

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI**

**BE/B.TECH Scheme of Teaching and Examinations
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
(Effective from the Academic Year 2018-2019)**

| VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI | | | | | | | | | | | | |
|--|------------------------|------------|---|----------------------|----------------------|-----------|--------------------|-------------------|------------|------------|-------------|-----------|
| Scheme of Teaching and Examination 2018 – 19 | | | | | | | | | | | | |
| Outcome Based Education(OBE) and Choice Based Credit System (CBCS) | | | | | | | | | | | | |
| (Effective from the academic year 2018 – 19) | | | | | | | | | | | | |
| III SEMESTER: B.E PETROCHEM ENGINEERING | | | | | | | | | | | | |
| Sl. No | Course and Course Code | | Course Title | Teaching Department | Teaching Hours /Week | | | Examination | | | | Credits |
| | | | | | Theory Lecture | Tutorial | Practical/ Drawing | Duration in hours | CIE Marks | SEE Marks | Total Marks | |
| | | | | | L | T | P | | | | | |
| 1 | BSC | 18MAT31 | Transform Calculus, Fourier Series And Numerical Techniques | Mathematics | 2 | 2 | -- | 03 | 40 | 60 | 100 | 3 |
| 2 | PCC | 18CH32 | Chemical Process Calculations | Chemical / Petrochem | 3 | 2 | -- | 03 | 40 | 60 | 100 | 4 |
| 3 | PCC | 18CH33 | Momentum Transfer | Chemical / Petrochem | 3 | 0 | -- | 03 | 40 | 60 | 100 | 3 |
| 4 | PCC | 18PC34 | Physical, Organic and Inorganic Chemistry | Chemistry | 3 | 0 | -- | 03 | 40 | 60 | 100 | 3 |
| 5 | PCC | 18PC35 | Introduction to Petrochemical Engineering | Chemical / Petrochem | 3 | 0 | -- | 03 | 40 | 60 | 100 | 3 |
| 6 | PCC | 18PC36 | Instrumental Methods of Chemical Analysis | Chemical / Petrochem | 3 | 0 | -- | 03 | 40 | 60 | 100 | 3 |
| 7 | PCC | 18PCL37 | Momentum Transfer Laboratory | Chemical / Petrochem | -- | 2 | 2 | 03 | 40 | 60 | 100 | 2 |
| 8 | PCC | 18PCL38 | Petroleum Product Analysis Laboratory | Chemical / Petrochem | -- | 2 | 2 | 03 | 40 | 60 | 100 | 2 |
| 9 | HSMC | 18KVK39/49 | Vyavaharika Kannada (Kannada for communication)/ | HSMC | -- | 2 | -- | -- | 100 | -- | 100 | 1 |
| | | 18KAK39/49 | Aadalitha Kannada (Kannada for Administration) | | | | | | | | | |
| | | OR | OR | | | | | | | | | |
| | | 18CPC39 | Constitution of India, Professional Ethics and Cyber Law | | 1 | -- | -- | 02 | 40 | 60 | | |
| TOTAL | | | | | 17 | 08 | | 24 | 420 | 480 | 900 | 24 |
| | | | | | OR | OR | 04 | OR | OR | OR | | |
| | | | | | 18 | 10 | | 26 | 360 | 540 | | |
| Note: BSC: Basic Science, PCC: Professional Core, HSMC: Humanity and Social Science, NCMC: Non-credit mandatory course. | | | | | | | | | | | | |
| 18KVK39 Vyavaharika Kannada (Kannada for communication) is for non-Kannada speaking, reading and writing students and 18KAK39 Aadalitha Kannada (Kannada for Administration) is for students who speak, read and write Kannada. | | | | | | | | | | | | |
| Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs | | | | | | | | | | | | |
| 10 | NCMC | 18MATDIP31 | Additional Mathematics - I | Mathematics | 02 | 01 | -- | 03 | 40 | 60 | 100 | 0 |
| (a)The mandatory non – credit courses Additional Mathematics I and II prescribed for III and IV semesters respectively, to the lateral entry Diploma holders admitted to III semester of BE/B. Tech programs, shall attend the classes during the respective semesters to complete all the formalities of the course and appear for the University examination. In case, any student fails to register for the said course/fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have secured F grade. In such a case, the students have to fulfill the requirements during subsequent semester/s to appear for SEE. | | | | | | | | | | | | |
