Economic Order Quantity, Reorder Quantity Level, Inventory Turnover etc. • Inventory Management of Central Drug Store – Storage conditions, Methods of storage, Distribution, Maintaining Cold Chain, Devices used for cold storage (Refrigerator, ILR, Walk-in-Cold rooms) • FEFO, FIFO methods • Expiry drug removal and handling, and disposal. Disposal of Narcotics, cytotoxic drugs • Documentation - purchase and inventory 	14
5	Drug distribution <ul style="list-style-type: none"> • Drug distribution (in- patients and out - patients) – Definition, advantages and disadvantages of individual prescription order method, Floor Stock Method, Unit Dose Drug Distribution Method, Drug Basket Method. • Distribution of drugs to ICCU/ICU/NICU/Emergency wards. • Automated drug dispensing systems and devices • Distribution of Narcotic and Psychotropic substances and their storage 	7
6	Compounding in Hospitals. Bulk compounding, IV admixture services and incompatibilities, Total parenteral nutrition	4
7	Radio Pharmaceuticals - Storage, dispensing and disposal of radiopharmaceuticals	2
8	Application of computers in Hospital Pharmacy Practice, Electronic health records, Softwares used in hospital pharmacy	2
9	Clinical Pharmacy: Definition, scope, and development - in India and other countries Technical definitions, common terminologies used in clinical settings and their significance such as Paediatrics, Geriatric, Anti-natal Care, Post-natal Care, etc.	12

	<p>Daily activities of clinical pharmacists: Definition, goal, and procedure of</p> <ul style="list-style-type: none"> • Ward round participation • Treatment Chart Review • Adverse drug reaction monitoring • Drug information and poisons information • Medication history • Patient counselling • Interprofessional collaboration <p>Pharmaceutical care: Definition, classification of drug related problems. Principles and procedure to provide pharmaceutical care</p> <p>Medication Therapy Management, Home Medication Review</p>	
10	<p>Clinical laboratory tests used in the evaluation of disease states - significance and interpretation of test results</p> <ul style="list-style-type: none"> • Haematological, Liver function, Renal function, thyroid function tests • Tests associated with cardiac disorders • Fluid and electrolyte balance • Pulmonary Function Tests 	10
11	<p>Poisoning: Types of poisoning: Clinical manifestations and Antidotes</p> <p>Drugs and Poison Information Centre and their services – Definition, Requirements, Information resources with examples, and their advantages and disadvantages</p>	6
12	<p>Pharmacovigilance</p> <ul style="list-style-type: none"> • Definition, aim and scope • Overview of Pharmacovigilance 	2
13	<p>Medication errors: Definition, types, consequences, and strategies to minimize medication errors, LASA drugs and Tallman lettering as per ISMP</p> <p>Drug Interactions: Definition, types, clinical significance of drug interactions</p>	6

HOSPITAL AND CLINICAL PHARMACY – PRACTICAL

Course Code: ER20-25P

25 Hours (1 Hour / Week)

Scope: This course is designed to train the students to assist other healthcare providers in the basic services of hospital and clinical pharmacy.

Course Objectives: This course will train the students with hands-on experiences, simulated clinical case studies in the following:

1. Methods to systematically approach and respond to drug information queries
2. How to interpret common laboratory reports to understand the need for optimizing dosage regimens
3. How to report suspected adverse drug reactions to the concerned authorities
4. Uses and methods of handling various medical/surgical aids and devices
5. How to interpret drug-drug interactions in the treatment of common diseases.

Course Outcomes: Upon completion of the course, the students will be able to

1. Professionally handle and answer the drug information queries
2. Interpret the common laboratory reports
3. Report suspected adverse drug reactions using standard procedures
4. Understand the uses and methods of handling various medical/surgical aids and devices
5. Interpret and report the drug-drug interactions in common diseases for optimizing the drug therapy

Note: Few of the experiments of Hospital and Clinical Pharmacy practical course listed here require adequate numbers of desktop computers with internet connectivity, adequate drug information resources including reference books, different types of surgical dressings and other medical devices and accessories. Various charts, models, exhibits pertaining to the experiments shall also be displayed in the laboratory.

Practicals

1. Systematic approach to drug information queries using primary / secondary / tertiary resources of information (2 cases)
2. Interpretation of laboratory reports to optimize the drug therapy in a given clinical case (2 cases)
3. Filling up IPC's ADR Reporting Form and perform causality assessments using various scales (2 cases)
4. Demonstration / simulated / hands-on experience on the identification, types, use / application /administration of
 - Orthopaedic and Surgical Aids such as knee cap, LS belts, abdominal belt, walker, walking sticks, etc.

- Different types of bandages such as sterile gauze, cotton, crepe bandages, etc.
 - Needles, syringes, catheters, IV set, urine bag, RYLE's tube, urine pots, colostomy bags, oxygen masks, etc.
5. Case studies on drug-drug interactions (any 2 cases)
 6. Wound dressing (simulated cases and role play –minimum 2 cases)
 7. Vaccination and injection techniques (IV, IM, SC) using mannequins (5 activities)
 8. Use of Hospital Pharmacy Software and various digital health tools

Assignments

The students shall be asked to submit written assignments on the following topics (One assignment per student per sessional period. i.e., a minimum of THREE assignments per student)

1. Typical profile of a drug to be included in the hospital formulary
2. Brief layout and various services of the Central Sterile Supplies Department (CSSD)
3. Various types of sterilizers and sterilization techniques used in hospitals
4. Fumigation and pesticide control in hospitals
5. Role of Pharmacists in Transition of Care: Discharge cards, post hospitalization care, medicine reconciliation activities in developed countries
6. Total parenteral nutrition and IV admixtures and their compatibility issues
7. Concept of electronic health records
8. Invasive and Non-invasive diagnostic tests - HRCT, MRI, Sonography, 2D ECHO, X-rays, Mammography, ECG, EMG, EEG
9. Home Diagnostic Kits - Pregnancy Test, COVID testing etc
10. Measures to be taken in hospitals to minimize Antimicrobial Resistance
11. Role and responsibilities of a pharmacist in public hospital in rural parts of the country
12. Safe waste disposal of hospital waste

Field Visit

The students shall be taken in groups to visit a Government / private healthcare facility to understand and witness the various hospital and clinical pharmacy services provided. Individual reports from each student on their learning experience from the field visit shall be submitted.

PHARMACY LAW AND ETHICS – THEORY

Course Code: ER20-26T

75 Hours (3 Hours/week)

Scope: This course is designed to impart basic knowledge on several important legislations related to the profession of pharmacy in India

Course Objectives: This course will discuss the following

1. General perspectives, history, evolution of pharmacy law in India
2. Act and Rules regulating the profession and practice of pharmacy in India
3. Important code of ethical guidelines pertaining to various practice standards
4. Brief introduction to the patent laws and their applications in pharmacy

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Describe the history and evolution of pharmacy law in India
2. Interpret the act and rules regulating the profession and practice of pharmacy in India
3. Discuss the various codes of ethics related to practice standards in pharmacy
4. Interpret the fundamentals of patent laws from the perspectives of pharmacy

Chapter	Topics	Hours
1	General Principles of Law, History and various Acts related to Drugs and Pharmacy profession	2
2	Pharmacy Act-1948 and Rules: Objectives, Definitions, Pharmacy Council of India; its constitution and functions, Education Regulations, State and Joint state pharmacy councils, Registration of Pharmacists, Offences and Penalties. Pharmacy Practice Regulations 2015	5
3	Drugs and Cosmetics Act 1940 and Rules 1945 and New Amendments Objectives, Definitions, Legal definitions of schedules to the Act and Rules Import of drugs – Classes of drugs and cosmetics prohibited from import, Import under license or permit.	23

	<p>Manufacture of drugs – Prohibition of manufacture and sale of certain drugs, Conditions for grant of license and conditions of license for manufacture of drugs, Manufacture of drugs for test, examination and analysis, manufacture of new drug, loan license and repacking license.</p> <p>Study of schedule C and C1, G, H, H1, K, P, M, N, and X.</p> <p>Sale of Drugs – Wholesale, Retail sale and Restricted license, Records to be kept in a pharmacy Drugs Prohibited for manufacture and sale in India</p> <p>Administration of the Act and Rules – Drugs Technical Advisory Board, Central Drugs Laboratory, Drugs Consultative Committee, Government analysts, licensing authorities, controlling authorities, Drug Inspectors.</p>	
4	<p>Narcotic Drugs and Psychotropic Substances Act 1985 and Rules Objectives, Definitions, Authorities and Officers, Prohibition, Control and Regulation, Offences and Penalties.</p>	2
5	<p>Drugs and Magic Remedies (Objectionable Advertisements) Act 1954 Objectives, Definitions, Prohibition of certain advertisements, Classes of Exempted advertisements, Offences and Penalties.</p>	2
6	<p>Prevention of Cruelty to Animals Act-1960: Objectives, Definitions, CPCSEA - brief overview, Institutional Animal Ethics Committee, Breeding and Stocking of Animals, Performance of Experiments, Transfer and Acquisition of animals for experiment, Records, Power to suspend or revoke registration, Offences and Penalties.</p>	2
7	<p>Poisons Act-1919: Introduction, objective, definition, possession, possession for sales and sale of any poison, import of poisons</p>	2
8	<p>FSSAI (Food Safety and Standards Authority of India) Act and Rules: brief overview and aspects related to manufacture, storage, sale, and labelling of Food Supplements</p>	2

