

Programme Specifications

Pharm. D. Programme



Programme: Doctor of Pharmacy

Faculty of Pharmacy
M. S. Ramaiah University of Applied Sciences
University House, New BEL Road, MSR Nagar, Bangalore – 560 054
www.msruas.ac.in

PROGRAMME SPECIFICATIONS – PHARM. D.

Faculty	Faculty of Pharmacy (FPH)
Programme	Doctor of Pharmacy
Dean of Faculty	Prof. (Dr.) V. Madhavan

1	Title of The Award Doctor of Pharmacy
2	Modes of Study Full Time
3	Awarding Institution /Body M.S. Ramaiah University of Applied Sciences
4	Joint Award Not Applicable
5	Teaching Institution Faculty of Pharmacy, M.S. Ramaiah University of Applied Sciences
6	Date of Programme Specifications February 2014
6	Date of Programme Approval by the Academic Council of MSRUAS April 2014
7	Next Review Date: As per PCI
8	Programme Approving Regulating Body and Date of Approval --
9	Programme Accredited Body and Date of Accreditation --
10.	Grade Awarded by the Accreditation Body --
11.	Programme Accreditation Validity --
12.	Programme Benchmark PCI- New Delhi: Pharm. D. Programme

14.	<p>Rationale for the Programme</p> <p>The Pharm D programme is an emerging concept globally focusing mainly on improving health care system for a better drug therapy by assisting medical practitioners. It is a clinical oriented curriculum where the students would be trained to provide information about diseases, drugs and lifestyle modifications to the patients in a hospital environment to improve the patient's health condition. There is an immense need for the Pharm D programme in our country where enormous drug related problems, irrational drug use and non-compliance to therapy among patients exist which can be tackled by properly trained clinical pharmacists.</p> <p>The M.S.Ramaiah College of Pharmacy, now a constituent of MSRUAS as Faculty of Pharmacy has been in existence for over 2 decades. Over the years, Faculty of Pharmacy of MSRUAS has grown and evolved as one of the Premier Institutions in the state of Karnataka. It has very good infrastructure, note worthy laboratory facilities and also associated with 1500 bedded multispeciality hospitals with experienced and competent staff, within the campus. During the last two decades it has produced over 1000 graduates and 110 Post graduates. The presence of other Faculties of applied sciences of the University will facilitate the students to experience more than the conventional curriculum.</p> <p>The Faculty of Pharmacy at MSRUAS offers the Pharm D programme to produce quality pharmacists with good knowledge on pharmacotherapy, critical thinking, analytical and problem solving skills.</p>
15	<p>Programme Mission</p> <p>The purpose of the programme is creation of innovative problem solvers in multi-disciplinary settings, entrepreneurs and leaders applying the knowledge, understanding, cognitive abilities, practical skills and transferable skills gained through systematic, flexible and rigorous learning in the chosen academic domain.</p>

16	<p>Graduate Attributes</p> <ol style="list-style-type: none">1. Ability to apply knowledge of basic science and pharmaceutical science fundamentals to solve complex problems in pharmacy2. Ability to analyse health problems, interpret data and arrive at meaningful conclusions involving scientific inferences3. Ability to design drugs and drug delivery systems to meet desired needs considering public health and safety, and the cultural, societal, and environmental considerations4. Ability to understand and solve complex problems in pharmacy by conducting experimental investigations5. Ability to apply appropriate tools and techniques and understand utilization of resources appropriately to complex activities in pharmacy6. Ability to understand the effect of pharmaceutical solutions on legal, cultural, social and public health and safety aspects7. Ability to develop sustainable solutions and understand their effect on society and environment8. Ability to apply ethical principles to pharmacy practices and professional responsibilities9. Ability to work as a member of a team, to plan and to integrate knowledge of various disciplines in pharmacy and to lead teams in multidisciplinary settings10. Ability to make effective oral presentations and communicate technical ideas to a broad audience using written and oral means11. Ability to lead and manage multidisciplinary teams by applying principles of pharmaceutical science and management principles12. Ability to adapt to the changes and advancements in technology and engage in independent and life-long learning
17	<p>Programme Goal</p> <p>The program goal is to produce clinical pharmacists who liaison with physicians, healthcare professionals and patients, taking into consideration of ethical, social, economic and legal issues that may have an impact on the therapeutic outcome</p>