| (b)These Courses shall not be considered for vertical progression, but completion of the courses shall be mandatory for the award of degree. | | | | | | | | | | | | |
| Courses prescribed to lateral entry B. Sc degree holders admitted to III semester of Engineering programs | | | | | | | | | | | | |
| Lateral entrant students from B.Sc. Stream, shall clear the non-credit courses Engineering Graphics and Elements of Civil Engineering and Mechanics of the First Year Engineering Programme. These Courses shall not be considered for vertical progression, but completion of the courses shall be mandatory for the award of degree. | | | | | | | | | | | | |
| AICTE Activity Points to be earned by students admitted to BE/B. Tech/B. Plan day college programme (For more details refer to Chapter 6,AICTE Activity Point Programme, Model Internship Guidelines): | | | | | | | | | | | | |
| Over and above the academic grades, every Day College regular student admitted to the 4 years Degree programme and every student entering 4 years Degree programme through lateral entry, shall earn 100 and 75 Activity Points respectively for the award of degree through AICTE Activity Point Programme. Students transferred from other Universities to fifth semester are required to earn 50 Activity Points from the year of entry to VTU. The Activity Points earned shall be reflected on the student's eighth semester Grade Card. | | | | | | | | | | | | |
| The activities can be spread over the years, anytime during the semester weekends and holidays, as per the liking and convenience of the student from the year of entry to the programme. However, minimum hours' requirement should be fulfilled. Activity Points (non-credit) have no effect on SGPA/CGPA and shall not be considered for vertical progression. | | | | | | | | | | | | |
| In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card. | | | | | | | | | | | | |

| VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI | | | | | | | | | | | | |
|---|------------------------|------------|--|----------------------|----------------------|-----------|--------------------|-------------------|------------|------------|-------------|-----------|
| Scheme of Teaching and Examination 2018 – 19 | | | | | | | | | | | | |
| Outcome Based Education(OBE) and Choice Based Credit System (CBCS) | | | | | | | | | | | | |
| (Effective from the academic year 2018 – 19) | | | | | | | | | | | | |
| IVSEMESTER: B.E PETROCHEM ENGINEERING | | | | | | | | | | | | |
| Sl. No | Course and Course code | | Course Title | Teaching Department | Teaching Hours /Week | | | Examination | | | | Credits |
| | | | | | Theory Lecture | Tutorial | Practical/ Drawing | Duration in hours | CIE Marks | SEE Marks | Total Marks | |
| | | | | | L | T | P | | | | | |
| 1 | BSC | 18MAT41 | Engg. Mathematics-IV (Title as per the decision of BoS in Sciences) | Mathematics | 2 | 2 | -- | 03 | 40 | 60 | 100 | 3 |
| 2 | PCC | 18CH42 | Chemical Engg Thermodynamics | Chemical / Petrochem | 3 | 2 | -- | 03 | 40 | 60 | 100 | 4 |
| 3 | PCC | 18 PC43 | Petroleum Refinery Engineering | Chemical / Petrochem | 3 | 0 | -- | 03 | 40 | 60 | 100 | 3 |
| 4 | PCC | 18PC44 | Technology of Intermediate Petrochemicals | Chemical / Petrochem | 3 | 0 | -- | 03 | 40 | 60 | 100 | 3 |
| 5 | PCC | 18CH45 | Process Heat Transfer | Chemical / Petrochem | 3 | 0 | -- | 03 | 40 | 60 | 100 | 3 |
| 6 | PCC | 18PC46 | Renewable Energy Resources and Systems | Chemical / Petrochem | 3 | 0 | -- | 03 | 40 | 60 | 100 | 3 |
| 7 | PCC | 18PCL47 | Chemical Engg. Drawing Laboratory | Chemical / Petrochem | -- | 2 | 2 | 03 | 40 | 60 | 100 | 2 |
| 8 | PCC | 18PCL48 | Heat Transfer Laboratory | Chemical / Petrochem | -- | 2 | 2 | 03 | 40 | 60 | 100 | 2 |
