



# ವಿವೇಕಾನಂದ ತಾಂತ್ರಿಕ ಮಹಾ ವಿದ್ಯಾಲಯ VIVEKANANDA INSTITUTE OF TECHNOLOGY

AN INSTITUTE OF JANATHA EDUCATION SOCIETY  
Recognised by GOK, Affiliated to VTU & Approved by AICTE, New Delhi.

Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year)

1.3.2.1. Number of students undertaking project work/field work / internships

HEI Input: 734

## Findings of DVV

REMARKS: [DVV pursued the certificates provided by the HEI and observed that Projects are conducted in Phase-I and Phase-II. Moreover, nowhere these certificates indicate the duration of internships or projects, whether it was of five days, or one week, or six months.]

1. HEI needs to revise its claim and requested to provide, program-wise, and semester-wise, revised list of the students who have completed any internship of at least two months or longer duration.

2. HEI needs to provide the syllabus/ curriculum for a respective program, highlighting the relevant part, that directs HEI's students to perform internship / project.

In the case, if the students other than final-year had compiled the projects/ internship in the latest completed AY, then it has also need to provide the curriculum of the respective programs, highlighting the relevant part, which directs them to do so.

## Clarifications regarding the Findings of DVV

The project work was part of the curriculum for the 7th and 8th semesters of 2022-23. Project work was completed by students in two phases: phase 1 and phase 2. In Phase-1, the problem definition and literature survey had to be done for the duration of 4 months. During 8th semester Phase-2 of the project had been done, with the duration of 4 months. As per the University (VTU) Regulations, the implementation of the tested project model was presented in front of the external examiner during Final Viva- Voce Exam.

The Civil Engineering department was conducted fieldwork as part of curriculum during the 5th Semester (3rd year), and it was mandatory for all students.

The Mini Projects, was done by Department of Computer science and Engineering (CSE), Department of Information Science and Engg (ISE), Department of Electronics and Communication (ECE), Department of Artificial Intelligence and machine learning (AIML) and Department of Mechanical Engineering (ME) during 6th semester (3rd Year) as a part of curriculum, the duration was 4 months.

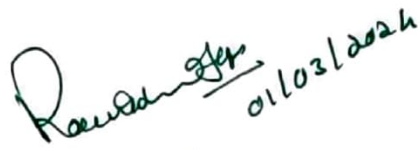
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The Department of CSE/ISE/AIML/ECE/ME/CV students had undergone Internship during 2nd year, according to University Curriculum was one month (4 weeks) and it was mandatory for all students.

According to the University curriculum, the Department of CSE/ISE/AIML/ECE/ME/CV students studied Internet of Things (IOT) Theory (BETCK105H/205H). The students designed the IOT models and participated in IOT projects Exhibition during first year, the course duration was four months.



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## Index Sheet

1.3.2. Percentage of students undertaking Project work/fieldwork/Internships (Data for the latest completed academic year (2022-23))

### Summary Sheet

| Sl. No   | Description   | No. of Students | Project work/fieldwork/Internships                                | Duration according to VTU Curriculum |
|--|---|-----------------|---|--------------------------------------|
| 1  | Total Number of students undertaking project work (Latest Completed Final Year 2022-23)                 | 132             | Project(Phase-I and Phase-II)                                     | 8 Months                             |
| 2  | Total Number of students undertaking fieldwork (Latest Completed 3 <sup>rd</sup> Year 2022-2023)        | 22              | Fieldwork   | 4 Months                             |
| 3  | Mini Projects (Latest Completed 3 <sup>rd</sup> Year 2022-2023)   | 172             | Mini Projects   | 4 Months                             |
| 4  | Total Number of students undertaking Internship (Latest Completed 2 <sup>nd</sup> Year 2022-23)         | 221             | Internships   | 1 Month as per VTU Regulations       |
| 5  | Total Number of students undertaking Project Exhibition (Latest Completed 1 <sup>st</sup> Year 2022-23) | 187             | Project Exhibition & IOT Theory and Project Exhibition activities | 4 Months                             |
| Total Number of students undertaking project work, Field Work, Internship and Mini Project |   | 734             |   |                                      |
| Total number of students during the latest completed academic year 2022-23                 |   | 812             |   |                                      |
| Percentage   |   | 90%             |   |                                      |

