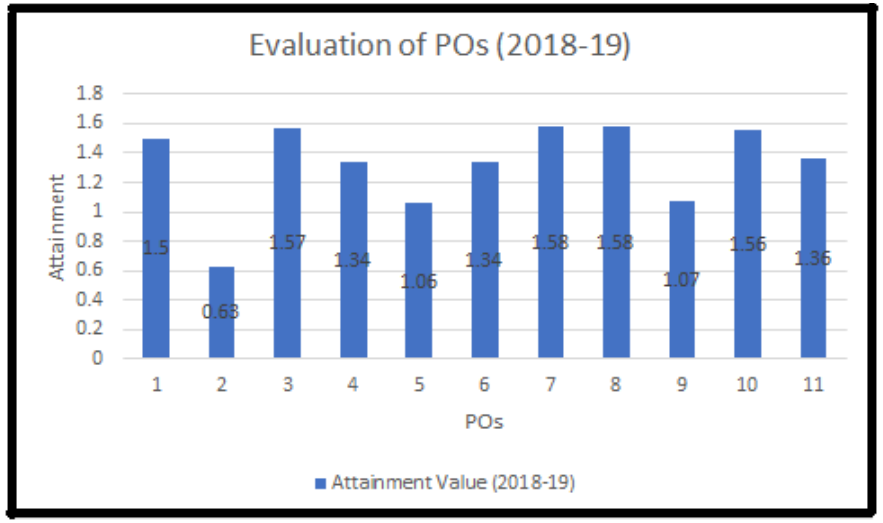
ANNEXURE-I

Faculty of Pharmacy
Attainment AY 2018-19

Attainment of POs



Attainment of POs for Academic Year 2018-19

Course Code	Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BPH1001	Human Anatomy and Physiology	2.31	-	1.19	-	-	-	-	-	-	-	1.00
BPH1002	Pharmaceutical Analysis	2.31	-	2.25	-	-	-	-	-	-	-	2.25
BPH1003	Pharmaceutics-I	2.63	-	2.67	-	-	-	2.50	-	2.38	-	2.75
BPH1004	Pharmaceutical Inorganic Chemistry (Theory)	2.60	-	1.38	-	-	-	2.75	-	0.00	-	2.06
BPH1001P	Human Anatomy and	1.50	-	1.58	1.50	-	-	-	1.75	-	-	-

	Physiology-I											
BPH1002P	Pharmaceutical Analysis-I	0.50	-	0.50	-	-	-	-	0.50	-	-	1.50
BPH1003P	Pharmaceutics-I	1.5	-	1.5	-	-	-	-	1.5	-	-	3.00
BPH1004P	Pharmaceutical Inorganic Chemistry	2.84	-	3.00	-	-	-	-	3.00	-	-	-
BPH2001	Human Anatomy and physiology-II	1.63	-	0.17	-	-	-	-	-	-	-	1.63
BPH2002	Pharmaceutical Organic Chemistry – II	1.50	-	1.50	-	-	-	0.17	-	0.56	-	1.31
BPH2003	Pharmaceutical Engineering-I	2.30	-	2.25	-	-	-	-	-	-	2.25	2.25
BPH2004	Computer Applications in Pharmacy	2.56	-	2.25	2.67	-	-	-	-	-	-	3.00
BPH2001P	Human Anatomy and Physiology-II	0.75	-	1.17	1.50	-	-	-	1.31	-	-	1.50
BPH2002P	Pharmaceutical Organic Chemistry-I	0.75	1.50	1.00	1.50	-	-	-	0.50	-	-	1.50
BPH2003P	Pharmaceutical Engineering	1.00	-	1.25	1.13	-	-	-	1.50	-	-	0.75
BPH2004P	Computer Applications in Pharmacy	2.84	-	3.00	2.67	-	-	-	2.67	-	-	-
BPH3001	Pharmaceutical Organic Chemistry-II	2.31	-	2.31	-	-	-	-	-	-	-	2.00
BPH3002	Physical Pharmaceutics-I	2.56	-	2.67	-	-	-	-	-	-	-	1.25
BPH3003	Pharmaceutical Microbiology	2.55	0.56	2.67	1.13	-	-	-	-	-	-	1.00
BPH3004	Pathophysiology	2.03	0.56	0.00	-	-	-	-	-	-	-	1.06
BPH3005	Environmental science	0.64	-	-	2.67	-	-	-	-	-	1.28	0.89
BPH3001P	Pharmaceutical Organic Chemistry-II	1.50	1.00	1.50	-	-	-	-	2.00	-	-	2.00
BPH3002P	Physical Pharmaceutics-I	1.42	-	0.67	-	-	-	-	0.50	-	-	1.42
BPH3003P	Pharmaceutical Microbiology	0.93	-	0.50	-	-	-	-	1.17	-	-	0.83
BPH4001	Pharmaceutical Organic Chemistry – III	0.75	-	0.75	-	-	-	-	-	-	-	0.50