| 9 | HSMC | 18KVK39/49 | Vyavaharika Kannada (Kannada for communication)/ | HSMC | -- | 2 | -- | -- | 100 | -- | 100 | 1 |
| | | 18KAK39/49 | Aadalitha Kannada (Kannada for Administration) | | | | | | | | | |
| | | OR | | | | | | | | | | |
| | | 18CPC49 | Constitution of India, Professional Ethics and Cyber Law | | 1 | -- | -- | 02 | 40 | 60 | | |
| TOTAL | | | | | 17 | 08 | | 24 | 420 | 480 | 900 | 24 |
| | | | | | OR | OR | 04 | OR | OR | OR | | |
| | | | | | 18 | 10 | | 26 | 360 | 540 | | |
| Note: BSC: Basic Science, PCC: Professional Core, HSMC: Humanity and Social Science, NCMC: Non-credit mandatory course. | | | | | | | | | | | | |
| 18KVK39/49 Vyavaharika Kannada (Kannada for communication) is for non-Kannada speaking, reading and writing students and 18KAK39/49 Aadalitha Kannada (Kannada for Administration) is for students who speak, read and write Kannada. | | | | | | | | | | | | |
| Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs | | | | | | | | | | | | |
| 10 | NCMC | 18MATDIP41 | Additional Mathematics - II | Mathematics | 02 | 01 | -- | 03 | 40 | 60 | 100 | 0 |
| (a)The mandatory non – credit courses Additional Mathematics I and II prescribed for III and IV semesters respectively, to the lateral entry Diploma holders admitted to III semester of BE/B. Tech programs, shall attend the classes during the respective semesters to complete all the formalities of the course and appear for the University examination. In case, any student fails to register for the said course/ fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have secured F grade. In such a case, the students have to fulfill the requirements during subsequent semester/s to appear for SEE. | | | | | | | | | | | | |
| (b) These Courses shall not be considered for vertical progression, but completion of the courses shall be mandatory for the award of degree. | | | | | | | | | | | | |
| Courses prescribed to lateral entry B. Sc degree holders admitted to III semester of Engineering programs | | | | | | | | | | | | |
| Lateral entrant students from B.Sc. Stream, shall clear the non-credit courses Engineering Graphics and Elements of Civil Engineering and Mechanics of the First Year Engineering Programme. These Courses shall not be considered for vertical progression, but completion of the courses shall be mandatory for the award of degree. | | | | | | | | | | | | |
| AICTE activity Points: In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card. | | | | | | | | | | | | |

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| Scheme of Teaching and Examination 2018 – 19 | | | | | | | | | | | | |
| Outcome Based Education(OBE) and Choice Based Credit System (CBCS) | | | | | | | | | | | | |
| (Effective from the academic year 2018 – 19) | | | | | | | | | | | | |
| V SEMESTER: B.E PETROCHEM ENGINEERING | | | | | | | | | | | | |
| Sl. No | Course and Course code | | Course Title | Teaching Department | Teaching Hours /Week | | | Examination | | | Credits | |
| | | | | | Theory Lecture | Tutorial | Practical/ Drawing | Duration in hours | CIE Marks | SEE Marks | | Total Marks |
| | | | | | L | T | P | | | | | |
| 1 | HSMC | 18CH51 | Management and Entrepreneurship | HSMC | 2 | 2 | -- | 03 | 40 | 60 | 100 | 3 |
| 2 | PCC | 18PC52 | Well Drilling Equipments and Operation | Chemical / Petrochem | 3 | 2 | -- | 03 | 40 | 60 | 100 | 4 |
| 3 | PCC | 18PC53 | Reservoir Engineering | Chemical / Petrochem/ Polymer Sci | 3 | 2 | -- | 03 | 40 | 60 | 100 | 4 |
| 4 | PCC | 18PC54 | Fundamentals of Petroleum Geology | Petrochem / Civil | 3 | -- | -- | 03 | 40 | 60 | 100 | 3 |
| 5 | PCC | 18PC55 | Mass Transfer Operations | Chemical / Petrochem | 3 | -- | -- | 03 | 40 | 60 | 100 | 3 |
| 6 | PCC | 18PC56 | Polymer Science and Technology | Chemical / Petrochem | 3 | -- | -- | 03 | 40 | 60 | 100 | 3 |