  
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**1.3.2 Percentage of students undertaking project work/field work/internship (Data for the latest completed academic year)**

| Sl No | Programme Name                   | Semester                                   | Sub/Subcode   | USN        | Name                     |
|-------|----------------------------------|--|---|------------|--------------------------|
| 1.    | Computer Science and Engineering | 7 <sup>th</sup> & 8 <sup>th</sup> Semester | Project - 18CSP83 (7th and 8th Semester-Final Year-AY2022-23) | 1VK19CS002 | ABHISHEK CHILLSHETTY     |
| 2.    |                                  |  |   | 1VK19CS003 | ABISHEK.R                |
| 3.    |                                  |  |   | 1VK19CS004 | AKANKSHA N RAJ           |
| 4.    |                                  |  |   | 1VK19CS005 | AKASH.C                  |
| 5.    |                                  |  |   | 1VK19CS006 | AKSHAY.S.J               |
| 6.    |                                  |  |   | 1VK19CS007 | AMOOPLYA.G.J             |
| 7.    |                                  |  |   | 1VK19CS008 | ANANYA VIJETHA.B.R       |
| 8.    |                                  |  |   | 1VK19CS009 | ANJALI C.N               |
| 9.    |                                  |  |   | 1VK19CS010 | ARAVIND.S                |
| 10.   |                                  |  |   | 1VK19CS011 | CHARANKUMAR.A.H          |
| 11.   |                                  |  |   | 1VK19CS012 | CHETHAN.M                |
| 12.   |                                  |  |   | 1VK19CS013 | DARSHAN.C.GOWDA          |
| 13.   |                                  |  |   | 1VK19CS014 | DARSHAN GOWDA.B.B        |
| 14.   |                                  |  |   | 1VK19CS015 | DAYANAND.R               |
| 15.   |                                  |  |   | 1VK19CS016 | G.SHREYAS                |
| 16.   |                                  |  |   | 1VK19CS017 | GAGAN.N                  |
| 17.   |                                  |  |   | 1VK19CS018 | HARSHITHA.M.R            |
| 18.   |                                  |  |   | 1VK19CS019 | JAYANTH.M                |
| 19.   |                                  |  |   | 1VK19CS020 | KUSHI.V                  |
| 20.   |                                  |  |   | 1VK19CS021 | LOHIT KUMAR A BHATTTANGI |
| 21.   |                                  |  |   | 1VK19CS023 | MATHISHA.A               |
| 22.   |                                  |  |   | 1VK19CS024 | MIRIYALA YAMUNA          |
| 23.   |                                  |  |   | 1VK19CS025 | MONISHA.V                |
| 24.   |                                  |  |   | 1VK19CS026 | NAGARAJ.S                |
| 25.   |                                  |  |   | 1VK19CS027 | NAYANA.G.R               |
| 26.   |                                  |  |   | 1VK19CS028 | NIKHIL.S                 |
| 27.   |                                  |  |   | 1VK19CS029 | NIRIKSHA.D.T             |
| 28.   |                                  |  |   | 1VK19CS030 | PAVAN KUMAR.T.S          |
| 29.   |                                  |  |   | 1VK19CS031 | PRAJWAL.M.B              |
| 30.   |                                  |  |   | 1VK19CS032 | PRAMOD BADIGER           |
| 31.   |                                  |  |   | 1VK19CS033 | PRATHAP KUMAR.K.S        |
| 32.   |                                  |  |   | 1VK19CS034 | PREETHAM.C               |
| 33.   |                                  |  |   | 1VK19CS035 | PREETHU S RAVI           |
| 34.   |                                  |  |   | 1VK19CS036 | RAJESH.B                 |
| 35.   |                                  |  |   | 1VK19CS037 | RAKSHITHA.M.J            |
| 36.   |                                  |  |   | 1VK19CS038 | RAMANAGOUDA              |
| 37.   |                                  |  |   | 1VK19CS039 | RUCHITHA.P.G             |
| 38.   |                                  |  |   | 1VK19CS040 | SAHANA.N                 |