9	National Pharmaceutical Pricing Authority: Drugs Price Control Order (DPCO) - 2013. Objectives, Definitions, Sale prices of bulk drugs, Retail price of formulations, Retail price and ceiling price of scheduled formulations, Pharmaceutical Policy 2002, National List of Essential Medicines (NLEM)	5
10	Code of Pharmaceutical Ethics: Definition, ethical principles, ethical problem solving, registration, code of ethics for Pharmacist in relation to his job, trade, medical profession and his profession, Pharmacist's oath.	5
11	Medical Termination of Pregnancy Act and Rules – basic understanding, salient features, and Amendments	2
12	Role of all the government pharma regulator bodies – Central Drugs Standards Control Organization (CDSCO), Indian Pharmacopoeia Commission (IPC)	1
13	Good Regulatory practices (documentation, licenses, renewals, e-governance) in Community Pharmacy, Hospital pharmacy, Pharma Manufacturing, Wholesale business, inspections, import, export of drugs and medical devices	3
14	Introduction to BCS system of classification, Basic concepts of Clinical Trials, ANDA, NDA, New Drug development, New Drugs and Clinical Trials Rules, 2019. Brand v/s Generic, Trade name concept, Introduction to Patent Law and Intellectual Property Rights, Emergency Use Authorization	7
15	Blood bank – basic requirements and functions	2
16	Clinical Establishment Act and Rules – Aspects related to Pharmacy	2
17	Biomedical Waste Management Rules 2016 – Basic aspects, and aspects related to pharma manufacture to disposal of pharma / medical waste at homes, pharmacies, and hospitals	2
18	Bioethics - Basic concepts, history and principles. Brief overview of ICMR's National Ethical Guidelines for Biomedical and Health Research involving human participants	2
19	Introduction to the Consumer Protection Act	1
20	Introduction to the Disaster Management Act	1
21	Medical Devices – Categorization, basic aspects related to manufacture and sale	2

Assignments

The students shall be asked to submit written assignments on the following topics (One assignment per student per sessional period. i.e., a minimum of THREE assignments per student)

1. Requirements for Ayurvedic, Homeopathic manufacturing, sale, and licensing requirements
2. Layout and contents of official websites of various agencies regulating the profession of pharmacy in India: e.g., CDSCO, SUGAM portal, PCI, etc.
3. Licenses required, application processes (online/offline), drug regulatory office website of the respective state
4. Case studies – actions taken on violation of any act / rule related to pharmacy
5. Schedule H1 drugs and its implementation in India
6. Counterfeit / Spurious medicines
7. Drug Testing Labs in India
8. Overview of Pharma marketing practices
9. Generic Medicines

9. Appendices

No	Appendix Document
1.	A typical format for the assessment of an Assignment
2.	A typical format for the assessment of a Field Visit Report
3.	List of instruments and equipment required for the conduct of D.Pharm program as per ER-2020

Appendix – 1

A typical format for the assessment of an Assignment

Name of the College:

Name of the Student:	
Academic Year of the Student:	
Name of the Subject:	
Title of the Assignment:	
Date on which the Assignment was given:	
Date on which the Assignment was submitted:	
Name & Designation of the Evaluator:	
Signature of the Evaluator with Date:	

Directions: For evaluation, enter rating of the student utilizing the following scale:

5 – Excellent; 4 - Very Good; 3 – Good; 2 – Satisfactory; 1 - Poor

Assessment Criteria	Score	Comments if any
a. Relevance with the content		
b. Use of resource material		
c. Organization & mechanical accuracy		
d. Cohesion & coherence		
e. Language proficiency & Timely submission		
Total Score		

Signature of the Student with Date:

Note: Subject teacher should try to cover all assignments mentioned in the list for each practical subject by assigning the topics to the students. Students should be encouraged to submit an assignment (in a format decided by the Institute) and encouraged to present assignments (at least any one assignment per subject) in the class.

Appendix – 2

A typical format for the assessment of a Field Visit Report

Name of the College:

Name of the Student:	
Academic Year of the Student:	
Name of the Subject:	
Name & full address of the organization visited:	
Date and Duration of Visit:	
Name & Designation of the Evaluator:	
Signature of the Evaluator with Date:	

Objectives set for the field visit: (give 2 – 4 objectives one by one)
Prior preparation of the student for the field visit: (minimum 100 words)
Describe the general experiences during the field visit: (minimum 100 words)
Learning points: Describe what theoretical concept that is correlated during the field visit: (minimum 300 words)

Appendix – 3

List of Instruments and Equipment required for the Conduct of D.Pharm program as per ER-2020

As per ER 2020 regulation;

At least four laboratories specified below should be provided for:

1. Pharmaceutics Lab.
2. Pharm. Chemistry Lab.
3. Physiology, Pharmacology and Pharmacognosy Lab.
4. Biochemistry, Clinical Pathology, Hospital and Clinical Pharmacy Lab.

The institutions shall provide “Model Pharmacy” as per following details

Model Pharmacy	No.	Area
<u>Essential:</u> Running Model Community Pharmacy	01	80 Sq. Mts. (Including 10 Sq. mt. for Drug Information Centre & 10 Sq. mt. for Patient Counselling)
<u>Desirable:</u> Drug Model Store		

NOTE: Wherever animal experimentations are prescribed in the curriculum, the required knowledge and skill should be imparted by using computer assisted modules. Animal hold area shall be as per the Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA) guidelines.

Practical of Social Pharmacy, Pharmacotherapeutics can be conducted in any one of the laboratories by making necessary provisions.

Department wise List of Minimum Equipment required for D.Pharm
(For a practical batch of 20 students)

1. Physiology, Pharmacology and Pharmacognosy Lab.

S. No.	Name	Minimum required Nos. for DPharm 60 intake
1	Microscopes	20
2	Haemocytometer with Micropipettes	20
3	Sahli's haemoglobinometers	20
4	Sphygmomanometers	5
5	Stethoscopes	10
6	Human Permanent Slides for various tissues	One pair of each tissue Organs and endocrine glands
7	Models for various organs	One model of each organ system
8	Specimen for various organs and systems	One model for each organ system
9	Human Skeleton and bones	One set of skeleton and one spare bone
10	Different Contraceptive Devices and Models	One set of each device
11	Digital Balance (10 mg Sensitivity)	1
12	Computer with LCD	1
13	Licensed Software packages for Physiological & Pharmacological experiment	1
14	IR Thermometer	2
15	Refrigerator	1
16	First aid equipment	Adequate number
17	Stop watch	20
18	Dummy Inhalers and Nebulizer	1
19	Pharmacotherapeutic charts for various diseases & disorders	Adequate number
20	Surgical devices and Sutures	Adequate number
21	Digital BP Instrument	5
22	Mercury Thermometer	10
23	Digital Thermometer	10
24	Pulse Oximeter	5
25	ESR Apparatus (Westergren and Wintrobe)	10
26	Peak Flow meter	10
27	Stadiometer	2
28	Adult Weighing Scale (150 kg)	5
29	Glucometer	10
30	Projection microscope	1
31	Permanent slide set of plants and charts for Pharmacognosy Lab	Adequate number
32	Drug information resources	Adequate number
33	Various types of PPE Kits,	Adequate number

34	Charts /displays/ AVs on tobacco control, glycemic index of foods, nutrition, reproductive health	Adequate number
35	Menstrual hygiene products	Adequate number
36	Display for various disinfectants, mosquito repellents etc	Adequate number
37	Water Testing Kit	Adequate number
38	Permanent slide of different microbes	Adequate number

NOTE: Adequate number of glassware commonly used in the laboratory should be provided in each laboratory and department

2. Pharmaceutical Chemistry/ Biochemistry, Clinical Pathology

S. No.	Name	Minimum required Nos. for DPharm 60 intake
1	Hot plates	5
2	Hot Air Oven	1
3	Refrigerator	1
4	Analytical Balances for demonstration	1
5	Digital balance 10mg sensitivity	5
6	Magnetic Stirrers with Thermostat	10
7	Vacuum Pump	1
8	Digital pH meter	1
9	Wall Mounted Water Distillation Unit	2
10	Nessler's Cylinders	40
11	Digital Melting Point Apparatus	2
12	Thieles Tube	20
13	Digital Colorimeter	2
14	Thermostatic Water Bath	1

NOTE: Adequate number of glassware commonly used in the laboratory should be provided in each laboratory and department

3. Pharmaceutics

S. No.	Name	Minimum required Nos. for DPharm 60 intake
1	Digital balance (10mg)	5
2	Microscopes	10
3	Autoclave	1
4	Vacuum Pump	1
5	Standard sieves, sieve no. 8, 10, 12, 22, 24, 44, 54, 60, 80, 85, 100, 120	10 sets
6	Tablet dissolution test apparatus IP (Digital single/double Unit)	1
7	Magnetic stirrer, 500ml and 1 liter capacity with speed control	5