| 7 | PCC | 18PCL57 | Geology Laboratory | Petrochem / Civil | -- | 2 | 2 | 03 | 40 | 60 | 100 | 2 |
| 8 | PCC | 18PCL58 | Mass Transfer Operations Laboratory | Chemical / Petrochem | -- | 2 | 2 | 03 | 40 | 60 | 100 | 2 |
| 9 | HSMC | 18CIV59 | Environmental Studies | Civil/ Environmental [Paper setting: Civil Engineering Board] | 1 | -- | -- | 02 | 40 | 60 | 100 | 1 |
| TOTAL | | | | | 18 | 10 | 04 | 26 | 360 | 540 | 900 | 25 |
| Note: PCC: Professional Core, HSMC: Humanity and Social Science. | | | | | | | | | | | | |
| AICTE activity Points: In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card. | | | | | | | | | | | | |

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| Scheme of Teaching and Examination 2018 – 19 | | | | | | | | | | | | |
| Outcome Based Education(OBE) and Choice Based Credit System (CBCS) | | | | | | | | | | | | |
| (Effective from the academic year 2018 – 19) | | | | | | | | | | | | |
| VI SEMESTER: B.E PETROCHEM ENGINEERING | | | | | | | | | | | | |
| Sl. No | Course and Course code | | Course Title | Teaching Department | Teaching Hours /Week | | | Examination | | | | Credits |
| | | | | | Theory Lecture | Tutorial | Practical/ Drawing | Duration in hours | CIE Marks | SEE Marks | Total Marks | |
| | | | | | L | T | P | | | | | |
| 1 | PCC | 18PC61 | Natural Gas Processing | Chemical / Petrochem | 3 | 2 | -- | 03 | 40 | 60 | 100 | 4 |
| 2 | PCC | 18PC62 | Chemical Reaction Engineering | Chemical / Petrochem | 3 | 2 | -- | 03 | 40 | 60 | 100 | 4 |
| 3 | PCC | 18CH63 | Process Equipment Design and Drawing | Chemical / Petrochem | 3 | 2 | -- | 03 | 40 | 60 | 100 | 4 |
| 4 | PEC | 18PC64X | Professional Elective -1 | Chemical / Petrochem | 3 | -- | -- | 03 | 40 | 60 | 100 | 3 |
| 5 | OEC | 18PC65X | Open Elective -A | Any Dept. | 3 | -- | -- | 03 | 40 | 60 | 100 | 3 |
| 6 | PCC | 18PCL66 | Chemical Reaction Engineering Laboratory | Chemical / Petrochem | -- | 2 | 2 | 03 | 40 | 60 | 100 | 2 |
| 7 | PCC | 18PCL67 | Petroleum Testing Laboratory | Chemical / Petrochem | -- | 2 | 2 | 03 | 40 | 60 | 100 | 2 |
| 8 | MP | 18PCMP68 | Mini-project | Chemical / Petrochem | -- | -- | 2 | 03 | 40 | 60 | 100 | 2 |
| 9 | Internship | -- | Internship | (To be carried out during the intervening vacations of VI and VII semesters) | | | | | | | | |
| TOTAL | | | | | 15 | 10 | 06 | 24 | 320 | 480 | 800 | 24 |
| Note: PCC: Professional core, PEC: Professional Elective, OE: Open Elective, MP: Mini-project, INT: Internship. | | | | | | | | | | | | |
| Professional Elective -1 | | | | Open Elective -A* | | | | | | | | |
| Course code under 18PC64X | | Course Title | | Course code under 18PC65X | | Course Title | | | | | | |
| 18PC641 | | Petroleum Transportation Engineering | | 18PC651 | | Biochemical Engineering | | | | | | |
| 18PC642 | | Probability and Statistics | | 18PC652 | | Pharmaceutical Technology | | | | | | |
| 18PC643 | | Reservoir Rocks and Fluid Properties | | 18PC653 | | Material Science Engineering | | | | | | |
| Students can select any one of the open electives offered by other Departments except those that are offered by the parent Department (Please refer to the list of open electives under 18XX65X). | | | | | | | | | | | | |
| Selection of an open elective shall not be allowed if, | | | | | | | | | | | | |
| <ul style="list-style-type: none"> The candidate has studied the same course during the previous semesters of the programme. The syllabus content of open elective is similar to that of the Departmental core courses or professional electives. A similar course, under any category, is prescribed in the higher semesters of the programme. | | | | | | | | | | | | |
| Registration to electives shall be documented under the guidance of Programme Coordinator/ Advisor/Mentor. | | | | | | | | | | | | |