BPH4002	Biochemistry	0.54	1.67	2.67	-	-	-	-		-	-	0.25
BPH4003	Physical Pharmaceutics-II	0.29	-	0.39	-	-	-	-	-	-	-	0.25
BPH4004	Pharmacology-I	2.17	0.00	2.17	-	-	-	-		-	-	0.75
BPH4005	Pharmacognosy-I	1.56	-	0.75	-	-	-	-	-	-	1.50	1.72
BPH4002P	Biochemistry	2.00	-	2.03	-	-	-	-	2.17	-	-	2.00
BPH4003P	Physical Pharmaceutics-II	2.84	-	3.00	-	-	-	-	2.67	-	-	3.00
BPH4004P	Pharmacology-I	1.01	-	0.67	-	-	-	0.67	1.34	-	-	0.17
BPH4005P	Pharmacognosy-I	2.56	-	2.56	2.67	-	-	-	2.34	-	-	-
PH322	Phytochemistry-II	0.50	-	0.58	-	-	-	-	-	-	-	0.38
PH331	Pharmacology-III	0.63	-	0.38	-	-	0.50	-	-	-	-	0.58
PH332	Medicinal chemistry-I	0.15	-	0.00	0.25	-	-	-	-	-	-	0.25
PH333	Pharmaceutical Analysis-I	1.00	-	0.75	-	-	-	-	-	-	-	-
PH334	Pharmaceutical microbiology and biotechnology	0.35	0.17	0.13	-	1.00	-	-	-	-	0.63	-
PH335	Pharmacology-IV	1.31	-	1.38	-	-	1.00	-	-	-	-	1.31
PH336	Medicinal chemistry-II	0.25	-	0.13	-	-	-	-	-	-	-	0.00
PH337	Pharmaceutical Analysis-II	1.00	-	1.17	-	-	-	-	-	-	-	1.50
PH415	Clinical Pharmacy	0.25	-	0.33	-	-	0.67	-	-	-	-	0.25
PH416	Traditional Medicine and Herbal drug Technology	0.60	-	0.67	0.50	-	-	-	-	-	-	0.67
PH417	Pharmaceutical Analysis-III	0.25	0.25	0.25	0.25	-	-	-	-	-	-	-
PH418	Medicinal Chemistry-III	0.08	-	0.08	-	-	-	-	-	-	-	0.17
PH419	Pharmaceutical Technology-II	0.56	-	0.58	-	-	-	-	-	-	-	0.25
PH422	Clinical Pharmacy and pharmacotherapeutis-II	0.56	0.88	0.25	-	-	0.25	0.25	0.25	0.25	-	0.13
PH423	Medicinal Chemistry-IV	0.23	-	0.28	-	-	-	-	-	-	-	0.56
PH424	Dosage Form Design	0.17	0.17	0.17	0.17	-	0.17	0.17	0.17	-	-	0.17
PH425	Novel Drug Delivery System	0.26	0.17	0.56	0.17	0.56	0.17	0.17	0.56	-	-	0.17
Total Mapped Courses		50	11	49	14	2	6	7	18	4	4	43
Total Attainment Value		65.33	6.93	69.66	18.78	1.56	2.76	6.68	25.9	3.19	5.66	49.98
Average Attainment Value		1.30	0.63	1.42	1.34	0.78	0.46	0.95	1.43	0.79	1.41	1.16

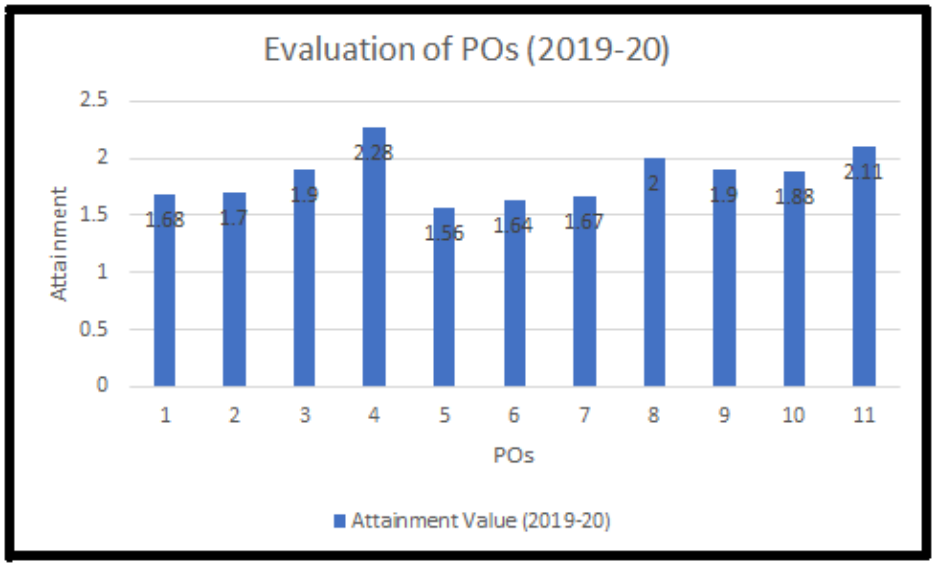
Based on core courses

Summary of PO Attainment for Academic Year 2018-19

Academic Year	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
2018-2019	1.5	0.63	1.57	1.34	1.06	1.34	1.58	1.58	1.07	1.56	1.36

Attainment AY 2019-20

Attainment of POs



Attainment of POs for Academic Year 2019-20

Course Code	Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BPH1001	Human Anatomy and Physiology	1.13	-	0.67	-	-	-	-	-	-	-	2.67
BPH1002	Pharmaceutical Analysis	1.38	-	1.38	-	-	-	-	-	-	-	1.25
BPH1003	Pharmaceutics-I	1.00	-	0.75	-	-	1.25	1.75	-	1.25	-	0.75
BPH1004	Pharmaceutical Inorganic Chemistry	1.10	-	2.33	-	-	2.56	2.67	-	1.56	-	2.67
BPH1005	Remedial Biology	3.00	-	-	-	-	-	-	-	-	-	-
HS1001	Communication skills	2.25	-	-	-	-	-	-	2.17			2.25