8	Digital pH meter	1
9	Capsule Counter	2
10	Hot Plate	2
11	Distillation Unit	1
12	Tablet counter – small size	2
13	Hot air oven	1
14	Electric water bath unit	2
15	Stalagmometer	5
16	Desiccator	5
17	Buchner Funnels (Medium)	10
18	Filtration assembly with Vacuum Pump	1
19	Andreasen's Pipette	5
20	Ointment slab	20
21	Ointment spatula	20
22	Pestle and mortar porcelain	20
23	Refrigerator	1
24	Micrometre slide Eyepiece	5
25	Micrometre slide Stage	5
26	Viscometer Ostwald/Brookfield	1
27	Stop watch	1
28	Sintered glass filter with vacuum	4

NOTE: Aseptic cabinet or area should be provided as per Appendix A of ER 2020
Adequate number of glassware commonly used in the laboratory should be provided in each laboratory and department

Machine Room

S. No.	Name	Minimum required Nos. for D.Pharm 60 intake
1	Capsule filling machine	1
2	Automated Single Station Tablet punching machine	1
3	Tablet disintegration test apparatus IP (Digital Single/Double unit)	1
4	Monsanto's hardness tester	2
5	Pfizer type hardness tester	2
6	Friability test apparatus (Digital Single/Double unit)	1
7	Sieve shaker with sieve set	1
8	Ointment filling machine	1
9	All-purpose equipment with all accessories	1
10	Bottle washing Machine	1
11	Bottle Sealing Machine	1
12	Liquid Filling Machine	1
13	Ampoule washing machine	1
14	Ampoule filling and sealing machine (Jet Burner)	1

15	Clarity test apparatus	1
16	Collapsible tube – Filling and Sealing	1
17	Liquid Mixer	1

NOTE: Adequate number of glassware commonly used in the laboratory should be provided in each laboratory and department

4. Hospital and Clinical Pharmacy Lab

S. No.	Name	Minimum required Nos for D.Pharm 60 intake
1	Orthopaedical & Surgical Aids such as knee cap, LS belts, abdominal belt, walker, walking sticks, etc	Adequate Number
2	Different Types of bandages such as sterile gauze, cotton, crepe bandages, roll bandage etc	Adequate Number
3	Mannequins for CPR-1 (with indication Signals)	2
4	Mannequins for injection IV Arm	2
5	Variety of Needles	20
6	Variety of Syringes	20
7	Variety of catheters	5
8	IV set	20
9	Urine Bag	2
10	RYLE's tube	2
11	Urine pots	2
12	Colostomy bags	2
13	Oxygen masks	10
14	Inventory Software for Retail Pharmacy	1

NOTE: Adequate number of glassware commonly used in the laboratory should be provided in each laboratory and department

5. Model Pharmacy

S. No.	Name	Minimum required Nos. for D.Pharm 60 intake (
1	<ul style="list-style-type: none"> • Empty cartons of variety medicines (across variety dosage forms) • Various name plates indicating different parts of Pharmacy, • Proper arrangement of medicines, shelves, racks, drawers • Box/area for expiry medicines, • Display windows, shelves • Computer • Refrigerator • Designated patient counselling area, • Patient Information Leaflets/Cards • Patient waiting area, • Drug Information books • Health information display, • Various devices for screening services (B.P. monitor, glucometer etc) • Height and body weight chart • Dummy devices (eg. Inhalers) • Display of pharmacist registration, license and other licenses • Display of name of owner • Inspection book, • Lock and key arrangement for Schedule X and NDPS medicines, • Bill book (dummy) , Computer stationary for bill printing 	Adequate
2	Computers: hospital and community pharmacy management software	1

APPENDIX 4

Subject wise list of Recommended Books (Latest Edition)

Pharmaceutics

1. History of Pharmacy in India by Dr. Harikishan Singh
2. Indian Pharmacopoeia, Govt. of India Publication
3. A Text book of Pharmaceuticals Formulation by B.M. Mithal, Vallabh Prakashan.
4. Bentleys' Text book of Pharmaceutics, Editor E.A. Rawlins, Elsevier Int.,
5. The Theory and Practice of Industrial Pharmacy. Leon Lachman, Herbert Lieberman and Joseph Kanig, Editors, Lea and Febiger, Philadelphia. Varghese Publishing House
6. Responsible Use of Medicines: A Layman's Handbook, [www.ipapharma.org / publications](http://www.ipapharma.org/publications)

Pharmaceutical Chemistry

1. Medicinal & Pharmaceutical chemistry by Harikishan Singh and VK Kapoor
2. Wilson and Griswold's Text book of Organic Medicinal and pharmaceutical Chemistry
3. Practical Organic Chemistry by Mann and Saunders.
4. Practical Pharmaceutical Chemistry, Volume- I & II by Beckett and J. B. Stenlake
5. Indian Pharmacopoeia
6. Vogel's text book of Practical Organic Chemistry

Pharmacognosy

1. Text book of Pharmacognosy by C. K. Kokate, S. B. Gokhale, A.P. Purohit, Nirali Prakashan
2. Text book of Pharmacognosy by C.S. Shah and J. S. Qadry, CBS Publishers & Distributors Pvt. Ltd.
3. Text Book of Pharmacognosy by T. E. Wallis. CBS Publishers & Distributors Pvt. Ltd.
4. Study of crude drugs by M. A. Iyengar, Manipal Press Ltd, Manipal
5. Powder crude drugs by M. A. Iyengar, Manipal Press Ltd, Manipal
6. Anatomy of crude drugs by M. A. Iyengar, Manipal Press Ltd, Manipal
7. Augmented Text Book of Homeopathic Pharmacy by Dr. D D Banerjee, B Jain Publishers (P) Ltd

Human Anatomy and Physiology

1. Human Physiology by C. C. Chatterjee
2. Human Anatomy and Physiology by S. Chaudhary and A. Chaudhary
3. Derasari and Gandhi's elements of Human Anatomy, Physiology and Health Education
4. S.R. Kale and R.R. Kale, Textbook of Practical Anatomy and Physiology
5. Ross and Wilson Anatomy and Physiology in Health and illness
6. Human Anatomy and Physiology by Tortora Gerard J
7. Fundamentals of Medical Physiology by K. Sambulingam and P Sambulingam
8. Ranade V.G. Text Book of Practical Physiology
9. Goyal R.K., Natvar M.P. and Shah S.A., Practical Anatomy, Physiology and Biochemistry, Experimental Physiology

Social Pharmacy

1. Social Pharmacy – Innovation and development. Geoff Harding, Sarah Nettleton and Kevin Taylor. The Pharmaceutical Press.
2. Text Book of Community Pharmacy Practice. RPSGB Publication
3. Community Pharmacy Handbook- Jonathan Waterfield
4. S Khurana, P Suresh and R Kalsi. Health Education & Community Pharmacy. S Vikas & Co
5. Social Pharmacy: Tayler, Geoffrey. Pharmaceutical Press. London.
6. Textbook by Dandiya PC, Zafer ZYK, Zafer A. Health education & Community Pharmacy. Vallabh Prakashan.
7. Websites of Ministry of Health and Family Welfare, National Health Portal
8. Pharmacists at the Frontlines: A Novel Approach at Combating TB www.ipapharma.org Visit Publications
9. Where There Is No Doctor: A Village Health Care Handbook by David Werner ,2015 updated version
10. Various WHO publications www.who.int

Pharmacology

1. Pharma Satoskar, R.S. and Bhandarkar, S.D. Pharmacology and Pharmacotherapeutics
2. B. Suresh, A Text Book of Pharmacology
3. Derasari and Gandhi's Elements of Pharmacology
4. S.K. Kulkarni, Practical Pharmacology and Clinical Pharmacy
5. H.K. Sharma. Principles of Pharmacology
6. Mary J. Mycek, Lippincott Williams and Wilkins. Lippincott's illustrated Reviews: Pharmacology
7. Tripathi, K.D. Essentials of Medical Pharmacology.
8. Various Drug Information Books like British National Formulary, MIMS, CIMS, Drug Today etc., WHO, NIH Websites

Community Pharmacy and Management

1. Health Education and Community Pharmacy by N.S. Parmar.
2. WHO consultative group report.
3. Drug store and Business management by Mohammed Ali and Jyoti.
4. Handbook of pharmacy – health care. Edt. Robin J Harman. The Pharmaceutical Press
5. Comprehensive Pharmacy Review – Edt. Leon Shargel. Lippincott Williams and Wilkins.
6. Good Pharmacy Practices Training Manual by IPA/CDSCO/WHO India
7. Training Module for Community Pharmacists in TB Care and Control/ by MoH/IPA
8. Hand Book of PharmaSoS, Drugs in Special population- Pregnancy and Lactation, Tobacco free future- Choice is yours: KSPC Publications.
9. Responsible Use of Medicines: A Layman's Handbook, [www.ipapharma.org /publications](http://www.ipapharma.org/publications)
10. Community Pharmacy Practice around the Globe: Part One: [www.ipapharma.org /publications](http://www.ipapharma.org/publications)

Biochemistry and Clinical Pathology

1. Essentials of Biochemistry by U. Satyanarayana, Books and Allied (P) Ltd.
2. A Textbook of Biochemistry by A.V.S.S. Rama Rao, UBS Publishers' Distributors Pvt. Ltd.
3. Practical Biochemistry by R.C. Gupta and S. Bhargava.
4. Laboratory manual of Biochemistry by Pattabiraman and Sitaram Acharya

Pharmacotherapeutics

1. Clinical Pharmacy and Therapeutics - Roger and Walker, Churchill Livingstone Publication
2. Clinical Pharmacy and Therapeutics - Eric T. Herfindal, Williams and Wilkins Publication
3. Applied Therapeutics: The clinical Use of Drugs. Lloyd Young and Koda-Kimble MA Lippincott, Williams and Wilkins Publication.
4. Pharmacotherapy: A Pathophysiologic approach - Joseph T. Dipiro et al. Appleton and Lange Publication.
5. National Formulary of India, Indian Pharmacopoeia Commission, Ghaziabad.