| Mini-project work: | | | | | | | | | | | | |
| Based on the ability/abilities of the student/s and recommendations of the mentor, a single discipline or a multidisciplinary Mini- project can be assigned to an individual student or to a group having not more than 4 students. | | | | | | | | | | | | |
| CIE procedure for Mini-project: | | | | | | | | | | | | |
| (i) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide. | | | | | | | | | | | | |
| The CIE marks awarded for the Mini-project work, shall be based on the evaluation of project report, project presentation skill and question and answer session in the ratio 50:25:25.The marks awarded for the project report shall be the same for all the batch mates. | | | | | | | | | | | | |
| (ii) Interdisciplinary: Continuous Internal Evaluation shall be group wise at the college level with the participation of all the guides of the college. | | | | | | | | | | | | |
| The CIE marks awarded for the Mini-project, shall be based on the evaluation of project report, project presentation skill and question and answer session in the ratio 50:25:25.The marks awarded for the project report shall be the same for all the batch mates. | | | | | | | | | | | | |
| SEE for Mini-project: | | | | | | | | | | | | |
| (i) Single discipline: Contribution to the Mini-project and the performance of each group member shall be assessed individually in the semester end examination (SEE) conducted at the department. | | | | | | | | | | | | |
| (ii) Interdisciplinary: Contribution to the Mini-project and the performance of each group member shall be assessed individually in semester end examination (SEE) conducted separately at the departments to which the student/s belong to. | | | | | | | | | | | | |
| Internship: All the students admitted to III year of BE/B.Tech shall have to undergo mandatory internship of 4 weeks during the vacation of VI and VII semesters and /or VII and VIII semesters. A University examination shall be conducted during VIII semester and the prescribed credit shall be included in VIII semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take-up/complete the internship shall be declared fail and shall have to complete during subsequent University examination after satisfying the internship requirements. | | | | | | | | | | | | |
| AICTE activity Points: In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card. | | | | | | | | | | | | |

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| Scheme of Teaching and Examination 2018 – 19 | | | | | | | | | | | | |
| Outcome Based Education(OBE) and Choice Based Credit System (CBCS) | | | | | | | | | | | | |
| (Effective from the academic year 2018 – 19) | | | | | | | | | | | | |
| VII SEMESTER: B.E PETROCHEM ENGINEERING | | | | | | | | | | | | |
| Sl. No | Course and Course code | | Course Title | Teaching Department | Teaching Hours /Week | | | Examination | | | Credits | |
| | | | | | Theory Lecture | Tutorial | Practical/ Drawing | Duration in hours | CIE Marks | SEE Marks | | Total Marks |
| | | | | | L | T | P | | | | | |
| 1 | PCC | 18PC71 | Research Methodology | Any Dept. | 3 | -- | -- | 03 | 40 | 60 | 100 | 3 |
| 2 | PCC | 18CH72 | Process Control and Instrumentation | Chemical/Petrochem | 3 | -- | -- | 03 | 40 | 60 | 100 | 3 |
| 3 | PEC | 18PC73X | Professional Elective - 2 | Chemical / Petrochem | 3 | -- | -- | 03 | 40 | 60 | 100 | 3 |
| 4 | PEC | 18PC74X | Professional Elective - 3 | Chemical / Petrochem | 3 | -- | -- | 03 | 40 | 60 | 100 | 3 |
| 5 | OEC | 18PC75X | Open Elective -B | Any Dept. | 3 | -- | -- | 03 | 40 | 60 | 100 | 3 |
| 6 | PCC | 18PCL76 | Process Control Laboratory | Chemical / Petrochem | -- | 2 | 2 | 03 | 40 | 60 | 100 | 2 |
| | PCC | 18PCL77 | Computer Applications Laboratory | Chemical / Petrochem | -- | 2 | 2 | 03 | 40 | 60 | 100 | 2 |