BPH1001P	Human Anatomy and Physiology-I	2.50	-	3.00	-	-	-	-	2.10	-	-	1.90
BPH1002P	Pharmaceutical Analysis-I	3.00	-	2.50	-	-	-	-	0.50	-	-	3.00
BPH1003P	Pharmaceutics-I	3.00	-	2.56	-	-	-	-	2.56	-	-	-
BPH1004P	Pharmaceutical Inorganic Chemistry	2.13	-	1.90	-	-	-	-	1.00	-	-	1.00
HS1001P	Communication skills	-	-	-	-	-	-	-	2.25	-	-	1.75
BPH1005P	Remedial Biology (Practical)*	3.00	-	2.67	-	-	-	-	3.00	-	-	-
BPH2001	Human Anatomy and Physiology – II	1.25	-	1.67	-	-	1.56	1.67	-	1.56	-	1.25
BPH2002	Pharmaceutical organic Chemistry – I	1.34	-	1.28	-	-	-	-	-	-	-	1.17
BPH2003	Pharmaceutical Engineering	1.25	-	1.75	-	-	-	-	-	-	0.75	0.75
BPH2004	Computer Applications in Pharmacy	2.67	-	2.67	2.89	-	-	-	-	-	-	3.00
BPH2001P	Human Anatomy and Physiology-II	3.00	-	2.25	-	-	-	-	2.25	3.00	-	3.00
BPH2002P	Pharmaceutical Organic Chemistry-I	0.75	-	0.50	-	-	-	-	2.67	-	-	2.67
BPH2003P	Pharmaceutical Engineering	3.00	-	3.00	3.00	-	-	-	3.00	-	-	3.00
BPH2004P	Computer Applications in Pharmacy	1.67	-	1.25	2.67	-	-	-	2.67	-	-	3.00
BPH3001	Pharmaceutical Organic Chemistry-II	1.34	-	1.28	-	-	-	-	-	-	-	1.17
BPH3002	Physical Pharmaceutics-I	0.82	-	0.53	-	-	-	-	-	-	-	0.50
BPH3003	Pharmaceutical Microbiology	1.20	-	1.34	1.67	-	-	-	-	-	-	0.50
BPH3004	Pathophysiology	3.00	-	-	-	-	-	-	-	-	-	3.00
BPH3005	Environmental Sciences	1.67	-	-	2.67	-	-	-	-	-	1.84	1.67

BPH3001P	Pharmaceutical Organic Chemistry-II	2.00	1.00	1.5	-	-	-	-	-	-	-	1.00
BPH3002P	Physical Pharmaceutics-I	2.01	-	1.84	-	-	-	-	1.17	-	-	1.67
BPH3003P	Pharmaceutical Microbiology	2.34	-	2.55	-	-	-	-	2.50	-	-	2.34
BPH4001	Pharmaceutical Organic Chemistry – III	2.17	-	2.00	-	-	-	-	-	-	-	2.00
BPH4002	Biochemistry	2.27	-	-	-	-	-	-	-	-	-	2.84
BPH4003	Physical Pharmaceutics – II	2.86	-	2.81	-	-	-	-	-	-	-	-
BPH4004	Pharmacology	1.70	-	1.71	-	-	-	-	-	-	-	1.63
BPH4005	Pharmacognosy	2.21	-	1.50	-	-	-	-	-	-	3.00	1.67
BPH4002P	Biochemistry	3.00	-	2.90	-	-	-	-	2.50	-	-	3.00
BPH4003P	Physical Pharmaceutics-II	2.25	-	2.00	1.50	-	-	-	1.00	-	-	2.25
BPH4004P	Pharmacology-I	1.42	-	0.87	-	-	-	1.34	1.50	-	-	0.34
BPH4005P	Pharmacognosy-I	3.00	-	2.89	3.00	-	-	-	2.67	-	-	-
BPH5001	Medicinal Chemistry-I	0.96	-	0.96	-	-	-	-	-	-	-	-
BPH5002	Industrial Pharmacy – I	0.88	-	0.88	-	-	-	-	-	-	-	0.84
BPH5003	Pharmacology – II	0.42	0.00	0.25	-	-	-	-	-	-	-	0.17
BPH5004	Pharmacognosy – II	1.03	-	0.97	1.50	-	-	-	-	-	-	1.50
BPH5005	Pharmaceutical jurisprudence	0.97	-	1.04	-	-	1.01	1.01	-	0.87	-	0.95
BPH5001P	Medicinal Chemistry-I	2.17	2.17	2.17	2.17	-	-	-	2.17	-	-	-
BPH5002P	Industrial Pharmacy-I	2.34	2.46	1.97	2.45	-	-	-	2.67	2.25	-	2.39
BPH5003P	Pharmacology-II	2.09	1.00	1.92	-	-	-	-	1.25	-	-	2.11
BPH5004P	Pharmacognosy-II	2.92	2.84	2.79	2.89	-	-	-	2.73	-	-	3.00
BPH6001	Medicinal Chemistry – II	2.38	-	2.38	-	-	-	-	-	-	-	2.50
BPH6002	Pharmacology – III	2.50	-	2.50	-	-	-	-	-	-	-	3.00
BPH6003	Herbal Drug and Technology	2.31	-	-	1.70	-	-	-	-	-	-	2.67
BPH6004	Industrial Pharmacy – II	2.56	-	2.92	-	-	-	1.50	-	2.13	-	2.50
BPH6005	Biotechnology	2.40	-	1.63	-	-	1.80	1.67	-	1.67	-	2.40