|     |                   |  |   |            |                     |
|-----|-------------------|--|---|------------|---------------------|
| 39. |                   |  |   | 1VK19CS041 | SANDEEP.M           |
| 40. |                   |  |   | 1VK19CS042 | SHAHUL HAMEED.K     |
| 41. |                   |  |   | 1VK19CS043 | SHAMANTH V KUMAR    |
| 42. |                   |  |   | 1VK19CS044 | SHASHANK B.S (S)    |
| 43. |                   |  |   | 1VK19CS045 | SHASHANK.B.S (K)    |
| 44. |                   |  |   | 1VK19CS046 | SHASHIDHAR          |
| 45. |                   |  |   |            | SHASHWATH           |
|     |                   |  |   | 1VK19CS047 | REVANAPPA GOUDA     |
| 46. |                   |  |   | 1VK19CS048 | SHREYASHREE.G       |
| 47. |                   |  |   | 1VK19CS049 | SHREYAS.K.S         |
| 48. |                   |  |   | 1VK19CS050 | SHREYASH.B.N        |
| 49. |                   |  |   | 1VK19CS051 | SHWETHA.L           |
| 50. |                   |  |   | 1VK19CS052 | SIDDHARATH          |
| 51. |                   |  |   | 1VK19CS053 | SIRAPARAPUGOWTHAM   |
| 52. |                   |  |   | 1VK19CS054 | SURIYA MEDAPPAA N.P |
| 53. |                   |  |   | 1VK19CS055 | SURYA KANTH SINGH   |
| 54. |                   |  |   | 1VK19CS056 | SWATHI B            |
| 55. |                   |  |   | 1VK19CS057 | VARSHA.G            |
| 56. |                   |  |   | 1VK19CS058 | VARSHA.P            |
| 57. |                   |  |   | 1VK19CS059 | VASANTH KUMAR.M.E   |
| 58. |                   |  |   | 1VK19CS060 | VISHAL PATEL A.V    |
| 59. |                   |  |   |            | YUKTHA SUDHIR       |
|     |                   |  |   | 1VK19CS062 | BANDEKODIGE         |
| 60. |                   |  |   | 1VK19CS063 | REEMA MANJUNATH     |
| 61. |                   |  |   | 1VK20CS400 | ASHWIN              |
| 62. |                   |  |   | 1VK18CS009 | BHUVAN              |
| 63. |                   |  |   | 1VK18CS020 | MAHADEV METRE       |
| 64. |                   |  |   | 1VK18CS021 | MANISH M            |
| 65. |                   |  |   | 1VK18CS029 | NESAR               |
| 66. |                   |  |   | 1VK18CS036 | RAHUL M Y           |
| 67. |                   |  |   | 1VK18CS054 | UDAY H S            |
| 68. |                   |  |   | 1VK16CS010 | CHANDRA SAGAR       |
| 69. |                   |  |   | 1VK19CV001 | AISHWARYA H         |
| 70. |                   |  |   | 1VK19CV002 | AKHILESH GOWDA R    |
| 71. |                   |  |   | 1VK19CV003 | AMOS MIZE           |
| 72. |                   |  |   | 1VK19CV006 | HARISH M            |
| 73. |                   |  |   | 1VK19CV008 | MANOJ N             |
| 74. |                   |  |   | 1VK19CV009 | NISHANT KUMAR       |
| 75. |                   |  |   | 1VK19CV010 | RAHUL               |
| 76. |                   |  |   | 1VK19CV011 | SHRAVAN P P         |
| 77. |                   |  |   | 1VK20CV400 | KEERTHI BHAT M      |
| 78. |                   |  |   | 1VK20CV401 | LOKESHA M           |
| 79. |                   |  |   | 1VK20CV402 | MUKESH U            |
|     | Civil Engineering | 7 <sup>th</sup> & 8 <sup>th</sup> Semester | Project - 18CVP83 (7th and 8th Semester-Final Year-AY2022-23) |            |                     |