| 7 | Project | 18PCL78 | Project Work Phase-I | Chemical / Petrochem | -- | -- | 2 | -- | 100 | -- | 100 | 1 |
| 8 | Internship | -- | Internship | (If not completed during the vacation of VI and VII semesters, it has to be carried out during the intervening vacations of VII and VIII semesters) | | | | | | | | |
| TOTAL | | | | | 15 | 04 | 06 | 21 | 380 | 420 | 800 | 20 |
| Note: PCC: Professional core, PEC: Professional Elective. | | | | | | | | | | | | |
| Professional Elective - 2 | | | | | | | | | | | | |
| Course code under 18PC73X | | Course Title | | | | | | | | | | |
| 18PC731 | | Optimization Techniques for process Industries | | | | | | | | | | |
| 18PC732 | | Process Engineering and Plant Design | | | | | | | | | | |
| 18PC733 | | Onshore and Offshore Engineering and Technology | | | | | | | | | | |
| Professional Electives - 3 | | | | Open Elective –B* | | | | | | | | |
| Course code under 18PC74X | | Course Title | | Course code under 18PC75X | | Course Title | | | | | | |
| 18PC741 | | Petroleum Corrosion Technology | | 18PC751 | | Environmental Science and Solid waste management | | | | | | |
| 18PC742 | | Professional Ethics In Engineering | | 18PC752 | | Process Modeling and Simulation | | | | | | |
| 18PC743 | | Green Chemistry | | 18PC753 | | Modern Separation Techniques | | | | | | |
| Students can select any one of the open electives offered by other Departments expect those that are offered by the parent Department (Please refer to the list of open electives under 18XX75X). | | | | | | | | | | | | |
| Selection of an open elective shall not be allowed if, | | | | | | | | | | | | |
| <ul style="list-style-type: none"> • The candidate has studied the same course during the previous semesters of the programme. • The syllabus content of open elective is similar to that of the Departmental core courses or professional electives. • A similar course, under any category, is prescribed in the higher semesters of the programme. | | | | | | | | | | | | |
| Registration to electives shall be documented under the guidance of Programme Coordinator/ Advisor/Mentor. | | | | | | | | | | | | |
| Project work: | | | | | | | | | | | | |
| Based on the ability/abilities of the student/s and recommendations of the mentor, a single discipline or a multidisciplinary project can be assigned to an individual student or to a group having not more than 4 students. In extraordinary cases, like the funded projects requiring students from different disciplines, the project student strength can be 5 or 6. | | | | | | | | | | | | |
| CIE procedure for Project Work Phase - 1: | | | | | | | | | | | | |
| (i) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide. | | | | | | | | | | | | |
| The CIE marks awarded for the project work phase -1, shall be based on the evaluation of the project work phase -1 Report (covering Literature Survey, Problem identification, Objectives and Methodology), project presentation skill and question and answer session in the ratio 50:25:25.The marks awarded for the Project report shall be the same for all the batch mates. | | | | | | | | | | | | |
| (ii) Interdisciplinary: Continuous Internal Evaluation shall be group wise at the college level with the participation of all guides of the college. Participation of external guide/s, if any, is desirable. | | | | | | | | | | | | |
| The CIE marks awarded for the project work phase -1, shall be based on the evaluation of project work phase -1 Report(covering Literature Survey, Problem identification, Objectives and Methodology), project presentation skill and question and answer session in the ratio 50:25:25.The marks awarded for the project report shall be the same for all the batch mates. | | | | | | | | | | | | |