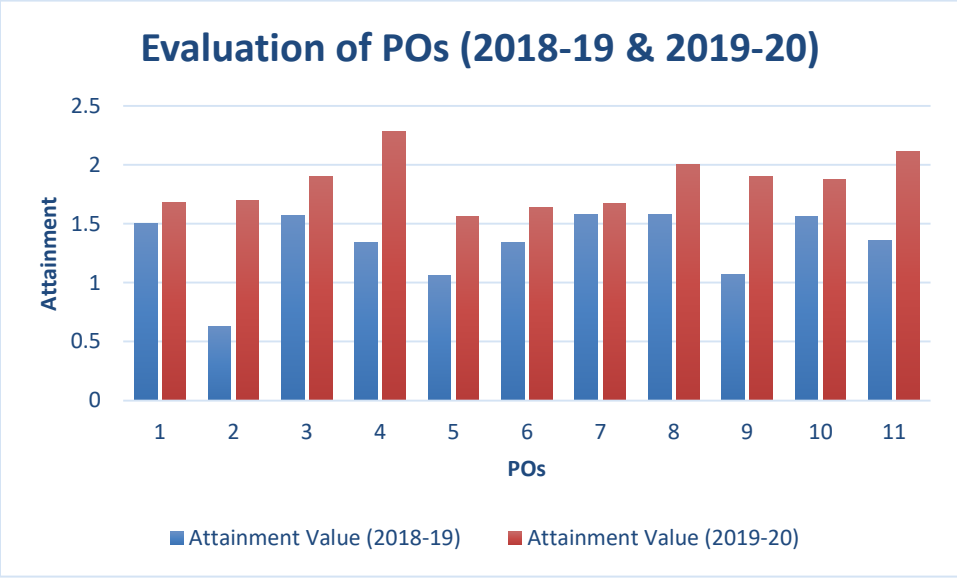
BPH6006	Instrumental Methods of Analysis	2.67	-	2.67	-	-	-	-	-	-	-	1.25
BPH6002P	Pharmacology-III	2.92	2.67	2.83	-	-	-	-	2.50	-	-	2.89
BPH6003P	Herbal Drug Technology	3.00	-	3.00	3.00	-	-	-	-	-	-	3.00
BPH6006P	Instrumental Methods of Analysis	0.94	-	1.15	2.25	-	-	-	2.00	-	-	0.94
PH418	Medicinal Chemistry-III	2.67	-	2.56	-	-	-	-	-	-	-	1.56
PH430	Clinical Pharmacy and pharmacotherapeutis-II	2.67	1.56	1.50	-	-	1.17	1.17	1.56	2.67	-	2.67
PH431	Traditional Medicine and Herbal drug Technology	1.45	-	1.50	1.50	-	-	-	-	-	-	1.42
PH432	Pharmaceutical Analysis-III	2.00	-	1.61	-	-	-	-	-	-	-	1.78
PH433	Pharmaceutical Technology-II	1.84	1.67	1.42	1.67	1.23	-	-	1.67	-	-	1.84
PH425	Novel Drug Delivery System	1.00	-	1.00	-	1.67	-	-	-	-	-	1.25
PH434	Clinical Pharmacy and pharmacotherapeutis-II	1.00	-	1.00	-	-	-	-	-	-	-	1.25
PH435	Dosage Form Design	2.25	-	2.25	-	-	-	-	-	-	-	2.25
PH436	Medicinal chemistry- IV	2.06	-	2.08	-	-	-	-	-	-	-	2.13
Total Mapped Courses		78	9	55	16	2	6	8	26	9	3	52
Total Attainment Value		126.08	15.37	101.58	36.53	2.9	9.35	12.78	52.08	16.96	5.59	104.9
Average Attainment Value		1.61	1.70	1.88	2.28	1.45	1.55	1.59	2.00	1.88	1.86	2.09

Based on core courses

Summary of PO Attainment for Academic Year 2019-20

Academic Year	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
2019-2020	1.68	1.70	1.90	2.28	1.56	1.64	1.67	2.00	1.90	1.88	2.11

Comparison for POs Attainment



ANNEXURE-II

Faculty of Pharmacy

Attainment Levels for POs and Summary of Actions Identified for Improvement

POs	Target Level	Attainment Level	Observations
	PO1: Pharmacy Knowledge: Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.		
PO1	**Target Level**	**Attainment Level**	Pharmacy knowledge includes core attributes for pharmacy graduates. Though the attainment level is fairly good, year to year, the attempts were coordinated to consolidate this outcome.
2019-20	3	1.68	
2018-19	3	1.50	
	Action 1: Guest lecture of experts from academia and industries are to be arranged on regular basis for each semester of B. Pharm program. **Action 2:** Students to be encouraged for participation in seminar/workshops/conferences and technical events organized within campus as well as outside University. Students participated in various competitions like poster presentation, model preparation and technical quizzes. **Action 3:**Students are to be trained for Prescription audit as a part of clinical pharmacy practice course **Action 4:** Visit to blood bank is to be arranged to learn the process of separation of various components from blood. **Action 5:** Training for GPAT examination is planned to aspiring students.		
	PO2: Planning Abilities: Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.		
PO2	**Target Level**	**Attainment Level**	Planning is vital to get success. Though it can't be taught directly, continuous efforts are needed.
2019-20	3	1.70	
2018-19	3	0.63	
	Action 1: Students are to be motivated for their active involvement in technical, co-curricular and extracurricular activities at institute and University levels.		