|      |   |  |  |                                     |  |
|------|---|--|--|-------------------------------------|--|
| 80.  | Electronics and Communication Engineering | 7 <sup>th</sup> & 8 <sup>th</sup> Semester | Project - 18ECP83<br>(7th and 8th Semester-Final Year-AY2022-23) | 1VK19EC001                          | ABHI SATHISH                               |
| 81.  |   |  |  | 1VK19EC002                          | ABHISHEK M S                               |
| 82.  |   |  |  | 1VK19EC004                          | ANUSH                                      |
| 83.  |   |  |  | 1VK19EC005                          | JANANI P                                   |
| 84.  |   |  |  | 1VK19EC006                          | LOHITH K S                                 |
| 85.  |   |  |  | 1VK19EC007                          | MANASA A                                   |
| 86.  |   |  |  | 1VK19EC008                          | NAGESH G N                                 |
| 87.  |   |  |  | 1VK19EC010                          | S S TEJAS                                  |
| 88.  |   |  |  | 1VK19EC011                          | SHARATH                                    |
| 89.  |   |  |  | 1VK19EC012                          | TEJAS GOWDA C K                            |
| 90.  |   |  |  | 1VK19EC013                          | TEJAS M H                                  |
| 91.  |   |  |  | 1VK19EC014                          | YUDHISHHIR SINGH                           |
| 92.  |   |  |  | 1VK18EC014                          | PUNEETH R                                  |
| 93.  |   |  |  | Information Science and Engineering | 7 <sup>th</sup> & 8 <sup>th</sup> Semester |
| 94.  | 1VK19IS002                                | ANANYA.T.J                                 |  |                                     |  |
| 95.  | 1VK19IS003                                | CHITHRA.D.M                                |  |                                     |  |
| 96.  | 1VK19IS004                                | DEEKSHA SHETTY                             |  |                                     |  |
| 97.  | 1VK19IS005                                | DURGASHREE.H.S                             |  |                                     |  |
| 98.  | 1VK19IS007                                | KIRAN KUMAR.V.M                            |  |                                     |  |
| 99.  | 1VK19IS008                                | KUSHAL.D                                   |  |                                     |  |
| 100. | 1VK19IS009                                | LISHIKA.K                                  |  |                                     |  |
| 101. | 1VK19IS010                                | MANASA.N.N                                 |  |                                     |  |
| 102. | 1VK19IS011                                | NIHARIKA SHANKAR                           |  |                                     |  |
| 103. | 1VK19IS013                                | PRAGATHI.G.O                               |  |                                     |  |
| 104. | 1VK19IS014                                | RASHMI.M                                   |  |                                     |  |
| 105. | 1VK19IS016                                | SHIVENDRA SAHARE                           |  |                                     |  |
| 106. | 1VK19IS017                                | SNEHA                                      |  |                                     |  |
| 107. | 1VK19IS018                                | SONIKA.D                                   |  |                                     |  |
| 108. | 1VK19IS019                                | SPOORTHI.S.S                               |  |                                     |  |
| 109. | 1VK19IS020                                | T G SHIVAJI                                |  |                                     |  |
| 110. | 1VK19IS021                                | YASHAS.S                                   |  |                                     |  |
| 111. | 1VK18IS004                                | CHETHAN J                                  |  |                                     |  |
| 112. | 1VK18IS009                                | PAVAN HEGDE H D                            |  |                                     |  |
| 113. | Mechanical Engineering                    | 7 <sup>th</sup> & 8 <sup>th</sup> Semester | Project - 18MEP83<br>(7th and 8th Semester-Final Year-AY2022-23) | 1VK18ME001                          | ANAND PRASAD                               |
| 114. |   |  |  | 1VK18ME013                          | SACHIN GOWDA                               |
| 115. |   |  |  | 1VK19ME001                          | ABHISHEK B A                               |
| 116. |   |  |  | 1VK19ME002                          | C MEGHANA                                  |
| 117. |   |  |  | 1VK19ME003                          | DEEPA S ARAMANI                            |
| 118. |   |  |  | 1VK19ME004                          | DILEEP G                                   |
| 119. |   |  |  | 1VK19ME005                          | GAGAN K S                                  |
| 120. |   |  |  | 1VK19ME006                          | GOPAL KRISHNA R                            |
| 121. |   |  |  | 1VK19ME007                          | GOWRAV D S                                 |
| 122. |   |  |  | 1VK19ME008                          | HEMANTH GOWDA B M                          |
| 123. |   |  |  | 1VK19ME009                          | KIRAN S                                    |
| 124. |   |  |  | 1VK19ME010                          | MAHESH K S                                 |
| 125. |   |  |  | 1VK19ME011                          | NITISH KUMAR RAI                           |
| 126. |   |  |  | 1VK19ME012                          | PRAJWAL R                                  |