18	<p>Programme Objectives</p> <p>The objectives of the programme are to:</p> <ol style="list-style-type: none">1. Promote rational use of drugs for an appropriate treatment2. Provide drug and poison information services to deliver unbiased, well-referenced and critically evaluated, up-to-date information on all aspects of drug use to the physicians for proper prescription3. Monitor, report and manage adverse drug reactions to avoid undesirable effects4. Provide patient counseling services for a safe and effective drug therapy5. Pursue research in clinical pharmacy related areas to improve health outcomes6. Perform drug utilization reviews and pharmaco-economic analysis for better therapeutic effectiveness and for reducing health care costs
19.	<p>Programme Intended Learning Outcomes</p> <p>The intended learning outcomes are listed under four headings:</p> <ol style="list-style-type: none">1. Knowledge and Understanding2. Cognitive skills3. Practical skills and4. Capability/Transferable skills. <p>Knowledge and Understanding</p> <p>After undergoing this programme, a student will be able to:</p> <p>KU1: Outline the basic concepts of cellular biology, anatomy, physiology, pathophysiology, health and disease in clinical care management</p> <p>KU2: Underline the principles of pharmacognosy, pharmaceutical chemistry, pharmacology, pharmaceuticals and pharmacy practice for the preparation of various dosage forms and to identify and overcome the incompatibilities in formulations</p> <p>KU3: Describe the methods for qualitative and quantitative analysis of various physiological and biochemical parameters and to interpret the results in various disease conditions</p> <p>KU4: Explain the concepts of microbiological standards in pharmaceutical industry and sterility testing</p> <p>Cognitive Skills</p> <p>After undergoing this programme, a student will be able to:</p> <p>CS1: Modify prescriptions with respect to a patient's pharmacotherapy and dose adjustments</p> <p>CS2: Demonstrate the methods of preparation, test for purity, and assays to analyse certain important organic and inorganic compounds</p> <p>CS3: Apply the knowledge of pharmacology as a basis of therapeutics and to correlate it clinically</p> <p>CS4: Summarize various concepts of the pharmaceutical legislation in India to understand the concepts of national and international laws</p>

Practical Skills

After undergoing this programme, a student will be able to:

PS1: Analyse the morphological and microscopical characters of crude drugs, screening the pharmacological activity of drugs using animal model

PS2: Perform pharmaceutical care services such as drug distribution, drug dispensing, inventory control, patient counseling and health screening for better therapeutic outcomes

PS3: Plan and provide services like drug and poison information, patient counseling, pharmacoeconomics, pharmacovigilance and therapeutic drug monitoring for improved patient care.

PS4: Develop the skills in data collection, analysis, reporting and interpretation in the area of community, hospital and clinical pharmacy using suitable biostatistical method

Capability/ Transferrable Skills

After undergoing the programme, a student will be able to-

TS1: Manage information, develop technical reports and make presentations

TS2: Build, Manage and Lead a team to successfully complete a project and communicate across teams and organizations to achieve professional objectives

TS3: Work under various constraints to meet project targets

TS4: Adopt to the chosen profession by continuously upgrading his/her knowledge and understanding through Life-long Learning philosophy

20. **Programme Structure (As per the PCI Regulations)**

First Year :

S.No.	Code	Programme Title	Theory (h/W/Y)	Tutorials (h/W/Y)	Practical (h/W/Y)	Total Credits	Max. Marks
1	PDA 101	Human Anatomy and Physiology	3	1	3	9	200
2	PDA 102	Pharmaceutics	2	1	3	8	200
3	PDA 103	Medicinal Biochemistry	3	1	3	9	200
4	PDA 104	Pharmaceutical Organic Chemistry	3	1	3	9	200
5	PDA 105	Pharmaceutical Inorganic Chemistry	2	1	3	8	200
6	PDA 106	Remedial Mathematics/ Biology**	3/3	1/1	0/3	6/9	100/200
Total			16/16**	6/6**	15/18**	49/52	1100/1200
Total number of contact hours per week			37/40 hours				

Second Year:

S.No.	Code	Programme Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	PDA 201	Pathophysiology	3	1	-	6	100
2	PDA 202	Pharmaceutical Microbiology	3	1	3	9	200
3	PDA 203	Pharmacognosy & Phytopharmaceuticals	3	1	3	9	200
4	PDA 204	Pharmacology-I	3	1	-	6	100
5	PDA 205	Community Pharmacy	2	1	-	5	100
6	PDA 206	Pharmacotherapeutics-I	3	1	3	9	200
Total			17	6	9	44	900
Total number of contact hours per week			32 hours				

Third Year:

S.No.	Code	Programme Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	PDA 301	Pharmacology-II	3	1	3	9	200
2	PDA 302	Pharmaceutical Analysis	3	1	3	9	200
3	PDA 303	Pharmacotherapeutics-II	3	1	3	9	200
4	PDA 304	Pharmaceutical Jurisprudence	2	-	-	4	100
5	PDA 305	Medicinal Chemistry	3	1	3	9	200
6	PDA 306	Pharmaceutical Formulations	2	1	3	8	200
Total			16	5	15	48	1100
Total number of contact hours per week			36 hours				

Fourth Year:

S.No.	Code	Programme Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	PDA 401	Pharmacotherapeutics-III	3	1	3	9	200
2	PDA 402	Hospital Pharmacy	2	1	3	8	200
3	PDA 403	Clinical Pharmacy	3	1	3	9	200
4	PDA 404	Biostatistics & Research Methodology	2	1	-	5	100
5	PDA 405	Biopharmaceutics & Pharmacokinetics	3	1	3	9	200
6	PDA 406	Clinical Toxicology	2	1	-	5	100
Total			15	6	12	45	1000
Total number of contact hours per week			33 hours				

Fifth Year:

S.No.	Code	Programme Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	PDA 501	Clinical Research	3	1	-	6	100
2	PDA 502	Pharmacoepidemiology and Pharmacoeconomics	3	1	-	6	100
3	PDA 503	Clinical Pharmacokinetics & Pharmacotherapeutic	2	1	-	5	100

		Drug Monitoring						
4	PDA 504	Clerkship *	-	-	25	25	100	
5	PDA 505	Project work (Six Months)	-	-	1	1	100	
Total			8	3	26	43	500	
Total number of contact hours per week			37 hours					
* Attending ward rounds on daily basis.								
Sixth Year: Internship								
Code.No. (1)	Internship (2)				No. of credits (3)			
PDA601	Internship or residency training including postings in speciality units. Student should independently provide the clinical pharmacy services to the allotted wards. (i) Six months in General Medicine department, and (ii) Two months each in three other speciality departments				80			
21	Programme Delivery As per the time Table							
22	Teaching and Learning Methods <ol style="list-style-type: none"> 1. Face to Face Lectures using Audio-Visuals 2. Workshops-Group Discussions, Debates, Presentations 3. Demonstrations 4. Guest Lectures 5. Laboratory-work/Field work/workshop 6. Industry Visit/Hospital Visit 7. Seminars 8. Group Exercises 9. Project work 10. Project Exhibitions 11. Technical Festivals 							
23	Academic Work The teaching staff of respective courses shall maintain a regular record of attendance in both Theory and Practical. Internal Assessment Marks A. Theory: Three sessional examinations evenly spread during the academic year shall be conducted by the faculty of pharmacy. The average marks of the best two examinations shall be computed out of a maximum 30 marks and shall constitute the sessional marks in theory. Provided further the colleges may conduct one special theory sessional examination towards the end of the academic session for those who might have missed any one of the regular sessional examination on genuine grounds.							

B. Practical: Students are expected to perform the number of experiments listed in the respective syllabus. Marks shall be awarded out of a maximum of 10 to each of the practical exercise and an average of those shall be computed out of maximum of 10 each marks. In addition, three practical sessional examinations evenly spread during academic year shall be conducted. The average marks of the best two practical examinations shall be computed out of a maximum of 20 marks. A total of 30 marks shall constitute the sessional award in practical. While awarding the sessional marks of practical experiments, the following considerations should be taken into account.

1. Preparation of the candidate.
2. Manipulative skills.
3. Results of the experiment.
4. Knowledge of the experiment
5. Viva voce pertaining to the experiments only.

The College shall maintain the sessional books of the students and the record of sessional marks of the students.