<table>
<tr><td></td><td colspan="3">Action 2: Institute to facilitate organization of various events wherein students are supposed to plan and co-ordinate the activities. The events are Teacher’s day, annual day, AVALANCHE – a PharmaTechFest, PHARMABATTLE – a Pharma Cricket Tournament. These events are handled completely by the students.
Action 3: Students areto be instructed for planning their experiments during practical sessions in a manner so that there is optimal utilization of products prepared during practical as samples or ingredient for the subsequent practical.</td></tr>
<tr><td></td><td colspan="3">PO3: Problem analysis: Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.</td></tr>
<tr><td>PO3</td><td>Target Level</td><td>Attainment Level</td><td rowspan="3">It is expected that graduates from professional courses must be able to solve technical and field related issues.</td></tr>
<tr><td>2019-20</td><td>3</td><td>1.90</td></tr>
<tr><td>2018-19</td><td>3</td><td>1.57</td></tr>
<tr><td></td><td colspan="3">Action 1: Students are to be involved in many decision making committee like human resource and development cell for students.
Action 2: Students are to be involved in e-newsletter publication of RPCP and Students’ Magazine of CHARUSAT.
Action 3: Introduction of the course on creativity problem solving and innovation.</td></tr>
<tr><td></td><td colspan="3">PO4: Modern tool usage: Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.</td></tr>
<tr><td>PO4</td><td>Target Level</td><td>Attainment Level</td><td rowspan="3">The knowledge of constructing, obtaining and using tool is technology. Sharing of information through paper records and traditional method of teaching is now replaced with modern technology which positively affects the students’ care, improvement in outcomes.</td></tr>
<tr><td>2019-20</td><td>3</td><td>2.28</td></tr>
<tr><td>2018-19</td><td>3</td><td>1.34</td></tr>
<tr><td></td><td colspan="3">Action 1: Faculties have to developed their blogs by which students would be benefited for material, their queries can be solved.
Action 2: Faculty members are to be encouraged to use platform such as Edmodo® for being connected with the learners and can give assignment, schedule quizzes and manage progress of learning.
Action 3: Faculty members have to create their websites
Action 4: Faculty members may use interactive pad for teaching sessions.
Action 5: IT enabled examination: Tablets are being used for conducting the examinations based on multiple choice questions, assignments etc. This may be extended.
Action 6: Software based practicals are conducted in the courses of pharmacology, medicinal chemistry and pharmaceutics.</td></tr>
<tr><td></td><td colspan="3">PO5: Leadership skills: Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible</td></tr>
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<table>
<tr><td></td><td colspan="3">citizens or leadership roles when appropriate to facilitate improvement in health and well-being.</td></tr>
<tr><td>PO5</td><td>Target Level</td><td>Attainment Level</td><td rowspan="3">Leadership is a quality which cannot be acquired by any person from the other but it can be acquired by self-determination of a person. Leadership can best be called the personality of the very highest ability-whether in ruling, thinking, imagining, innovation, warring, or religious influencing.</td></tr>
<tr><td>2019-20</td><td>3</td><td>1.56</td></tr>
<tr><td>2018-19</td><td>3</td><td>1.06</td></tr>
<tr><td></td><td colspan="3">Action 1: Students’ Council is constituted by scheduling an election. Nominees do canvassing before election of class representatives. The activities to be taken up to participate students’ council.
Action 2: Students from each class of B. Pharm program should participate in NSS activities.
Action 3: Class representatives are to be advised to take the responsibility of coordination with class for various Institutional activities.
Action 4: Technical events to be organized at institute may require active students participation in organization.
Action 5: Students are to be encouraged to contribute in Students’ Magazine – The QUILL., e-newsletter “Pharmaphore U”. Students get opportunities to enhance their creativities, team work and leadership skills through this activity.</td></tr>
<tr><td></td><td colspan="3">PO6: Professional Identity: Understand, analyze and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).</td></tr>
<tr><td>PO6</td><td>Target Level</td><td>Attainment Level</td><td rowspan="3">Students’ professional identity formation is important for enabling the successful transition between academic education and professional practice. Recognition of this resulted in significant changes in profession education</td></tr>
<tr><td>2019-20</td><td>3</td><td>1.64</td></tr>
<tr><td>2018-19</td><td>3</td><td>1.34</td></tr>
<tr><td></td><td colspan="3">Action 1: Institute organizes various pharmacy events such as national pharmacy week, pharmacist day celebration, teachers’ day celebration, and health awareness programs for communicating the role of pharma professionals in the society. The extent may be increased.
Action 2: National level Technical festival like AVALANCHE organized by college which involves various events like pharma modeling, poster presentation, marketing where students actively participated. Such events may be organized with active participation from the students.
Action 3: Various theme based seminar and workshop are to be conducted.
Action 4: Guest lecture of professional personnel are to be organized to impart knowledge to students.
Action 5: Active participation of students in Pharma elocution competition at state and national level is to be ensured.
Action 6: Alumni who have qualified national level competitive examinations may provide guidance and motivation to the students.</td></tr>
<tr><td></td><td colspan="3">PO7: Pharmaceutical Ethics: Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.</td></tr>
</table>

PO7	**Target Level**	**Attainment Level**	There is hardly any course targets ethics in pharmaceutical ethics. It has to be imbibe indirectly by following actions
2019-20	3	1.67	
2018-19	3	1.58	
	Action 1: Dissemination of Pharmacists' Oath. **Action 2**: Experts from pharmaceutical regulatory agency are to be invited to deliver talk and share their field-experience. **Action 3:** Visit to Food and Drug Laboratory has to be arranged. **Action 4**: Information about approval of IAEC for proper and ethical use and handling of animals is to be shared with students. **Action 5:** Students are to be taught about formulation audit, literature (Leaflet) audit, prescription audit and errors. **Action 6:** Students are to be instructed about the penalties in case of unfair means observed during examinations. **Action 7:** Courses like Values and Ethics is to be taught to students and plagiarism in academics is to be incorporated.		
	PO8: Communication: Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.		
PO8	**Target Level**	**Attainment Level**	It is perhaps the most significant tool to impress the findings. The graduates are expected for being thorough in inter-personal communication ability. Though course is incorporated in syllabus but by looking at below average attainment level, extra efforts were undertaken.
2019-20	3	2.00	
2018-19	3	1.58	
	Action 1: Student are to be encouraged for participation in essay competition, technical events like poster presentation, model making. Students are involved in anchoring and hosting the functions. **Action 2:** Academy for Graduate Admissions and Competitive Examinations (AGACE) has established at CHARUSAT. The objectives of the academy primarily include providing overall guidance, quality assistance or coaching to aspiring immigrants of CHARUSAT to enhance their career prospects. The students may take advantage of this initiative.		
	PO9: The Pharmacist and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice.		
PO9	**Target Level**	**Attainment Level**	Pharmacists are an integral component in healthcare systems. Students must realize their probable role in societal actions as pharmacist. These can't only be taught in class. Instead, it is felt that extra efforts are needed.
2019-20	3	1.90	
2018-19	3	1.07	
	Action 1: Community services like health awareness program, blood donation camp, cleanliness program, organ donation rally etc are to be organized in collaboration with EOC, NSS units.		