  
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|      |  |                          |   |            |                          |
|------|--|--------------------------|---|------------|--------------------------|
| 127. |  |                          |   | 1VK19ME013 | PURUGANTI AVINASH ADITYA |
| 128. |  |                          |   | 1VK19ME014 | SANJAY S P               |
| 129. |  |                          |   | 1VK19ME016 | THEJU B K                |
| 130. |  |                          |   | 1VK19ME017 | VIGNESH                  |
| 131. |  |                          |   | 1VK20ME400 | PAVAN KUMAR M S          |
| 132. |  |                          |   | 1VK20ME401 | SHOIB PASHA              |
| 133. | Civil Engineering                            | 6 <sup>th</sup> Semester | Extensive Survey Project: 18CVEP68( 6th Semester-3rd Year-AY2022-23)                    | 1VK18CV021 | SUNIL N                  |
| 134. |  |                          |   | 1VK20CV001 | CHETHAN P                |
| 135. |  |                          |   | 1VK20CV002 | HEMANTH H                |
| 136. |  |                          |   | 1VK20CV003 | HEMANTH S                |
| 137. |  |                          |   | 1VK20CV004 | K DIVYA                  |
| 138. |  |                          |   | 1VK20CV005 | KAVYA B R                |
| 139. |  |                          |   | 1VK20CV006 | KIRAN H R                |
| 140. |  |                          |   | 1VK20CV007 | KUSHAL S                 |
| 141. |  |                          |   | 1VK20CV008 | LEKHAK K S               |
| 142. |  |                          |   | 1VK20CV009 | MADHU SHARAN             |
| 143. |  |                          |   | 1VK20CV010 | NISHANTH S               |
| 144. |  |                          |   | 1VK20CV011 | NITHIN D                 |
| 145. |  |                          |   | 1VK20CV012 | PRATHICK H R             |
| 146. |  |                          |   | 1VK20CV013 | PRATIKSHA A NAIK         |
| 147. |  |                          |   | 1VK20CV014 | RAMESH B                 |
| 148. |  |                          |   | 1VK20CV015 | RAMYA M                  |
| 149. |  |                          |   | 1VK20CV016 | RANJITHA C               |
| 150. |  |                          |   | 1VK20CV017 | SRIVATSA R               |
| 151. |  |                          |   | 1VK20CV018 | VIKAS GOWDA S            |
| 152. |  |                          |   | 1VK20CV019 | YASHAS GOWDA G           |
| 153. |  |                          |   | 1VK20CV020 | YASHWANTH R              |
| 154. |  |                          |   | 1VK21CV400 | BASAVARAJ H              |
| 155. | Artificial Intelligence and Machine Learning | 6 <sup>th</sup> Semester | Digital Image Processing Lab with Mini Project 18AIL67(6th Semester-3rd Year-AY2022-23) | 1VK20AI002 | AKSHATA                  |
| 156. |  |                          |   | 1VK20AI003 | AKSHATHA H V             |
| 157. |  |                          |   | 1VK20AI004 | ARCHANA B                |
| 158. |  |                          |   | 1VK20AI005 | CHETAN HENJAR S S        |
| 159. |  |                          |   | 1VK20AI006 | CHETAN VERMA             |
| 160. |  |                          |   | 1VK20AI007 | DEEP P DOSHI             |
| 161. |  |                          |   | 1VK20AI008 | GRACE MARY B K           |
| 162. |  |                          |   | 1VK20AI009 | HEPZIBAH V               |
| 163. |  |                          |   | 1VK20AI010 | INCHARA P                |
| 164. |  |                          |   | 1VK20AI012 | JAHNAVI GOWDA A M        |
| 165. |  |                          |   | 1VK20AI013 | KETHAN GOWDA B N         |
| 166. |  |                          |   | 1VK20AI014 | MANJUNATH R GOWDA        |
| 167. |  |                          |   | 1VK20AI016 | PRAGNASHRI G             |
| 168. |  |                          |   | 1VK20AI017 | PRAJWAL D                |
| 169. |  |                          |   | 1VK20AI018 | PRIYANKA N               |
| 170. |  |                          |   | 1VK20AI019 | RAVI DAMAMI              |
| 171. | 1VK20AI020                                   | ROHAN KUMAR SHARBIDRIKAR |   |            |                          |