Hospital and Clinical Pharmacy

1. A Textbook of Clinical Pharmacy Practice - Essential concepts and skills - Parthasarathi G, Karin Nyfort-Hansen and Milap Nahata. Orient Longman Pvt. Ltd. Hyderabad.
2. Text Book of Hospital and Clinical Pharmacy by Dr. Pratibha Nand and Dr. Roop K Khar, Birla publications, New Delhi.
3. Gupta B.K and Gupta R.N., GPP in Hospital Pharmacy, Vallabh Prakashan.
4. Basic skills in interpreting laboratory data - Scott LT, American Society of Health System Pharmacists Inc.
5. Australian drug information- Procedure manual. The Society of Hospital Pharmacists of Australia.

Pharmacy Law and Ethics

1. Text book of Forensic Pharmacy by B.M. Mithal
2. Forensic Pharmacy by B. Suresh
3. Hand book of drug law-by M.L. Mehra
4. A text book of Forensic Pharmacy by N.K. Jain
5. Drugs and Cosmetics Act/Rules by Govt. of India publications.
6. Medicinal and Toilet preparations Act 1955 by Govt. of India publications.
7. Narcotic Drugs and Psychotropic Substances Act by Govt. of India publications
8. Drugs and Magic Remedies Act by Govt. of India publications.
9. CDSCO Website, NPPA Website
10. Books on Drugs and Cosmetic Act by Nilesh Gandhi and Sudhir Deshpande
11. Text Book of Forensic Pharmacy by Dr Guruprasad Mohanta



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Tel.No.: 022-62542100/110/188

Email:secretary@msbte.com

web:www.msbte.org.in

No. MSBTE/D-40/Even sem /Academic Calendar/2021/ 007

Date 21 JAN 2022

Academic Year 2021-22 Even Term Academic Schedule

A.Y. 2021-22 Even Term academic Schedule for AICTE approved Diploma Engineering and Pharmacy courses					
S.N.	Course Pattern	Even Term academic schedule	First Class Test	Second Class Test	Third Class Test
1	Semester pattern AICTE approved Diploma Engineering courses (2,4,6,8)	February 14 - June 03, 2022	April 04 - 06, 2022	May 25 - 27, 2022	Not Applicable
2	Yearly pattern Mining courses (1,2,3)	January 24, 2022 – June 03, 2022	1 st class Test is already conducted in Odd Term of A.Y. 2021-22	May 25 - 27, 2022	Not Applicable
3	Pharmacy 1 st and 2 nd Year	January 24, 2022 – June 03, 2022	1 st class Test is already conducted in Odd Term of A.Y. 2021-22	March 07 - 12, 2022	May 23 - 28, 2022

Important Note: For State Government approved short term (Non-AICTE) courses the Even term Academic schedule will be published through separate circular.

Summer 2022 Exam form filling Schedule for AICTE approved Diploma Engineering and Pharmacy courses				
S.N.	Activities	Filling Examination forms (Normal Fees)	Filling Examination forms (With Exam form fees + Late fees of Rs. 200/-)	Filling Examination forms (With Exam form fees + Penalty Rs. 1500/-)
1	Candidate fill	March 29 – April 15, 2022	April 17 - 20, 2022	April 22 - 24, 2022
2	Institute fill & Confirmation	March 29 – April 16, 2022	April 17 - 21, 2022	April 22 - 25, 2022
3	RBTE Confirmation	April 26 - 28, 2022		

Last date for RBTE confirmation of filled exam form is 28th April, 2022 upto 5:00 PM

Note:

- For State Government approved short term (Non-AICTE) Yearly and Semester pattern courses the Summer 2022 Exam form schedule will be published through separate circular.
- For Summer 2022 exam Regular Exam form will be made available only for Even semester & Yearly pattern students and Backlog exam forms will be made available for Odd, Even Semester & Yearly pattern students



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION

(Autonomous)

(ISO 9001:2015)

(ISO/IEC 27001:2013)

4th Floor, Govt. Polytechnic, Bldg, 49, Kherwadi, Bandra (E), Mumbai-400 051

Tel.No.: 022-62542100/110/188

Email:secretary@msbte.com

web:www.msbte.org.in

Note:

1. The Classes may be started in Online/Offline (Class Room) or Blended mode (Online as well as Offline) following the prescribed protocols / guidelines / directives from Government or local authorities if any.
2. The academic schedule displayed is tentative it may change by considering prevailing COVID – 19 situation and guidelines / directives from Government if any.
3. Institutes have to take measures to conduct additional instructional days for academic activities if needed.
4. All type of fees & penalties shall be necessarily deposited to regional office of the Board as per the schedule declared by respective RBTE or MSBTE.
5. All Practical & term work shall be completed with continuous assessment as per curriculum till the end of term.
6. In unavoidable circumstances, the necessary amendment in the schedule of any activity will be notified through separate circular on MSBTE web portal.

(Dr. Mahendra R. Chitlange)

Secretary,

M. S. Board of Technical Education, Mumbai

Copy to:

1. Hon. Director, MSBTE, Mumbai – for information.
2. Deputy Secretary, CDC, MSBTE, Mumbai – for information.
3. Deputy Secretary, MSBTE Regional Offices, Mumbai, Pune, Nagpur, Aurangabad for necessary action.
4. Desk Officer D-40, D-42 & D-43 MSBTE, Mumbai - for necessary action.
5. Portal Manager, MSBTE, Mumbai to display on the website



ACADEMIC CALENDAR 2021-2022

September

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

5th September 2021- Teachers Day,

15th September 2021 Commencement of SY D pharm

25th September 2021- World Pharmacists Day

Academic days- 14

October

S	M	T	W	T	F	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

2nd Oct. 2021 - Gandhi Jayanti

15th Oct 2021- Vijayadashmi Dasara

18th Oct 2021- Commencement of F.Y. D.Pharmacy

19th Oct 2021-Eid -e- Milad

Academic days- 23

November

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

1st Nov to 7th Nov 2021- Diwali Vacation

22nd Nov to 27th Nov 2021 First Sessional Exam S.Y. D. Pharmacy

Academic days- 20

December

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

13th Dec to 18th Dec 2021 First Sessional Exam FY D Pharmacy.

25th December 2021- Christmas

Academic days- 26

January						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

19 th January 2022- Sanstha SnehMelava
26 th January 2022- Republic Day
Academic days- 25

February						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

19 th February 2022- Chhatrapati Shivaji Maharaj Jayanti
Academic days- 23

March						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

01 st March- Mahashivratri
07 th March to 12 th March 2022 Second Sessional Exam FY D Pharmacy.
07 th March to 12 th March 2022 Second Sessional Exam SY D Pharmacy.
Academic days- 27

April						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

02 nd April 2022 Gudhi Padwa
Academic days- 25

May						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

03 rd May 2022 Akshay Trutiya, Ramjan Eid
14 th May 2022 – Ramjan Eid
23 rd May to 28 th May 2022 Third Sessional Exam FY D Pharmacy.
23 rd May to 28 th May 2022 Third Sessional Exam SY D Pharmacy.
31 st May 2022 - Academic Term End
Academic days- 25

June						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Total Weeks available- 35 Weeks

Total Days Available- 208

Date of Commencement of Academics: 15/09/2021

Date of Completion of Academics: 31/05/2022

First Sessional Examination- 22nd Nov 2021 to 27th Dec 2021/ 13th Dec 2021 to 18th Dec 2021

Second Sessional Examination- 07th March to 12th March 2022 Second Sessional Exam.

Third Sessional Examination- 23rd May to 28th May 2022 Third Sessional Exam.