<table>
<tr><td></td><td colspan="3">Action 2: Health check-up of students and staff is organized every year. This has to be kept as regular practice.
Action 3: Under the Cell for Prevention of Sexual Harassment (CPSH), awareness program are to be organized to educate the girl students on the campus about the legal and safety issues like self-defence etc.
Action 4: Students participate in various activities of CHARUSAT Rural Education Development Program (CREDP). CREDP cell organizes education enrichment activities like training programs, tests, competitions for students, workshops & seminars, career counselling programs, awareness and motivational programs, exhibitions, school visit, school survey, etc. This is to be continued.</td></tr>
<tr><td></td><td colspan="3">PO10: Environment and sustainability: Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.</td></tr>
<tr><td>PO10</td><td>Target Level</td><td>Attainment Level</td><td rowspan="3">There must be a committee which look upon the recommendations on environmental issues, and shall generally, investigate, promote, advise, recommend, and assist in the implementation of measures that will improve the quality of life, the livability, and the working environment for the residents, visitors and businesses through the integration of the principles of sustainability and sound environmental practice to all municipal functions and operations, as established by the Environment & Sustainability Committee Terms of Reference.</td></tr>
<tr><td>2019-20</td><td>3</td><td>1.88</td></tr>
<tr><td>2018-19</td><td>3</td><td>1.56</td></tr>
<tr><td></td><td colspan="3">Action 1: Students are to be oriented towards Waste Management through environmentally sustainable technologies.
Action 2: Paperless systems are adopted at various stages. IT enabled examination system is to be set.
Action 3: Fume hoods are needed to be installed in laboratory.
Action 4: Students are to be educated about chemical hazards with the help of fire and chemical safety charts available in laboratory.
Action 5: Practicals are to be designed to minimize /rationalized the usage of animals.
Action 6: A course on Environmental science is part of the curriculum. There is a need of practice based course on environment.
Action 7: Visit to botanical garden like Indroda park, Gandhinagar is to be planned.</td></tr>
<tr><td></td><td colspan="3">PO11: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing basis.</td></tr>
<tr><td>PO11</td><td>Target Level</td><td>Attainment Level</td><td rowspan="3">Students are found to be average performer in self-learning.</td></tr>
<tr><td>2019-20</td><td>3</td><td>2.11</td></tr>
<tr><td>2018-19</td><td>3</td><td>1.36</td></tr>
<tr><td></td><td colspan="3">Action 1: Industry visit/academic tour (Expo/blood bank visit, hospital and pharmacy visit), herbal garden visit were arranged, and to be continued.</td></tr>
</table>

	Action 2: Industrial training is mandatory as per academic regulations for B. Pharm. This is to be implemented for M. Pharm too. **Action:3 :** Enhancement of the practical skills of the students, a "SUMMER SCHOOL" program is started for 3-4 week for RPCP students. This programme may be popularized and scope is created for more students. **Action 4:** Feedback from employer is to be shared with the students for identifying their learning needs. **Action 5:** Industry academia meets are organized, which has to be continued. **Action 6:** Availability of life learning, motivational, inspirational books in library facilitated through library slot in time table. Possibility of increase in library utilization is to be explored. **Action 7:** Spiritual lectures are arranged regularly. **Action 8:** A robust system of student counseling is in place. This is to be continued. **Action 9:** A course on creativity, problem solving and innovation is offered. This course may help the students.

ANNEXURE-I

Charotar University of Science and Technology [CHARUSAT]
Faculty of Technology and Engineering [FTE]
Chandubhai S. Patel Institute of Technology [CSPIT]
Department of Mechanical Engineering (Year 2019-20- Even Semester)
Attainment of POs

Sr . No.	Course Name	Course Code	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2
1	Numerical and Statistical Methods	MA248	1.5	1.5	1.3	1.7	1.5	0.7	0.8	-	-	-	0.8	1.5		
2	Manufacturing Processes-II	ME 245	0.9	0.3	-	-	-	-	-	-	-	-	-	1.3	-	1.4
3	Material Engineering & Metallurgy	ME 246	2.2	1.7	2.0	2.0	1.8	1.2	1.3	-	1.3	-	-	1.5	2.0	
4	Fluid Mechanics	ME247	2.2	1.3	0.8	-	-	-	-	-	-	-	-	-	1.5	
5	Dynamics of Machines	ME 248	1.5	1.8	1.8	1.5	1.0	-	-	-	0.9	-	-	1.3	1.3	
6	Design of Machine Elements-I	ME 347	3.0	3.0	2.8	2.5	2.3	2.3	-	-	3.0	-	-	3.0	3.0	
7	Refrigeration & Air Conditioning	ME344	2.2	2.0	1.6	0.8	-	-	-	-	0.8	-	-	1.5	0.8	
8	Fluid Machines	ME 346	2.3	1.9	-	-	-	-	-	-	-	-	-	-	0.7	
9	Production Technology	ME 348	1.6	1.5	-	-	-	-	-	-	-	-	-	0.9	-	2.6
10	Finite Element Methods	ME372.01	2.5	2.1	2.1	2.1	1.4	-	-	-	-	-	-	-	2.9	
11	Automobile Engineering	ME374	2.0	-	1.8	1.3	1.3	1.6	-	-	-	-	-	2.4	1.3	
12	Advanced Materials	ME375	1.3	-	1.0	-	0.8	-	0.5	-	-	-	-	-	-	0.5
13	Mechanical Measurement & Metrology	ME 345	2.7	2.7	-	3.0	2.2	1.7	-	-	-	-	-	2.7	1.8	
14	POWER PLANT ENGINEERING	ME447	2.3	2.8	0.6	0.8	-	1.9	1.9	-	-	-	-	-	0.9	-
15	COMPUTER AIDED MANUFACTURING	ME448	1.8	0.9	0.9	0.9	0.8	0.4	-	0.6	1.0	-	-	1.4	-	1.3
16	INDUSTRIAL ENGINEERING & MANAGEMENT	ME449	3.0	2.0	2.0	-	2.0	3.0	2.0	1.9	1.9	1.5	3.0	3.0	1.0	1.0
17	CONTROL ENGINEERING	ME 450	2.6	2.2	2.2	1.2	1.2	1.1	-	-	1.3	-	1.0	2.0	1.8	
18	OPTIMIZATION TECHNIQUES	ME477	1.9	1.3	1.1	0.9	2.0	0.8	0.8	-	1.1	0.9	-	2.0	1.5	1.3