|      |  |  |  |            |  |
|------|--|--|--|------------|--|
| 172. |  |  |  | 1VK20AI021 | S DIXIT                                  |
| 173. |  |  |  | 1VK20AI023 | SHASHANK K M                             |
| 174. |  |  |  | 1VK20AI024 | SHREYAS B S                              |
| 175. |  |  |  | 1VK20AI025 | SINDHU D S                               |
| 176. |  |  |  | 1VK20AI026 | SUMANTH K                                |
| 177. |  |  |  | 1VK20AI027 | VAISHNAVI J INAMDAR                      |
| 178. |  |  |  | 1VK20AI028 | VARSHA S                                 |
| 179. |  |  |  | 1VK20AI029 | YASHWANTH J                              |
| 180. |  |  |  | 1VK20AI030 | YASHWANTHGOWDA H N                       |
| 181. |  |  |  | 1VK20CS001 | AARIZ NASEER                             |
| 182. |  |  |  | 1VK20CS002 | ABHI K R                                 |
| 183. |  |  |  | 1VK20CS003 | ABHILASHA C                              |
| 184. |  |  |  | 1VK20CS004 | ADARSH HAMILPURE                         |
| 185. |  |  |  | 1VK20CS005 | ADIB UL HUQ KHAN                         |
| 186. |  |  |  | 1VK20CS006 | AKSHAY N                                 |
| 187. |  |  |  | 1VK20CS007 | AMRUTH M                                 |
| 188. |  |  |  | 1VK20CS008 | ANJALI                                   |
| 189. |  |  |  | 1VK20CS009 | ANKITHA R                                |
| 190. |  |  |  | 1VK20CS010 | ANUSHA M                                 |
| 191. |  |  |  | 1VK20CS011 | ANUVARSHINI V                            |
| 192. |  |  |  | 1VK20CS012 | ARCHA SINGH                              |
| 193. |  |  |  | 1VK20CS013 | BHARATH K                                |
| 194. |  |  |  | 1VK20CS014 | BHAVANA SATISH GOUDA                     |
| 195. |  |  |  | 1VK20CS015 | CHANDAN H R                              |
| 196. |  |  |  | 1VK20CS016 | CHANDAN V<br>MARIYANNANAVAR              |
| 197. |  |  |  | 1VK20CS017 | CHANDANA P                               |
| 198. |  |  |  | 1VK20CS018 | CHANDANA S                               |
| 199. |  |  |  | 1VK20CS019 | CHARANKUMAR<br>BOODEPPA<br>CHAPPARADALLI |
| 200. |  |  |  | 1VK20CS020 | CHAYA SHREE R                            |
| 201. |  |  |  | 1VK20CS022 | CHUCHITH GOWDA J M                       |
| 202. |  |  |  | 1VK20CS023 | DESHWANTH S                              |
| 203. |  |  |  | 1VK20CS024 | DHANUSH URS T N                          |
| 204. |  |  |  | 1VK20CS025 | DIVYA V                                  |
| 205. |  |  |  | 1VK20CS027 | GUNASHEELA S                             |
| 206. |  |  |  | 1VK20CS028 | HAMSA B R                                |
| 207. |  |  |  | 1VK20CS029 | HARSHITH KUMAR                           |
| 208. |  |  |  | 1VK20CS030 | HARSHITHA N                              |
| 209. |  |  |  | 1VK20CS031 | JAIDEV SINGH                             |
| 210. |  |  |  | 1VK20CS032 | JANANI YADAV Y K                         |
| 211. |  |  |  | 1VK20CS033 | JEEVAN GOWDA                             |
| 212. |  |  |  | 1VK20CS034 | KAVYA V                                  |
| 213. |  |  |  | 1VK20CS035 | KEERTHANA C L                            |
| 214. |  |  |  | 1VK20CS036 | KRUTHIKA S M                             |
| 215. |  |  |  | 1VK20CS037 | LAVANYA M O                              |
| 216. |  |  |  | 1VK20CS038 | LIKITH D                                 |