A regular record of both theory and practical class work and sessional examinations conducted in an institution imparting the programme shall be maintained for each student in the institution.

Examination for Pharm D

(1) Every year there shall be an examination to examine the students.

(2) Each examination may be held twice every year. The first examination in a year shall be the annual examination and the second examination shall be supplementary examination.

(3) The examinations shall be of written and practical (including oral nature) carrying maximum marks for each part of a course as indicated in Tables below :

T A B L E S

Code No.	Name of Course	Maximum marks for Theory			Maximum marks for Practical		
		YEE	CIE	Total	YEE	CIE	Total
PDA 101	Human Anatomy and Physiology	70	30	100	70	30	100
PDA 102	Pharmaceutics	70	30	100	70	30	100
PDA 103	Medicinal Biochemistry	70	30	100	70	30	100
PDA 104	Pharmaceutical Organic Chemistry	70	30	100	70	30	100
PDA 105	Pharmaceutical Inorganic Chemistry	70	30	100	70	30	100
PDA 106	Remedial Mathematics/ Biology	70	30	100	70*	30*	100*
				600			500/600 = 1100/1200

- For Biology.

Second Year examination:

Code No.	Name of Course	Maximum marks for Theory			Maximum marks for Practical		
		YEE	CIE	Total	YEE	CIE	Total
PDA 201	Pathophysiology	70	30	100	-	-	-
PDA 202	Pharmaceutical Microbiology	70	30	100	70	30	100
PDA 203	Pharmacognosy & Phytopharmaceuticals	70	30	100	70	30	100
PDA 204	Pharmacology-I	70	30	100	-	-	-
PDA 205	Community Pharmacy	70	30	100	-	-	-
PDA 206	Pharmacotherapeutics-I	70	30	100	70	30	100
				600			300=900

Third Year examination:

Code No.	Name of Course	Maximum marks for Theory			Maximum marks for Practical		
		YEE	CIE	Total	YEE	CIE	Total
PDA 301	Pharmacology-II	70	30	100	70	30	100
PDA 302	Pharmaceutical Analysis	70	30	100	70	30	100
PDA 303	Pharmacotherapeutics-II	70	30	100	70	30	100
PDA 304	Pharmaceutical Jurisprudence	70	30	100	-	-	-
PDA 305	Medicinal Chemistry	70	30	100	70	30	100
PDA 306	Pharmaceutical Formulations	70	30	100	70	30	100
				600			500 = 1100

Fourth Year examination:

Code No.	Name of Course	Maximum marks for Theory			Maximum marks for Practical		
		YEE	CIE	Total	YEE	CIE	Total
PDA 401	Pharmacotherapeutics-III	70	30	100	70	30	100
PDA 402	Hospital Pharmacy	70	30	100	70	30	100
PDA 403	Clinical Pharmacy	70	30	100	70	30	100
PDA 404	Biostatistics & Research Methodology	70	30	100	-	-	-
PDA 405	Biopharmaceutics & Pharmacokinetics	70	30	100	70	30	100
PDA 406	Clinical Toxicology	70	30	100	-	-	-
				600			400 = 1000

Fifth Year examination:

Code No.	Name of Course	Maximum marks for Theory			Maximum marks for Practical		
		YEE	CIE	Total	YEE	CIE	Total
PDA 501	Clinical Research	70	30	100	-	-	-
PDA 502	Pharmacoepidemiology and Pharmacoconomics	70	30	100	-	-	-
PDA 503	Clinical Pharmacokinetics & Pharmacotherapeutic Drug Monitoring	70	30	100	-	-	-
PDA 504	Clerkship *	-	-	-	70	30	100
PDA 505	Project work (Six Months)	-	-	-	100**		100
				300			200 = 500

* Attending ward rounds on daily basis.