| Internship: All the students admitted to III year of BE/B. Tech shall have to undergo mandatory internship of 4 weeks during the vacation of VI and VII semesters and /or VII and VIII semesters. A University examination shall be conducted during VIII semester and the prescribed credit shall be included in VIII semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take-up/complete the internship shall be declared fail and shall have to complete during subsequent University examination after satisfying the internship requirements. | | | | | | | | | | | | |
| AICTE activity Points: In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card. | | | | | | | | | | | | |

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| Scheme of Teaching and Examination 2018 – 19 | | | | | | | | | | | | |
| Outcome Based Education(OBE) and Choice Based Credit System (CBCS) | | | | | | | | | | | | |
| (Effective from the academic year 2018 – 19) | | | | | | | | | | | | |
| VIII SEMESTER: B.E PETROCHEM ENGINEERING | | | | | | | | | | | | |
| Sl. No | Course and Course code | | Course Title | Teaching Department | Teaching Hours /Week | | | Examination | | | | Credits |
| | | | | | Theory Lecture | Tutorial | Practical/ Drawing | Duration in hours | CIE Marks | SEE Marks | Total Marks | |
| | | | | | L | T | P | | | | | |
| 1 | PCC | 18PC81 | Transport Phenomena | Chemical / Petrochem | 3 | -- | -- | 03 | 40 | 60 | 100 | 3 |
| 2 | PEC | 18PC82X | Professional Elective - 4 | Chemical / Petrochem | 3 | -- | -- | 03 | 40 | 60 | 100 | 3 |
| 3 | Project | 18PCP83 | Project Work Phase - 2 | Petrochem | -- | -- | 2 | 03 | 40 | 60 | 100 | 8 |
| 4 | Seminar | 18PCS84 | Technical Seminar | Petrochem | -- | -- | 2 | 03 | 100 | -- | 100 | 1 |
| 5 | Internship | 18PCI85 | Internship | (Completed during the intervening vacations of VI and VII semesters and /or VII and VIII semesters.) | | | | 03 | 40 | 60 | 100 | 3 |
| TOTAL | | | | | 06 | -- | 04 | 15 | 260 | 240 | 500 | 18 |
| Note: PCC: Professional Core, PEC: Professional Elective, OEC: Open Elective, INT: Internship. | | | | | | | | | | | | |
| Professional Electives - 4 | | | | | | | | | | | | |
| Course code under 18PC82X | | Course Title | | | | | | | | | | |
| 18PC821 | | Risk Assessment and Safety Engineering | | | | | | | | | | |
| 18PC822 | | Petroleum Economics | | | | | | | | | | |
| 18PC823 | | Pilot Plant and Scale Up Methods | | | | | | | | | | |
| Project Work | | | | | | | | | | | | |
| CIE procedure for Project Work Phase - 2: | | | | | | | | | | | | |
| (i) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide. The CIE marks awarded for the project work phase -2, shall be based on the evaluation of project work phase -2 Report, project presentation skill and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates. | | | | | | | | | | | | |
| (ii) Interdisciplinary: Continuous Internal Evaluation shall be group wise at the college level with the participation of all guides of the college. Participation of external guide/s, if any, is desirable. The CIE marks awarded for the project work phase -2, shall be based on the evaluation of project work phase -2 Report, project presentation skill and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates. | | | | | | | | | | | | |
| SEE for Project Work Phase - 2: | | | | | | | | | | | | |
| (i) Single discipline: Contribution to the project and the performance of each group member shall be assessed individually in semester end examination (SEE) conducted at the department. | | | | | | | | | | | | |
| (ii) Interdisciplinary: Contribution to the project and the performance of each group member shall be assessed individually in semester end examination (SEE) conducted separately at the departments to which the student/s belong to. | | | | | | | | | | | | |