19	INDUSTRIAL TRIBOLOGY	ME 478	2.4	1.0	1.8	-	-	-	-	-	-	-	-	-	1.9	-
20	ADVANCED MANUFACTURING TECHNOLOGY	ME-480	1.4	1.2	1.3	1.3	1.3	0.8	0.8	-	1.3	0.4	-	0.8	-	1.3
21	COMPUTATIONAL FLUID DYNAMICS	ME481	3.0	2.0	-	-	-	-	-	-	-	-	-	-	2.3	
22	Major Project-2	ME451	1.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	3.0	3.0	3.0	2.0	3.0	3.0
	Total Attainment		2.0	1.7	1.6	1.5	1.5	1.4	1.2	1.5	1.6	1.4	1.8	1.7	1.7	1.5

ANNEXURE-II

Charotar University of Science and Technology [CHARUSAT]
Faculty of Technology and Engineering [FTE]
Chandubhai S. Patel Institute of Technology [CSPIT]
Department of Mechanical Engineering (Year 2019-20- Even Semester)
Analysis and Action to be taken

POs	Target Value	Attainment Level	Observation
PO1: Graduates will demonstrate the knowledge of engineering fundamentals, mathematics, science and engineering specialization to solve complex engineering problem.			
PO1	2	2	• Target Achieve but some students are not integrating the basic science and mathematics for the solution of a complex problems • Some diploma students find difficulties to solve numericals.
Action1: Additional class has conducted for students to correlate basic of science with engineering subject. Atction2: More problem will be given for practice.			
PO2:Graduates will exhibit the ability to design, identify, analyze and solve problems related to mathematics, science and engineering.			
PO2	2	1.7	• Students find difficulty to analyze and solve problem-related to engineering. • Lateral entry students find difficult to implement basic mathematics in engineering subject.
Action1: Additional class of engineering mathematics has conducted for lateral entry students. Action2: Numerical incorporate during the regular classes which can help the students to analyze and to solve. Action 3: To enhance the skill more problems will be given to the students as a part of assignment.			
PO3: Graduates will exhibit the ability to design, solve and develop processes or systems which are cost-effective, technologically advanced and meets public health, safety and environmental challenges			
PO3	2	1.6	• Students are not preparing for the internal examinations

Action1: Method of internal assessment has been changed (MCQ based Question paper).			
PO4: Graduates will demonstrate ability to design and conduct experiments, analyze and interpret data through simulations to arrive at valid conclusions.			
PO4	2	1.5	• Students are not able to explain the valid conclusions for the numerical.
Action1: Teach students to correlate the numerical with practical problem and explain them to identify the advantage and disadvantages. Action2:Revision of course outcomes for the courses.			
PO5: Graduates will demonstrate the skills to use modern methods of engineering, software tools, high-tech equipments and facilities to solve various problems.			
PO5	2	1.5	• Few students are not aware about different modern tools.
Action1: faculties have developed their blogs and google class to solve query of students.			
PO6: Graduates will display their abilities in undertaking problems of technological significance with a motive to serve the society.			
PO6	2	1.4	• Lack of knowledge about professional skill.
Action1: Revision of course outcomes for the courses to put more effort serve society.			
PO7: Graduates will demonstrate ability to provide professional engineering solution in the contents of societal and environmental sustainability.			
PO7	2	1.2	• Students are not exposed to a multi-disciplinary problem related to engineering.
Action1: Project works are linked to improve Environment and sustainability.			
PO8: Graduates will exhibit responsibility in ethical and social issues.			
PO8	2	1.5	• Few students are not aware about values and ethics of engineering studies.
Action1: : Revision of course outcomes for the courses to put more effort ethics and social issues			
PO9: Graduates will demonstrate the ability to work as an individual, and as a member or leader in diverse team and in multi-			

disciplinary settings.			
PO9	2	1.6	• Some students are not participate in group activity.
Action1: Group activity based presentation has been arranged by different courses and consider it as a part of assessment method for continuous evaluation.			
PO10: Graduates will be effective in formal and informal communication in both verbal and written form and develop managerial skills			
PO10	2	1.4	• Few students are not up to mark in communication skill.
Action1: Revision of course outcomes and change in pedagogy for different courses Action2: try to make interactive doubt solving session			
PO11: Graduates will demonstrate the ability to work on multi-disciplinary problems through engineering and management principles			
PO11	2	1.8	• Few students do not know about management-related principles.
Action1: Students are encouraged to collaborate for industry-oriented project Action2: Assignments are given on project management			
PO12: Graduates will develop confidence for self-education and ability for life-long learning.			
PO12	2	1.7	• Students are not self confident to solve the different problem of engineering.
Action1: Motivate students to do hand on experiments and project based on real life or practical based problem of their own interest			

PSO1: The mechanical engineering graduates will be able to analyze, design, and evaluate the performance of mechanical components and systems by using various technological tools.			
PSO1	2	1.7	• Few students find difficulty related to solution of design and evaluate the real life problem.
Action1: Course outcomes and pedagogy of few courses are revised.			
PSO2: The mechanical engineering graduates will be able to plan and manufacture mechanical components and systems, including selection of material, method and process automation.			

PSO2	2	1.5	• Student finding difficulty to implement the hand on session on manufacturing of components
Action1: Motivate the student to developed project related to the mechanical system.			