** 30 marks – viva-voce (oral)
70 marks– Thesis work

ASSESSMENT OF INTERNSHIP :

- i) The intern shall maintain a record of work which is to be verified and certified by the preceptor (teacher/practitioner) under whom he works. Apart from scrutiny of the record of work, assessment and evaluation of training shall be undertaken by an objective approach using situation tests in knowledge, skills and attitude during and at the end of the training. Based on the record of work and date of evaluation, the Dean or Principal shall issue certificate of satisfactory completion of training, following which the university shall award the degree or declare him eligible for it.
- ii) Satisfactory completion of internship shall be determined on the basis of the following:-
- (1) Proficiency of knowledge required for each case management SCORE 0-5
 - (2) The competency in skills expected for providing Clinical Pharmacy Services SCORE 0-5
 - (3) Responsibility, punctuality, work up of case, involvement in patient care SCORE 0-5
 - (4) Ability to work in a team (Behavior with other healthcare professionals including medical doctors, nursing staff and colleagues) SCORE 0-5
 - (5) Initiative, participation in discussions, research aptitude SCORE 0-5

Poor	Fair	Below Average	Average	Above Average	Excellent
0	1	2	3	4	5

A Score of less than 3 in any of above items will represent unsatisfactory completion of internship.

Mode of examinations

- (1) Theory examination shall be of three hours and practical examination shall be of four hours duration.
- (2) Practical examination shall also consist of a viva –voce (Oral) examination.
- (3) Clerkship examination – Oral examination shall be conducted after the completion of clerkship of students. An external and an internal examiner will evaluate the student. Students may be asked to present the allotted medical cases followed by discussion. Students' capabilities in delivering clinical pharmacy services, pharmaceutical care planning and knowledge of therapeutics shall be assessed.

Criteria for Pass

- a) Candidates who have secured a minimum of 50% marks in the Theory (including sessional) and Practical (including sessional) separately in any course or courses shall be declared to have passed in that course/ and exempted from appearing in that course/s at subsequent examination.
- b) Theory and Practical of a particular course are considered as individual courses for the purpose of pass criteria.

Eligibility for promotion to next year

1. All students who have appeared for all the courses and passed the first year annual examination are eligible for promotion to the second year and, so on. However, failure in more than two courses shall debar him or her from promotion to the next year classes. A student cannot carry more than 2 courses from the present year of study to next year of study.
Any one of the two courses i.e. either Remedial Mathematics or Biology can be carried forward to 2nd year Pharm. D. as an additional failed course along with 2 failed courses of 1st year under regulation 15 of the Pharm. D. regulations, 2008 course to the condition that failure in more than two courses shall debar the candidate from promotion to next year class (IIIrd year).
2. A student will be promoted to third year provided the student has passed all the courses of first year of study.

3. A student will be promoted to fourth year provided the student has passed all the courses of second year of study.

Declaration of Class

Class shall be awarded at the end of I, II, III, IV, V and final year of Pharm. D examination as shown below:

- 1) Distinction 75%
- 2) First class 60% and above and less than 75%
- 3) Second Class 50% and above and less than 60% in single attempt

Pass class shall be awarded to such of the candidates who would have passed the examination in more than one attempt. However, this shall not be applicable to candidates who are exempted in Remedial Biology and Remedial Mathematics.

The students securing 60% marks or above in aggregate in all courses in a single attempt at the Pharm.D. examination shall be declared to have passed in first class. Students securing 75% marks or above in any course or courses shall be declared to have passed with distinction in the course or those courses provided he or she passes in all the courses in a single attempt.

Internship

(1) Internship is a phase of training wherein a student is expected to conduct actual practice of pharmacy and health care and acquires skills under the supervision so that he or she may become capable of functioning independently.

(2) A student shall be permitted to start the internship only after having passed in theory and practical of all courses of all the previous years.

(3) Every student has to undergo one-year internship as per Appendix-C to these regulations.

Award of Degree

a) A candidate who has passed in all the courses of Pharm.D programme has successfully completed the

Internship (as described in appendix C) will be eligible for the award of Pharm. D degree.

Practical training

1. **Hospital posting** — Every student shall be posted in constituent hospital for a period of not less than fifty hours to be covered in not less than 200 working days in each of second, third & fourth year programme. Each student shall submit report duly certified by the preceptor and duly attested by the Head of the Department or Institution as prescribed. In the fifth year, every student shall spend half a day in the morning hours attending ward rounds on daily basis as a part of clerkship. Theory teaching may be scheduled in the afternoon.

2. Project work

(1) To allow the student to develop data collection and reporting skills in the area of community, hospital and clinical pharmacy, a project work shall be carried out under the supervision of a teacher. The project topic must be approved by the Head of the Department or Head of the Institution. The same shall be announced to students within one month of commencement of the fifth year classes. Project work shall be presented in a written report and as a seminar at the end of the year. External and the internal examiners shall do the assessment of the project work.