  
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|------|--|--|--|------------|---------------------|
| 217. |  |  |  | 1VK20CS039 | MADHUSHREYA H M     |
| 218. |  |  |  | 1VK20CS040 | MANOJ L K           |
| 219. |  |  |  | 1VK20CS041 | MOHAMMED WASIULLAH  |
| 220. |  |  |  | 1VK20CS042 | MOHAN A R           |
| 221. |  |  |  | 1VK20CS043 | MOHITH K S          |
| 222. |  |  |  | 1VK20CS044 | N A VAGHDEVI        |
| 223. |  |  |  | 1VK20CS045 | NAGESHWAR T N       |
| 224. |  |  |  | 1VK20CS046 | NAVEEN NAIK         |
| 225. |  |  |  | 1VK20CS047 | NAWAZ PASHA A       |
| 226. |  |  |  | 1VK20CS048 | NAYANA V            |
| 227. |  |  |  | 1VK20CS050 | OMISHA H R          |
| 228. |  |  |  | 1VK20CS051 | PALLAVI C           |
| 229. |  |  |  | 1VK20CS052 | PAPINENI SAISHARAN  |
| 230. |  |  |  | 1VK20CS053 | PAVAN N             |
| 231. |  |  |  | 1VK20CS054 | PRANAV KUMAR T U Y  |
| 232. |  |  |  | 1VK20CS055 | PRATHAP N S         |
| 233. |  |  |  | 1VK20CS056 | PREETHI S S         |
| 234. |  |  |  | 1VK20CS057 | PRERANA L           |
| 235. |  |  |  | 1VK20CS058 | PUNEETH R           |
| 236. |  |  |  | 1VK20CS059 | R DEEKSHITHA        |
| 237. |  |  |  | 1VK20CS060 | R MADHUSUDHAN REDDY |
| 238. |  |  |  | 1VK20CS061 | RAHUL N             |
| 239. |  |  |  | 1VK20CS062 | RAKSHITHA B         |
| 240. |  |  |  | 1VK20CS063 | RAKSHITHA L         |
| 241. |  |  |  | 1VK20CS064 | RAMYA V M           |
| 242. |  |  |  | 1VK20CS065 | RAMYASHREE S        |
| 243. |  |  |  | 1VK20CS066 | RICHU KUMAR         |
| 244. |  |  |  | 1VK20CS067 | RISHABH RANJAN      |
| 245. |  |  |  | 1VK20CS068 | ROHITH H M          |
| 246. |  |  |  | 1VK20CS069 | SANJANA M K         |
| 247. |  |  |  | 1VK20CS070 | SANJAY GOWDA B R    |
| 248. |  |  |  | 1VK20CS071 | SANJAY KUMAR J      |
| 249. |  |  |  | 1VK20CS072 | SHASHANKA M S       |
| 250. |  |  |  | 1VK20CS073 | SHIVARAM M          |
| 251. |  |  |  | 1VK20CS074 | SHREYA S            |
| 252. |  |  |  | 1VK20CS075 | SHUBHANKAR KUMAR    |
| 253. |  |  |  | 1VK20CS076 | SNEHA B             |
| 254. |  |  |  | 1VK20CS077 | SRUSHTI D           |
| 255. |  |  |  | 1VK20CS079 | SWATHI K Y          |
| 256. |  |  |  | 1VK20CS080 | TUSHAR D REVANKAR   |
| 257. |  |  |  | 1VK20CS081 | UJJWAL PANDEY       |
| 258. |  |  |  | 1VK20CS082 | UMA D               |
| 259. |  |  |  | 1VK20CS083 | VAISHNAVI N R       |
| 260. |  |  |  | 1VK20CS084 | VARNA R             |
| 261. |  |  |  | 1VK20CS085 | VARUN KUMAR C N     |
| 262. |  |  |  | 1VK20CS086 | VIVEK KUMAR         |
| 263. |  |  |  | 1VK20CS087 | YAMUNA J            |