ANNEXURE-I

Charotar University of Science and Technology [CHARUSAT]
Faculty of Technology and Engineering [FTE]
Chandubhai S. Patel Institute of Technology [CSPIT]
U & P U. Patel Department of Computer Engineering (Year 2019-2020 Even Semester)
PO & PSO Attainment

Sr. No.	Course Name	Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
1	Object Oriented Programming with C++	CE144	1.90	1.44	1.83	0.83	2.20	1.17	1.22	-	0.92	-	1.33	1.52	1.58	0.89
2	Engineering Mathematics-II	MA144	2.43	1.55	0.94	1.50	1.00	1.00	1.00	-	-	-	-	-	2.28	1.00
3	Elements of Engineering	ME145	2.15	2.00	-	-	-	3.00	-	-	-	-	-	-	-	-
4	Engineering Physics	PY141.01	2.63	2.63	1.75	1.97	2.19	-	-	-	-	-	-	-	-	-
5	Communication Skills - I	HS126.01A	-	-	-	-	-	1.75	-	1.67	1.75	2.60	-	1.00	-	1.60
6	Data Structure and Algorithms	CE245	1.80	1.81	2.10	1.79	1.20	-	-	-	-	-	-	1.78	2.05	-
7	Database Management System	CE246	2.35	2.35	1.84	1.86	1.60	1.18	0.95	1.77	1.45	0.87	-	1.80	1.84	1.30
8	Web Technologies	CE247	2.28	2.11	2.56	1.11	2.61	2.00	-	1.60	1.72	-	1.72	1.80	2.60	2.11
9	Operating System	CE248	2.79	1.90	-	-	1.86	-	-	-	-	-	-	0.92	-	0.95
10	Computer Organization	CE256	1.97	2.20	2.22	0.89	-	-	-	0.74	0.74	-	-	0.67	1.61	-
11	Software Group Project - II	CE255	3.00	2.50	2.00	1.50	2.50	1.50	-	2.75	1.92	3.00	-	1.00	3.00	-
12	Creativity, Innovation and Problem Solving	HS133A	2.25	1.00	1.75	1.00	1.00	2.67	2.67	2.00	1.50	2.00	2.50	2.25	-	1.00
13	Internals of Operating System	CE347	1.61	0.86	2.01	1.24	1.92	1.00	-	0.83	-	-	-	-	1.28	1.68
14	Information Security	CE348	1.63	1.79	2.46	1.47	2.18	1.04	1.70	1.36	1.17	0.86	1.67	-	1.81	1.13
15	Theory of Computation	CE349	1.95	1.21	1.54	-	-	-	-	-	-	-	-	-	1.73	-
16	Data Warehouse and Data Mining	CE350	1.60	1.56	1.91	2.24	2.02	0.86	1.21	-	-	-	-	1.39	1.21	1.81
17	Digital Image Processing	CE375	2.25	2.43	1.97	1.97	1.97	3.00	2.00	-	-	-	-	0.92	1.00	0.86
18	Programming in Python	CE376	2.31	2.16	1.62	1.25	2.69	-	-	-	-	-	-	1.00	1.65	1.18
19	Software Group Project - III	CE351	3.00	2.50	1.50	2.00	2.00	1.00	-	3.00	2.00	3.00	1.00	2.33	2.00	-
20	Contributor Personality Development	HS134A	-	-	2.00	-	-	1.67	2.00	2.00	3.00	1.00	2.00	1.00	1.00	3.00

21	Software Project Major	CE447	2.50	2.00	1.80	1.50	2.00	3.00	1.50	3.00	1.67	2.00	1.25	1.60	2.00	1.83
Overall Attainment			**2.23**	**1.90**	**1.88**	**1.51**	**1.93**	**1.72**	**1.58**	**1.88**	**1.62**	**1.92**	**1.64**	**1.40**	**1.79**	**1.45**

ANNEXURE-II

Charotar University of Science and Technology [CHARUSAT]

Faculty of Technology and Engineering [FTE]

Chandubhai S. Patel Institute of Technology [CSPIT]

U & P U. Patel Department of Computer Engineering (Year 2019-2020 Even Semester)

Analysis and Action to be taken

POs	Target Level	Attainment Level	Observation
PO1:	**Engineering knowledge:** Apply knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.		
PO1	1.5	2.23	➢ Target achieved ➢ A minority percentage of students, mainly diploma students, struggled with basic mathematical calculations.
PO2:	**Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.		
PO2	1.5	1.90	➢ Target achieved ➢ Few students struggle with engineering problem analysis.
PO3:	**Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, and the cultural, societal, and environmental considerations.		
PO3	1.5	1.88	➢ Target achieved ➢ However, optimal solution design is not carried out by students
PO4:	**Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.		
PO4	1.5	1.51	➢ Target achieved ➢ Research exposer
Action-1:	Research components will be added in courses		
PO5:	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.		
PO5	1.5	1.93	➢ Target achieved
Action-1:	Faculties will be advices to introduce modern tools and technology presentation in laboratory sessions		

PO6:	**The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.		
PO6	1.5	1.72	➢ Target achieved, however focus on humanity course will be increased.
PO7:	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.		
PO7	1.5	1.58	➢ Target achieved
PO8:	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.		
PO8	1.5	1.88	➢ Target achieved
Action-1: Work should be evaluated after checking plagiarism.			
PO9:	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.		
PO9	1.5	1.62	➢ Target achieved
Action-1: Team work oriented Group project will be offered.			
PO10:	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.		
PO10	1.5	1.92	➢ Target achieved
PO11:	**Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.		
PO11	1.5	1.64	➢ Target achieved
PO12:	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.		
PO12	1.5	1.4	➢ Target is missed
Action-1: Derive method to incorporate lifelong learning into curriculum.			

PSOs	Target Level	Attainment Level	Observation
PSO1:	Apply good analytical, design and implementation skills required to formulate and solve computational problems.		
PSO1	1.5	1.79	➢ Target achieved
PSO2:	Excellent adaptability to function in a multi-disciplinary work environment, good interpersonal skills		

in appreciation of professional ethics and societal responsibilities.			
PSO2	1.5	1.45	➢ Target is missed
Action-1: Multidisciplinary project will be offered.			