(2) Project work shall comprise of objectives of the work, methodology, results, discussions and conclusions.

3. Objectives of project work

The main objectives of the project work is to

(i) show the evidence of having made accurate description of published work of others and of having recorded the findings in an impartial manner; and

(ii) develop the students in data collection, analysis, reporting and interpretation skills.

	<p>4. Methodology To complete the project work following methodology shall be adopted, namely:</p> <p>(i) students shall work in groups of not less than <i>two</i> and not more than <i>four</i> under an authorised teacher;</p> <p>(ii) project topic shall be approved by the Head of the Department or Head of the Institution;</p> <p>(iii) project work chosen shall be related to the pharmacy practice in community, hospital and clinical setup. It shall be patient and treatment (Medicine) oriented, like drug utilization reviews, pharmacoepidemiology, pharmacovigilance or pharmacoconomics;</p> <p>(iv) project work shall be approved by the institutional ethics committee;</p> <p>(v) student shall present at least three seminars, one in the beginning, one at middle and one at the end of the project work; and</p> <p>(vi) two-page write-up of the project indicating title, objectives, methodology anticipated benefits and references shall be submitted to the Head of the Department or Head of the Institution.</p> <p>5. Reporting</p> <p>(1) Student working on the project shall submit jointly to the Head of the Department or Head of the Institution a project report of about 40-50 pages. Project report should include a certificate issued by the Teacher, Head of the Department as well as by the Head of the Institution.</p> <p>(2) Project report shall be computer typed in double space using Times Roman font on A4 paper. The title shall be in bold with font size 18, subtitles in bold with font size 14 and the text with font size 12. The cover page of the project report shall contain details about the name of the student and the name of the authorized teacher with font size 14.</p> <p>(3) Submission of the project report shall be done at least one month prior to the commencement of annual or supplementary examination.</p> <p>6. Evaluation</p> <p>The following methodology shall be adopted for evaluating the project work:</p> <p>(i) Project work shall be evaluated by internal and external examiners.</p> <p>(ii) Students shall be evaluated in groups for four hours (i.e., about half an hour for a group of four students).</p> <p>(iii) Three seminars presented by students shall be evaluated for twenty marks each and the average of best two shall be forwarded to the university with marks of other courses.</p> <p>(iv) Evaluation shall be done on the following items:</p> <table data-bbox="256 1276 1315 1486"> <thead> <tr> <th></th> <th style="text-align: right;">Marks</th> </tr> </thead> <tbody> <tr> <td>a) Write up of the seminar</td> <td style="text-align: right;">(7.5)</td> </tr> <tr> <td>b) Presentation of work</td> <td style="text-align: right;">(7.5)</td> </tr> <tr> <td>c) Communication skills</td> <td style="text-align: right;">(7.5)</td> </tr> <tr> <td>d) Question and answer skills</td> <td style="text-align: right;">(7.5)</td> </tr> <tr> <td style="text-align: right;">Total</td> <td style="text-align: right;">(30 marks)</td> </tr> </tbody> </table> <p>(v) Final evaluation of project work shall be done on the following items:</p> <table data-bbox="256 1491 1315 1696"> <thead> <tr> <th></th> <th style="text-align: right;">Marks</th> </tr> </thead> <tbody> <tr> <td>a) Write up of the seminar</td> <td style="text-align: right;">(17.5)</td> </tr> <tr> <td>b) Presentation of work</td> <td style="text-align: right;">(17.5)</td> </tr> <tr> <td>c) Communication skills</td> <td style="text-align: right;">(17.5)</td> </tr> <tr> <td>d) Question and answer skills</td> <td style="text-align: right;">(17.5)</td> </tr> <tr> <td style="text-align: right;">Total</td> <td style="text-align: right;">(70 marks)</td> </tr> </tbody> </table> <p><i>Explanation.</i>— For the purposes of differentiation in the evaluation in case of topic being the same for the group of students, the same shall be done based on item numbers b, c and d mentioned above.</p>		Marks	a) Write up of the seminar	(7.5)	b) Presentation of work	(7.5)	c) Communication skills	(7.5)	d) Question and answer skills	(7.5)	Total	(30 marks)		Marks	a) Write up of the seminar	(17.5)	b) Presentation of work	(17.5)	c) Communication skills	(17.5)	d) Question and answer skills	(17.5)	Total	(70 marks)
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Total	(70 marks)																								
24	<p>Attendance A minimum of 85% attendance compulsory to appear for yearend examinations. Any condoning is as</p>																								