PRINCIPAL



Sant Dnyaneshwar Shikshan Sanstha's



ANNASHEB DANGE COLLEGE OF D PHARMACY, ASHTA

(Approved by AICTE, New Delhi, Govt. of Maharashtra and Affiliated to MSBTE, Mumbai)

ACADEMIC YEAR 2021-22

TIME TABLE

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1ST YEAR THEORY 09.15AM-12.15 PM						
09.15AM-10.15 AM	PGY (Y.D.D.)	PC (J.A.A.)	PGY (Y.D.D.)	HAP (P.I.N.)	SP (S.T.S)	HAP (P.I.N.)
10.15AM-11.15 AM	PH (A.C.P.)	PH (A.C.P.)	PC (J.A.A.)	SP (S.T.S)	HAP (P.I.N.)	SP (S.T.S)
11.15AM-12.15 PM	PC (J.A.A.)	PGY (Y.D.D.)	PH (A.C.P.)	LH	LH	LH
PRACTICAL 01.00PM- 04.00 PM						
BATCH A	PC (J.A.A.)	PGY (Y.D.D.)	PH-I (A.C.P.)	HAP (P.I.N.)	LH	SP (S.T.S)
BATCH B	PH (A.C.P.)	PC-I (J.A.A.)	PGY (Y.D.D.)	SP (S.T.S)	HAP (P.I.N.)	LH
BATCH C	PGY (Y.D.D.)	PH-I (A.C.P.)	PC-I (J.A.A.)	LH	SP (S.T.S)	HAP (P.I.N.)
04.00 PM-05.00PM TUTORIALS	PH	PC	PGY	SP	HAP	
2ND YEAR 09.15AM-12.15 PM						
PRACTICAL						
BATCH A	PH-II (A.S.M.)	LH	PNT (S.T.S)	PC-II (A.S.M.)	HCP (A.C.P.)	LH
BATCH B	PNT (S.T.S)	PH-II (A.S.M.)	LH	LH	PC-II (A.S.M.)	HCP (A.C.P.)
BATCH C	LH	PNT (S.T.S)	PH-II (A.S.M.)	HCP (A.C.P.)	LH	PC-II (J.A.A)
THEORY 01.00PM – 04.00 PM						
01.00PM – 02.00 PM	HCP (P.I.N.)	PH-II (A.S.M.)	PNT (S.T.S)	PHJ (J.A.A)	PC-II (Y.D.D.)	PC-II (Y.D.D.)
02.00PM – 03.00 PM	PH-II (A.S.M.)	PNT (S.T.S)	PH-II (A.S.M.)	DSBM (S.A.D.)	PHJ (J.A.A)	DSBM (S.A.D.)
03.00PM – 04.00 PM	HCP (P.I.N.)	HCP (P.I.N.)	PNT (S.T.S)	PC-II (Y.D.D.)	DSBM (S.A.D.)	PC-II (Y.D.D.)
04.00 PM-05.00PM TUTORIALS	PH-II	PC-II	HCP	PHJ	PNT	DSBM

SAD: Mr. Sujit A Desai, **PIN:** Mr. Prakash I. Nargatti, **YDD:** Mr. Yuvraj D Dange,

JAA: Mrs. Jyoti A. Admuthe, **ASM:** Mr. Anil S Magdum,

STS: Mrs. Sangeeta T Sankpal, **ACP:** Miss. Aishwarya C Patil

PRINCIPAL



Sant Dnyaneshwar Shikshan Santha's
Annasaheb Dange College of D.Pharmacy, Ashta
 Tal.-Walwa, Dist.-Sangli, Maharashtra, India 416 301



WORK LOAD DISTRIBUTION
Academic Year- 2021-22

Sr.No	Name of Staff	Subject	1st Yr			2nd Yr		Total
			TH	PR	TU	TH	PR	
1	Mr. S. A. Desai	Drug Store & Business Management	-	-	-	3	-	04
		Pharmaceutics	-	-	1	-	-	
2	Mr. P.I. Nargatti	Human Anatomy & Physiology	03	09	1	-	-	16
		Hospital & Clinical Pharmacy	-	-	-	3	-	
3	Mr. Y.D. Dange	Pharmacognosy	3	9	1	-	-	17
		Pharmaceutical Chemistry-II	-	-	-	4	-	
4	Mrs. J. A. Admuthe	Pharmaceutical Chemistry	3	9	1	-	-	18
		Pharmaceutical Chemistry –II	-	-	-	-	3	
		Pharmaceutical Jurisprudence	-	-	-	2	-	
5	Mr. Anil S Magdum	Pharmaceutics -II	-	-	-	3	12	18
		Pharmaceutical Chemistry –II	-	-	-	-	6	
6	Ms. S. T. Sankpal	Social Pharmacy	3	9	1	-	-	22
		Pharmacology & Toxicology	-	-	-	3	6	
7	Miss. A. C. Patil	Pharmaceutics	03	09	-	-	-	18
		Hospital & Clinical Pharmacy	-	-	-	-	06	

PRINCIPAL

ANNEXURE-IX

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

F.No. Western/2016/1-2859867201

Date: 30-Apr-2016

To,
The Secretary,
Tech. & Higher Education Deptt.
Govt. of Maharashtra, Mantralaya,
Annexe Building, Mumbai-400032

Sub: Letter of Approval for New Institute 2016-17

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F.No.37-3/Legal/2012 dated 27/09/2012 and other notifications, as applicable and published from time to time, I am directed to convey the approval to

Regional Office	Western	Application Id	1-2859867201
Name of the Institute	ANNASAHEB DANGE COLLEGE OF D PHARMACY	Institute Address	A/P - ASHTA, TAL - WALWA, DIST - SANGLI, ASHTA, SANGLI, Maharashtra, 416301
Name of the Society/Trust	SANT DNYANESHWAR SHIKSHAN SANSTHA, ISLAMPUR	Society/Trust Address	OLD AIRPORT, ASHTA TAL - WALWA, DIST.- SANGLI MAHARASHTRA 416301, ISLAMPUR, SANGLI, Maharashtra, 416301
Institute Type	Unaided - Private		

to conduct following courses with the intake indicated below for the academic year 2016-2017

Application Id : 1-2859867201				Course	Full/Part Time	Affiliating Body	Intake approved for 2016-17	PIO/F N/Gulf Quota	NRI
S. No.	Programme	Shift	Level						
1	PHARMACY	1st Shift	DIPLOMA	PHARMACY	FULL TIME	Maharashtra State Board of Technical Education, Mumbai	60	No	No

Note: The approval is valid for two years from the date of issue of this letter for getting affiliation with respective University/ Board of Technical Education (BTE)/ Board of Technical Education & Training (BTET) (as applicable) and fulfilling State Govt. requirements for admission. If institution is unable to start in the academic session 2016-17 due to reason mentioned above, the institution will have to apply On-line on AICTE web portal in next academic session for continuation of approval.

The Society/Trust/Institution shall obtain necessary affiliation / permission from the concerned affiliating University/ Board of Technical Education (BTE)/ Board of Technical Education & Training (BTET)(as applicable) as per the prescribed schedule of the University/ Board of Technical Education (BTE)/ Board of Technical Education & Training (BTET)(as applicable) Admission authority etc. The Applicant Society/Trust/Institution shall send information about commencement of the above courses to AICTE. In case the Institution is not in a position to commence the above mentioned courses for whatever reason during the two years period from the date of issue of this letter, the approval becomes invalid and the applicant Society/Trust/Institution shall make fresh application to AICTE for grant of approval as per the norms prevailing at that time.

All Institutions shall fulfill the following general conditions:



All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

1. The management shall provide adequate funds for development of land and for providing related infrastructural, instructional and other facilities as per norms and standards laid down by the Council from time to time and for meeting recurring expenditure.
2. The admission shall be made only after adequate infrastructure and all other facilities, including the availability / recruitment of the required faculty are provided as per norms and guidelines of the AICTE.
3. The admissions shall be made in accordance with the regulations notified by the Council from time to time.
4. The curriculum of the course, the procedure for evaluation / assessment of students shall be in accordance with the norms prescribed by the AICTE and concerned affiliating university/ Board of Technical Education (BTE)/ Board of Technical Education & Training (BTET) (as applicable) wherever applicable.
5. The management of the Institution shall not close the Institution or the institution shall not discontinue any course(s) or start any new course(s) or alter intake capacity of seats without the prior approval of the Council.
6. No excess admission shall be made by the Institution over and above the approved intake under any circumstances. In case any excess admission is reported to the Council, appropriate action as per the notified regulations shall be initiated against the Institution.
7. The institutions shall not have any collaborative arrangements with any Indian and / or Foreign Universities for conduct of technical courses other than those approved by AICTE without obtaining prior approval from AICTE. In case any violation is reported to the Council, appropriate action as per the notified regulations shall be initiated against the Institution.
8. The Institution shall not conduct any course(s) in the field of technical education in the same premises / campus and / or in the name of the Institution without prior permission / approval of AICTE. If found so, appropriate action as per the notified regulations shall be initiated against the Institution.
9. The institution shall not conduct any non-technical course (s) in the same premises under any circumstances. In case any violation is reported to the Council, appropriate action as per the notified regulations shall be initiated against the Institution.
10. The institution shall operate only from the approved location, and that the institution shall not open any off campus study centers / extension centers directly or in collaboration with any other institution / university / organization for the purpose of imparting technical education without obtaining prior approval from the AICTE. If found so, appropriate action as per the notified regulations shall be initiated against the Institution.
11. The tuition and other fees shall be charged as prescribed by the Competent Authority within the overall criteria prescribed by the Council from time to time. No capitation fee shall be charged from the students / guardians of students in any form. If found so, appropriate action as per the notified regulations shall be initiated against the Institution.
12. The accounts of the Institution shall be audited annually by a certified Chartered Accountant and shall be open for inspection by the Council or anybody or persons authorized by it.
13. The Director / Principal and the teaching and other staff shall be appointed in given time frame and selection shall be done according to procedures, qualifications and experience prescribed by the Council from time to



All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

time and pay scales are as per the norms prescribed by the Council from time to time.