| Internship: Those, who have not pursued /completed the internship shall be declared as fail and have to complete during subsequent University examination after satisfying the internship requirements | | | | | | | | | | | | |
| AICTE activity Points: In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card. Activity points of the students who have earned the prescribed AICTE activity Points shall be sent the University along with the CIE marks of 8th semester. In case of students who have not satisfied the AICTE activity Points at the end of eighth semester, the column under activity Points shall be marked NSAP (Not Satisfied Activity Points). | | | | | | | | | | | | |

| B. E. PETROCHEM ENGINEERING | | | | |
|--|---|------------|--------------------|------------------------------|
| Outcome Based Education (OBE) and Choice Based Credit System (CBCS) | | | | |
| SEMESTER - VI | | | | |
| OPEN ELECTIVE - A | | | | |
| Course Code | 18PC65X | CIE Marks | 40 | |
| Teaching Hours/Week (L:T:P) | (3:0:0) | SEE Marks | 60 | |
| Credits | 03 | Exam Hours | 03 | |
| Students can select any one of the open electives offered by other Departments except those that are offered by the parent Department (For syllabus, please refer to the concerned Programme syllabus book or VTU website vtu.ac.in may be visited.). | | | | |
| Selection of an open elective shall not be allowed if, | | | | |
| <ul style="list-style-type: none"> • The candidate has studied the same course during the previous semesters of the programme. • The syllabus content of open elective is similar to that of the Departmental core courses or professional electives. • A similar course, under any category, is prescribed in the higher semesters of the programme. | | | | |
| Registration to electives shall be documented under the guidance of Programme Coordinator/ Advisor/Mentor. | | | | |
| SINO | Board and the Department offering the Electives | Course | | Course Title |
| | | SI No | code under 18XX65X | |
| 1. | Chemical Engineering Board Department of Petrochem Engineering | 1 | 18PC651 | Biochemical Engineering |
| | | 2 | 18PC652 | Pharmaceutical Technology |
| | | 3 | 18PC653 | Material Science Engineering |

| B.E PETROCHEM ENGINEERING | | | | |
|--|---|------------|--------------------|--|
| Outcome Based Education (OBE) and Choice Based Credit System (CBCS) | | | | |
| SEMESTER - VII | | | | |
| OPEN ELECTIVE - B | | | | |
| Course Code | 18PC75X | CIE Marks | 40 | |
| TeachingHours/Week (L:T:P) | (3:0:0) | SEE Marks | 60 | |
| Credits | 03 | Exam Hours | 03 | |
| Students can select any one of the open electives offered by other Departments except those that are offered by the parent Department (For syllabus, please refer to the concerned Programme syllabus book or VTU website vtu.ac.in may be visited.). | | | | |
| Selection of an open elective shall not be allowed if, | | | | |
| <ul style="list-style-type: none"> • The candidate has studied the same course during the previous semesters of the programme. • The syllabus content of open elective is similar to that of the Departmental core courses or professional electives. • A similar course, under any category, is prescribed in the higher semesters of the programme. | | | | |
| Registration to electives shall be documented under the guidance of Programme Coordinator/ Advisor/Mentor. | | | | |
| SINO | Board and the Department offering the Electives | Course | | Course Title |
| | | SI No | code under 18PC75X | |
| 1. | Chemical Engineering Board Department of Petrochem Engineering | 1 | 18PC751 | Environmental Science and Solid Waste Management |
| | | 2 | 18PC752 | Process Modeling and Simulation |
| | | 3 | 18PC753 | Modern Separation Techniques |