	per the academic regulations.
25	Award of Class As per the academic regulations
26	Student support for Learning <ol style="list-style-type: none">1. Course Notes2. Reference Books in the Library3. Magazines and Journals4. Internet Facility5. Computing Facility6. Laboratory Facility7. Workshop facility8. Staff support9. Lounges for Discussions10. Any other support that enhances their learning
27	Quality Control Measures <ol style="list-style-type: none">1. Review of Course Notes2. Review of Question Papers and Assignment Questions3. Student Feedback4. Moderation of assessed work5. Opportunities for students to see their assessed work6. Review by external examiners and external examiners reports7. Staff Student consultative committee meetings8. Student exit feedback9. Course Assessment Board(SAB)10. Programme Assessment Board(PAB)

Course Code	Intended Learning Outcomes											
	Knowledge and Understanding				Cognitive (Thinking) Skills (Critical, Analytical, Problem Solving)				Practical skills			
	KU1	KU2	KU3	KU4	CS1	CS2	CS3	CS4	PS1	PS2	PS3	PS4
	PDA101	X		X		X				X		
PDA102		X		X	X							
PDA103			X									
PDA104		X	X			X						
PDA105		X	X			X						
PDA106	X											
PDA201	X	X	X									
PDA202				X								
PDA203		X							X			
PDA204	X	X					X		X			
PDA205		X								X	X	
PDA206	X	X	X		X		X				X	
PDA301	X	X					X		X			
PDA302		X	X			X						
PDA303	X	X	X		X		X				X	
PDA304								X				
PDA305		X				X						
PDA306		X		X								
PDA401	X	X	X		X		X				X	
PDA402		X		X	X					X	X	X

	PDA403		X		X	X					X	X	X
	PDA404												X
	PDA405			X		X						X	
	PDA406											X	
	PDA501	X			X			X				X	X
	PDA502					X						X	
	PDA503		X	X		X						X	X
	PDA504	X	X			X		X			X	X	X
	PDA505										X	X	X
	PDA601					X		X			X	X	X
29	Capability/Transferable Skills Map												
	Course Code		GK		SL	WC	VC	p	B	IM	PM	L	RS
	PDA101				X								
	PDA102				X			X					
	PDA103				X			X					
	PDA104				X			X					
	PDA105				X			X					
	PDA106				X			X					
	PDA201				X			X					
	PDA202				X			X					
	PDA203				X			X					
	PDA204		X		X			X					
	PDA205		X		X	X	X	X	X				
	PDA206		X		X	X	X	X	X	X			

PDA301	X	X			X					
PDA302		X			X					
PDA303	X	X	X	X	X	X				
PDA304		X								
PDA305		X			X					
PDA306		X			X					
PDA401	X	X	X	X	X	X				
PDA402	X	X	X	X	X	X				
PDA403	X	X	X	X	X	X				
PDA404	X	X			X					
PDA405	X	X			X	X	X			
PDA406	X	X					X			
PDA501	X	X					X			
PDA502		X								
PDA503	X	X					X			
PDA504	X	X	X	X	X	X	X	X	X	
PDA505	X	X	X	X	X	X	X	X	X	
PDA601	X	X	X	X	X	X	X	X	X	
GK: Group Work; SL: Self Learning; WC: Written Communication; VC: Verbal Communication P: Presentation; B: Behavioural; IM: Information Management; PM: Personal Management/ L: Leadership; RS: Research skills										
30	Co curricular Activities Student are encourage to take part in co-curricular activities like seminars, conferences, symposium, paper writing, attending industry exhibitions, project competitions and related activities for them to enhance their knowledge and network.									
31	Cultural and Literary Activities To remind and ignite the creative endeavors annual cultural festivals are held and the students are									

	made to plan and organise the activities
32	Sports and Athletics Students are encouraged to develop a habit of playing games on daily basis and also take part in annual sports and athletic events.

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