14. The technical institution shall publish an information booklet before commencement of the academic year giving details regarding the institution and courses / programs being conducted and details of infrastructural facilities including faculty etc. in the form of mandatory disclosure. The information booklet may be made available to the stakeholders of the technical education. The mandatory disclosure information, as per directions in the AICTE website / Approval Process Handbook, shall be put on the Institution Website. The information shall be revised every year with updated information about all aspects of the institution.
15. It shall be mandatory for the technical institution to maintain a Website providing the prescribed information. The Website information must be continuously updated as and when changes take place.
16. If a technical Institution fails to disclose the information or suppress and / or misrepresent the information, appropriate action as per the notified regulations shall be initiated against the Institution.
17. AICTE may carry out random inspections round the year for verifying the status of the Institutions to ensure maintenance of norms and standards.
18. AICTE may also conduct inspections with or without notifying the dates to verify specific complaints, to verify adherence to AICTE norms & standards, and to verify any mis-representation, violation of norms & standards, mal-practices etc.
19. The Institution by virtue of the approval given by Council shall not automatically become claimant to any grant-in-aid from the Central or State Government.
20. In the event of a student / candidate withdrawing before the starting of the course, the wait listed candidates should be given admission against the vacant seat. The entire fee collected from the student, after a deduction of the processing fee of not more than Rs. 1000/- (Rupees one thousand only) shall be refunded and returned by the Institution / University/ Board of Technical Education (BTE)/ Board of Technical Education & Training (BTET)(as applicable) to the student / candidate withdrawing from the program. It would not be permissible for Institutions and Universities to retain the School / Institution Leaving Certificates in original to force retention of admitted students.
21. The Institute shall take appropriate measures for prevention of ragging in any form, in the light of AICTE regulation "Prevention and Prohibition of Ragging in Technical Institutions, Universities including Deemed to Universities imparting technical education" Regulation 2009 (F.No. 37-3/Legal/AICTE/2009 dated 01/07/2009). In case of failure to prevent the instances of ragging by the Institutions, the Council shall take appropriate action as per the notified regulations.

The Management of the Institute shall strictly follow further conditions as may be specified by the Council from time to time. The Council may withdraw the approval, in case it observe any violation of the above conditions and / or non-adherence to the norms and standards prescribed by the Council, mis-representation of facts and submitting factually in correct information to it.

Prof. Alok Prakash Mittal
Member Secretary, AICTE

Copy to:

1. **The Regional Officer,**
All India Council for Technical Education
Industrial Assurance Building



All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

2nd Floor, Nariman Road
Mumbai - 400 020, Maharashtra

2. **The Director Of Technical Education,**
Maharashtra
3. **The Registrar,**
Maharashtra State Board of Technical Education, Mumbai
4. **The Principal / Director,**
ANNASHEB DANGE COLLEGE OF D PHARMACY
A/P - ASHTA, TAL - WALWA, DIST - SANGLI,
ASHTA,SANGLI,
Maharashtra,416301
5. **The Secretary / Chairman,**
SANT DNYANESHWAR SHIKSHAN SANSTHA,ISLAMPUR
OLD AIRPORT,ASHTA TAL - WALWA,
DIST.- SANGLI MAHARASHTRA 416301,
ISLAMPUR,SANGLI,
Maharashtra,416301
6. **Guard File(AICTE)**

ANNEXURE-X



All India Council for Technical Education

(A Statutory body under Ministry of HRD, Govt. of India)

Nelson Mandela Marg Vasant Kunj, New Delhi-110067

PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

F.No. Western/1-3321539801/2017/EOA

Date: 30-Mar-2017

To,

The Secretary,
Tech. & Higher Education Deptt.
Govt. of Maharashtra, Mantralaya,
Annexe Building, Mumbai-400032

Sub: Extension of approval for the academic year 2017-18

Ref: Application of the Institution for Extension of approval for the academic year 2017-18

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2016 notified by the Council vide notification number F.No.AB/AICTE/REG/2016 dated 30/11/2016 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Permanent Id	1-2859867201	Application Id	1-3321539801
Name of the Institute	ANNASAHEB DANGE COLLEGE OF D PHARMACY	Institute Address	A/P - ASHTA, TAL - WALWA, DIST - SANGLI, ASHTA, SANGLI, Maharashtra, 416301
Name of the Society/Trust	SANT DNYANESSHWAR SHIKSHAN SANSTHA, ISLAMPUR	Society/Trust Address	OLD AIRPORT, ASHTA TAL - WALWA, DIST.- SANGLI MAHARASHTRA 416301, ISLAMPUR, SANGLI, Maharashtra, 416301
Institute Type	Unaided - Private	Region	Western

Opted for change from Women to Co-ed and Vice versa	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved and Vice versa	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable
Opted for Conversion from degree to diploma	No	Opted for Conversion from diploma to degree	No	Conversion (degree to diploma or vice-versa) Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2017-18

Application Id: 1-3321539801			Course	Full/Part Time	Affiliating Body	Intake Approved for 2016-17	Intake Approved for 2017-18	NRI Approval status	PIO / FN / Gulf quota/ OCI/ Approval status	Foreign Collaboration/Twinning Program Approval status*
Program	Shift	Level								
PHARMACY	1st Shift	DIPL OMA	PHARMACY	FULL TIME	Maharashtra State Board of Technical Education, Mumbai	60	60	NA	NA	NA



All India Council for Technical Education

(A Statutory body under Ministry of HRD, Govt. of India)

Nelson Mandela Marg Vasant Kunj, New Delhi-110067

PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

The above mentioned approval is subject to the condition that

ANNASAHEB DANGE COLLEGE OF D PHARMACY

shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Note: Validity of the course details may be verified at www.aicte-india.org

Prof. A.P Mittal
Member Secretary, AICTE

Copy to:

1. **The Regional Officer,**
All India Council for Technical Education
Industrial Assurance Building
2nd Floor, Nariman Road
Mumbai - 400 020, Maharashtra
2. **The Director Of Technical Education**,**
Maharashtra
3. **The Registrar**,**
Maharashtra State Board of Technical Education, Mumbai
4. **The Principal / Director,**
ANNASAHEB DANGE COLLEGE OF D PHARMACY
A/P - ASHTA, TAL - WALWA, DIST - SANGLI,
ASHTA, SANGLI,
Maharashtra, 416301
5. **The Secretary / Chairman,**
SANT DNYANESHWAR SHIKSHAN SANSTHA, ISLAMPUR
OLD AIRPORT, ASHTA TAL - WALWA,
DIST.- SANGLI MAHARASHTRA 416301,
ISLAMPUR, SANGLI,
Maharashtra, 416301
6. **Guard File(AICTE)**

Note: ** - Approval letter copy will not be communicated through post/email. However, provision is made in the portal for downloading Approval letter through Authorized login credentials allotted to concerned DTE/Registrar.



All India Council for Technical Education

(A Statutory body under Ministry of HRD, Govt. of India)

Nelson Mandela Marg Vasant Kunj, New Delhi-110067

PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

ANNEXURE-XI

All India Council for Technical Education

(A Statutory body under Ministry of HRD, Govt. of India)

Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: www.aicte-india.org



APPROVAL PROCESS 2018-19

Extension of Approval (EoA)

F.No. Western/1-3508230370/2018/EOA

Date: 04-Apr-2018

To,

The Secretary,
Tech. & Higher Education Deptt.
Govt. of Maharashtra, Mantralaya,
Annexe Building, Mumbai-400032

Sub: Extension of Approval for the Academic Year 2018-19

Ref: Application of the Institution for Extension of approval for the Academic Year 2018-19

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2016 notified by the Council vide notification number F.No.AB/AICTE/REG/2016 dated 30/11/2016 and amended on December 5, 2017 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Permanent Id	1-2859867201	Application Id	1-3508230370
Name of the Institute	ANNASAHEB DANGE COLLEGE OF D PHARMACY	Name of the Society/Trust	SANT DNYANESSHWAR SHIKSHAN SANSTHA, ISLAMPUR
Institute Address	A/P - ASHTA, TAL - WALWA, DIST - SANGLI, ASHTA, SANGLI, Maharashtra, 416301	Society/Trust Address	OLD AIRPORT, ASHTA TAL - WALWA, DIST.- SANGLI MAHARASHTRA 416301, ISLAMPUR, SANGLI, Mahara shtra, 416301
Institute Type	Unaided - Private	Region	Western

Opted for Change from Women to Co-Ed and vice versa	No	Change from Women to Co-Ed and vice versa Approved or Not	NA
Opted for Change of Name	No	Change of Name Approved or Not	NA
Opted for Change of Site	No	Change of Site Approved or Not	NA
Opted for Conversion from Degree to Diploma or vice versa	No	Conversion for Degree to Diploma or vice versa Approved or Not	NA
Opted for Organization Name Change	No	Change of Organization Name Approved or Not	NA

To conduct following Courses with the Intake indicated below for the Academic Year 2018-19

Program	Shift	Level	Course	FT/PT+	Affiliating Body (Univ/Body)	Intake Approved for 2018-19	NRI Approval Status	PIO / FN / Gulf quota/ OCI/ Approval Status	Foreign Collaboration /Twining Program Approval Status*
PHARMACY	1st	DIPLOMA	PHARMACY	FT	Maharashtra State Board of Technical Education, Mumbai	60	NA	NA	NA

+FT –Full Time, PT-Part Time

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation: - Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Prof. A.P Mittal
Member Secretary, AICTE

Copy to:

1. The Regional Officer,
All India Council for Technical Education
Industrial Assurance Building
2nd Floor, Nariman Road
Mumbai - 400 020, Maharashtra
2. The Director Of Technical Education**,
Maharashtra
3. The Registrar**,
Maharashtra State Board of Technical Education, Mumbai
4. The Principal / Director,
ANNASHEB DANGE COLLEGE OF D PHARMACY
A/P - ASHTA, TAL - WALWA, DIST - SANGLI,
ASHTA,SANGLI,
Maharashtra,416301
5. The Secretary / Chairman,
SANT DNYANESHWAR SHIKSHAN SANSTHA,ISLAMPUR
OLD AIRPORT,ASHTA TAL - WALWA,
DIST.- SANGLI MAHARASHTRA 416301,
ISLAMPUR,SANGLI,
Maharashtra,416301
6. Guard File(AICTE)

Note: Validity of the Course details may be verified at <http://www.aicte-india.org/>

** Individual Approval letter copy will not be communicated through Post/Email. However, consolidated list of Approved Institutions(bulk) will be shared through official Email Address to the concerned Authorities mentioned above.

ANNEXURE-XII

All India Council for Technical Education

(A Statutory body under Ministry of HRD, Govt. of India)

Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: www.aicte-india.org



APPROVAL PROCESS 2019-20

Extension of Approval (EoA)

F.No. Western/1-4259216569/2019/EOA

Date: 29-Apr-2019

To,

The Secretary,
Tech. & Higher Education Deptt.
Govt. of Maharashtra, Mantralaya,
Annexe Building, Mumbai-400032

Sub: Extension of Approval for the Academic Year 2019-20

Ref: Application of the Institution for Extension of approval for the Academic Year 2019-20

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2018 notified by the Council vide notification number F.No.AB/AICTE/REG/2018 dated 31/12/2018 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Permanent Id	1-2859867201	Application Id	1-4259216569
Name of the Institute	ANNASAHEB DANGE COLLEGE OF D PHARMACY	Name of the Society/Trust	SANT DNYANESSHWAR SHIKSHAN SANSTHA, ISLAMPUR
Institute Address	A/P - ASHTA, TAL - WALWA, DIST - SANGLI, ASHTA, SANGLI, Maharashtra, 416301	Society/Trust Address	OLD AIRPORT, ASHTA TAL - WALWA, DIST.- SANGLI MAHARASHTRA 416301, ISLAMPUR, SANGLI, Mahara shtra, 416301
Institute Type	Unaided - Private	Region	Western

Opted for Change from Women to Co-Ed and vice versa	No	Change from Women to Co-Ed and vice versa Approved or Not	NA
Opted for Change of Name	No	Change of Name Approved or Not	NA
Opted for Change of Site/Location	No	Change of Site/Location Approved or Not	NA
Opted for Conversion from Degree to Diploma or vice versa	No	Conversion for Degree to Diploma or vice versa Approved or Not	NA
Opted for Organization Name Change	No	Change of Organization Name Approved or Not	NA
Opted for Merger of Institution	No	Merger of Institution Approved or Not	NA
Opted for Introduction of New Program/Level	No	Introduction of Program/Level Approved or Not	NA

To conduct following Courses with the Intake indicated below for the Academic Year 2019-20

Program	Shift	Level	Course	FT/PT+	Affiliating Body (Univ/Body)	Intake Approved for 2019-20	NRI Approval Status	PIO / FN / Gulf quota/ OCI/ Approval Status
PHARMACY	1st	DIPLOMA	PHARMACY	FT	Maharashtra State Board of Technical Education, Mumbai	60	NA	NA

+FT –Full Time, PT-Part Time

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation: - Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

It is mandatory to comply all the essential requirements as given in APH 2019-20(appendix 6)

NOTE: If the State Government / UT / DTE / DME has a reservation policy for admission in Technical Education Institutes and the same is applicable to Private & Self-financing Technical Institutions, then the State Government / UT/ DTE / DME shall ensure that 10 % of Reservation for EWS would be operational from the Academic year 2019-20 without affecting the percentage reservations of SC/ST/OBC/General . However, this would not be applicable in the case of Minority Institutions referred to the clause (1) of Article 30 of Constitution of India.

Prof. A.P Mittal
Member Secretary, AICTE

Copy to:

1. **The Director Of Technical Education**, Maharashtra**
2. **The Registrar**,
Maharashtra State Board Of Technical Education, Mumbai**
3. **The Principal / Director,
Annasaheb Dange College Of D Pharmacy
A/P - Ashta, Tal - Walwa, Dist - Sangli,
Ashta, Sangli,
Maharashtra, 416301**
4. **The Secretary / Chairman,
Sant Dnyaneshwar Shikshan Sanstha, Islampur
Old Airport, Ashta Tal - Walwa,
Dist.- Sangli Maharashtra 416301.
Islampur, Sangli,
Maharashtra, 416301**
5. **The Regional Officer,
All India Council for Technical Education
Industrial Assurance Building
2nd Floor, Nariman Road
Mumbai - 400 020, Maharashtra**
6. **Guard File(AICTE)**

Note: Validity of the Course details may be verified at <http://www.aicte-india.org/>

** Individual Approval letter copy will not be communicated through Post/Email. However, consolidated list of Approved Institutions(bulk) will be shared through official Email Address to the concerned Authorities mentioned above.

ANNEXURE-XIII

All India Council for Technical Education

(A Statutory body under Ministry of HRD, Govt. of India)

Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: www.aicte-india.org



APPROVAL PROCESS 2020-21

Extension of Approval (EoA)

F.No. Western/1-7014614232/2020/EOA

Date: 30-Apr-2020

To,

The Secretary,
Tech. & Higher Education Deptt.
Govt. of Maharashtra, Mantralaya,
Annexe Building, Mumbai-400032

Sub: Extension of Approval for the Academic Year 2020-21

Ref: Application of the Institution for Extension of Approval for the Academic Year 2020-21

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2020 notified by the Council vide notification number F.No. AB/AICTE/REG/2020 dated 4th February 2020 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Permanent Id	1-2859867201	Application Id	1-7014614232
Name of the Institute	ANNASAHEB DANGE COLLEGE OF D PHARMACY	Name of the Society/Trust	SANT DNYANESSHWAR SHIKSHAN SANSTHA, ISLAMPUR
Institute Address	A/P - ASHTA, TAL - WALWA, DIST - SANGLI, ASHTA, SANGLI, Maharashtra, 416301	Society/Trust Address	OLD AIRPORT, ASHTA TAL - WALWA, DIST.- SANGLI MAHARASHTRA 416301, ISLAMPUR, SANGLI., 416301
Institute Type	Private-Self Financing	Region	Western

To conduct following Courses with the Intake indicated below for the Academic Year 2020-21

Program	Level	Course	Affiliating Body (University /Body)	Intake Approved for 2019-20	Intake Approved for 2020-21	NRI Approval Status	PIO / FN / Gulf quota/ OCI/ Approval Status
PHARMACY	DIPLOMA	PHARMACY	Maharashtra State Board of Technical Education, Mumbai	60	60	NA	No

It is mandatory to comply with all the essential requirements as given in APH 2020-21 (Appendix 6)

Important Instructions

1. The State Government/ UT/ Directorate of Technical Education/ Directorate of Medical Education shall ensure that 10% of reservation for Economically Weaker Section (EWS) as per the reservation policy for admission, operational from the Academic year 2020-21 is implemented without affecting the reservation percentages of SC/ ST/ OBC/ General. However, this would not be applicable in the case of Minority Institutions referred to the Clause (1) of Article 30 of Constitution of India. Such Institution shall be permitted to increase in annual permitted strength over a maximum period of two years beginning with the Academic Year 2020-21
2. The Institution offering courses earlier in the Regular Shift, First Shift, Second Shift/Part Time now amalgamated as total intake shall have to fulfil all facilities such as Infrastructure, Faculty and other requirements as per the norms specified in the Approval Process Handbook 2020-21 for the Total Approved Intake. Further, the Institutions Deemed to be Universities/ Institutions having Accreditation/ Autonomy status shall have to maintain the Faculty: Student ratio as specified in the Approval Process Handbook. All such Institutions/ Universities shall have to create the necessary Faculty, Infrastructure and other facilities WITHIN 2 YEARS to fulfil the norms based on the Affidavit submitted to AICTE.
3. In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.
4. Strict compliance of Anti-Ragging Regulation: - Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 373/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Prof.Rajive Kumar
Member Secretary, AICTE

Copy to:

1. **The Director Of Technical Education****, Maharashtra
2. **The Principal / Director**,
ANNASAHAB DANGE COLLEGE OF D PHARMACY
A/P - Ashta, Tal - Walwa, Dist - Sangli,
Ashta, Sangli,
Maharashtra, 416301
3. **The Secretary / Chairman**,
OLD AIRPORT, ASHTA TAL - WALWA,
DIST.- SANGLI MAHARASHTRA 416301
ISLAMPUR, SANGLI
, 416301
4. **The Regional Officer**,
All India Council for Technical Education
Industrial Assurance Building
2nd Floor, Nariman Road
Mumbai - 400 020, Maharashtra
5. **Guard File(AICTE)**

Note: Validity of the Course details may be verified at <http://www.aicte-india.org/>

** Individual Approval letter copy will not be communicated through Post/Email. However, consolidated list of Approved Institutions(bulk) will be shared through official Email Address to the concerned Authorities mentioned above.



APPROVAL PROCESS 2021-22

Extension of Approval (EoA)

F.No. Western/1-9317814099/2021/EOA

Date: 25-Jun-2021

To,

The Secretary,
Tech. & Higher Education Deptt.
Govt. of Maharashtra, Mantralaya,
Annexe Building, Mumbai-400032

Sub: Extension of Approval for the Academic Year 2021-22

Ref: Application of the Institution for Extension of Approval for the Academic Year 2021-22

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations, 2021 Notified on 4th February, 2020 and amended on 24th February 2021 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to:

Permanent Id	1-2859867201	Application Id	1-9317814099
Name of the Institution /University	ANNASAHEB DANGE COLLEGE OF D PHARMACY	Name of the Society/Trust	SANT DNYANESSHWAR SHIKSHAN SANSTHA, ISLAMPUR
Institution /University Address	A/P - ASHTA, TAL - WALWA, DIST - SANGLI, ASHTA, SANGLI, Maharashtra, 416301	Society/Trust Address	, ISLAMPUR, SANGLI, Maharashtra, 416301
Institution /University Type	Private-Self Financing	Region	Western

To conduct following Programs / Courses with the Intake indicated below for the Academic Year 2021-22

Program	Level	Course	Affiliating Body (University /Body)	Intake Approved for 2020-21	Intake Approved for 2021-22	NRI Approval Status	FN / Gulf quota/ OCI/ Approval Status
PHARMACY	DIPLOMA	PHARMACY	Maharashtra State Board of Technical Education, Mumbai	60	60	NA	NA

It is mandatory to comply with all the essential requirements as given in APH 2021-22 (Appendix 6)

Important Instructions

1. The State Government/ UT/ Directorate of Technical Education/ Directorate of Medical Education shall ensure that 10% of reservation for Economically Weaker Section (EWS) as per the reservation policy for admission, operational from the Academic year 2019-20 is implemented without affecting the reservation percentages of SC/ ST/ OBC/ General. However, this would not be applicable in the case of Minority Institutions referred to the Clause (1) of Article 30 of Constitution of India. Such Institution shall be permitted to increase in annual permitted strength over a maximum period of two years.
2. The Institution offering courses earlier in the Regular Shift, First Shift, Second Shift/Part Time now amalgamated as total intake shall have to fulfil all facilities such as Infrastructure, Faculty and other requirements as per the norms specified in the Approval Process Handbook 2021-22 for the Total Approved Intake. Further, the Institutions Deemed to be Universities/ Institutions having Accreditation/ Autonomy status shall have to maintain the Faculty: Student ratio as specified in the Approval Process Handbook. All such Institutions/ Universities shall have to create the necessary Faculty, Infrastructure and other facilities WITHIN 2 YEARS to fulfil the norms based on the Affidavit submitted to AICTE within the Academic Year 2021-22
3. Strict compliance of Anti-Ragging Regulation, Establishment of Committee for SC/ ST, Establishment of Internal Complaint Committee (ICC), Establishment of Online Grievance Redressal Mechanism, Barrier Free Built Environment for disabled and elderly persons, Fire and Safety Certificate should be maintained as per the provisions made in Approval Process Handbook and AICTE Regulation notified from time to time.
4. In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Prof.Rajive Kumar
Member Secretary, AICTE

Copy ** to:

1. **The Director of Technical Education**, Maharashtra**
2. **The Principal / Director,**
ANNASHEB DANGE COLLEGE OF D PHARMACY
A/P - Ashta, Tal - Walwa, Dist - Sangli,
Ashta, Sangli,
Maharashtra, 416301
3. **The Secretary / Chairman,**

ISLAMPUR, SANGLI
Maharashtra, 416301
4. **The Regional Officer,**
All India Council for Technical Education
Industrial Assurance Building
2nd Floor, Nariman Road
Mumbai - 400 020, Maharashtra
5. **Guard File(AICTE)**

Note: Validity of the Course details may be verified at <http://www.aicte-india.org/> .

** Individual Approval letter copy will not be communicated through Post/Email. However, consolidated list of Approved Institutions(bulk) will be shared through official Email Address to the concerned Authorities mentioned above.

This is a computer generated Statement. No signature Required

BHASKAR B. PATIL & Co.

Chartered Accountants

Office : Flat No. 101 & 102, Ground Floor,
'C' Wing, Shamrao Mandlik Park,
13th Lane, Rajarampuri (East),
Kolhapur - 416 008

E-mail : ilpbbpatil@gmail.com

Phone : 0231-2525985, Mob.: 9422047185

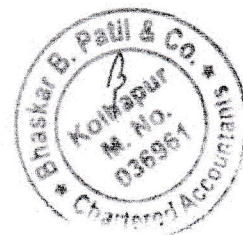
Audit Report

We have audited the accounts of **"Annasaheb Dange College of D. Pharmacy, Ashta"**, Taluka - Walwa, District - Sangli - 416301 which is a unit/branch of parent body - **Sant Dnyaneshwar Shikshan Sanstha Islampur**, Taluka - Walwa, District - Sangli, Registered Trust No. F - 1546 for the period **01-04-2019 to 31-03-2020** and annexed herewith the audited Receipt & Payment A/c, Income & Expenditure A/c for the year ended on **31-03-2020** and Balance Sheet of the said unit/branch as on **31-03-2020**

We have conducted our audit in accordance with the auditing standards generally accepted in India. Those standards required that we plan & perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. An audit includes examining on a test check basis, evidence supporting the amount and disclosures in the financial statements. And audit also includes assessing the accounting principles used and significant estimates made by the management as well as evaluating the overall financial statements presented. We believe that our audit provides a reasonable basis for our opinion.

Auditor's responsibility -

Our responsibility is to express an opinion on these financial statements based on our audit. An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal financial control relevant to the institution's preparation and presentation of the financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on whether the institution has in place an adequate internal financial controls system over financial reporting and the operating effectiveness of such controls. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by the management as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the financial statements.



Report on required matters as per Fee Regulation Authority -

1. Reporting of Method of Accounting -

During the Financial Year 01-04-2019 to 31-03-2020 the educational institute has followed the mercantile system of accounting as recommended by the FRA in its guidelines.

2. Reporting of Segment Accounting -

a) About Geographical Segmentation -

The area of operation of the educational institute is restricted to only one place situated at "Ashta", Taluka Walwa, District Sangli, Maharashtra State and hence there is no requirement of geographical segmentation for the courses conducted by the institute.

b) About Business Segmentation -

The educational institute runs only one course i.e. D. Pharmacy at same place and hence fee is only for D. Pharmacy course and accounting records and financial statements relates only to such educational activity i.e. D. Pharmacy course only.

Accordingly the Receipt and Payment Account, Income and Expenditure Account and Balance Sheet as on 31-03-2020 of D. Pharmacy Course are prepared along with the necessary schedules.

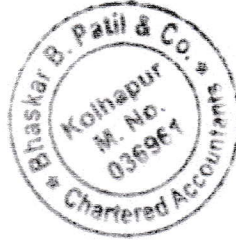
3. The educational institute has kept proper books of accounts required for the purpose of conducting audit.

4. While conducting the audit, we have observed that the internal control system is deficient in respect of expenses incurred and considering the size & volume of the transactions of the institute it is necessary to improve it adequately to safeguard the interest of the educational institute.



5. Subject to above; in our opinion and according to the information and explanation given to us the accounts give true and fair view –
- i) In the case of the Balance Sheet the state of affairs of the educational institute as at 31st March, 2020.
 - ii) In the case of Income and Expenditure of the **Surplus** of the educational institute for the year ended on that date.

Place – Kolhapur
Date – 27-10-2020



For M/s. Bhaskar B. Patil & Co.
Chartered Accountants
FRN – 101275W

A handwritten signature in black ink, appearing to be "B. Patil".

CA. Bhaskar B. Patil
Proprietor
M. No. 036961