|      |   |                             |  |            |                      |
|------|---|-----------------------------|--|------------|----------------------|
| 264. |   |                             |  | 1VK21CS400 | RAKSHITHA K S        |
| 265. |   |                             |  | 1VK21CS401 | SANGEETHA            |
| 266. | Electronics and<br>Communication<br>Engineering | 6 <sup>th</sup><br>Semester | Mini Project -<br>18ECMP68<br>(6th Semester-3rd<br>Year-AY2022-23) | 1VK20EC001 | AKILAMURTHA S M      |
| 267. |   |                             |  | 1VK20EC002 | AMRUTHA J            |
| 268. |   |                             |  | 1VK20EC003 | ANIL KUMAR           |
| 269. |   |                             |  | 1VK20EC004 | BHAGYAMMA B          |
| 270. |   |                             |  | 1VK20EC006 | DIVYASHREE T S       |
| 271. |   |                             |  | 1VK20EC008 | INCHARA K A          |
| 272. |   |                             |  | 1VK20EC009 | ISHA ASMI SYDANI S A |
| 273. |   |                             |  | 1VK20EC010 | KUMARASWAMY T        |
| 274. |   |                             |  | 1VK20EC011 | KUSHAL KUMAR K       |
| 275. |   |                             |  | 1VK20EC012 | LIKITH K             |
| 276. |   |                             |  | 1VK20EC013 | MADHUSREE C L        |
| 277. |   |                             |  | 1VK20EC014 | MANISHA V            |
| 278. |   |                             |  | 1VK20EC016 | NAGARATHNA H S       |
| 279. |   |                             |  | 1VK20EC017 | NIKITHA S            |
| 280. |   |                             |  | 1VK20EC018 | PUNITH KUMAR A       |
| 281. |   |                             |  | 1VK20EC019 | SAHANABABY R         |
| 282. |   |                             |  | 1VK20EC020 | SATHISH H G          |
| 283. |   |                             |  | 1VK20EC021 | SRIKANTH P V         |
| 284. |   |                             |  | 1VK20EC022 | SUFIYA AMEEN         |
| 285. |   |                             |  | 1VK20EC023 | SUNIL B K            |
| 286. |   |                             |  | 1VK20EC024 | TEJAS V              |
| 287. |   |                             |  | 1VK20EC025 | VARSHITH N P         |
| 288. |   |                             |  |            |                      |

  
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|      |                                     |                          |   |            |                      |
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| 289. | Information Science and Engineering | 6 <sup>th</sup> Semester | File Structure Lab with Mini Project - 18ISL67(6th Semester-3rd Year-AY2022-23) | 1VK20IS002 | AKSHAY K Y           |
| 290. |                                     |                          |   | 1VK20IS003 | BEULAH V             |
| 291. |                                     |                          |   | 1VK20IS004 | BHARGAVI K           |
| 292. |                                     |                          |   | 1VK20IS005 | BHOOMIKA H G         |
| 293. |                                     |                          |   | 1VK20IS006 | CHANDU S             |
| 294. |                                     |                          |   | 1VK20IS007 | CHARAN C             |
| 295. |                                     |                          |   | 1VK20IS008 | DARSHAN C            |
| 296. |                                     |                          |   | 1VK20IS009 | DARSHAN K            |
| 297. |                                     |                          |   | 1VK20IS010 | DEEPASHREE R         |
| 298. |                                     |                          |   | 1VK20IS011 | DEV BHUPENDRA THAKOR |
| 299. |                                     |                          |   | 1VK20IS012 | DIVYA S              |
| 300. |                                     |                          |   | 1VK20IS013 | HARSHITHA K          |
| 301. |                                     |                          |   | 1VK20IS014 | HEMALATHA P          |
| 302. |                                     |                          |   | 1VK20IS015 | JNANESHWAR H K       |
| 303. |                                     |                          |   | 1VK20IS016 | JYOTHIKA M J         |
| 304. |                                     |                          |   | 1VK20IS017 | KIRAN S              |
| 305. |                                     |                          |   | 1VK20IS018 | MANOHAR P            |
| 306. |                                     |                          |   | 1VK20IS019 | MANOJ M              |
| 307. |                                     |                          |   | 1VK20IS020 | NAYANA Y K           |
| 308. |                                     |                          |   | 1VK20IS022 | PAVAN PRASAD K S     |
| 309. |                                     |                          |   | 1VK20IS023 | PRAVEEN H            |
| 310. | 1VK20IS024                          | PREMA                    |   |            |                      |
| 311. | 1VK20IS025                          | SANATH S                 |   |            |                      |
| 312. | 1VK20IS026                          | SANCHITHA A R            |   |            |                      |
| 313. | 1VK20IS027                          | SHISHIR KUMAR G S        |   |            |                      |
| 314. | 1VK20IS028                          | SUJAI S J S              |   |            |                      |
| 315. | 1VK20IS029                          | SUMANTH S                |   |            |                      |
| 316. | 1VK20IS030                          | TEJAS KUMAR R            |   |            |                      |
| 317. | 1VK20IS031                          | THASHWINI P S            |   |            |                      |
| 318. | 1VK20IS032                          | USHA K M                 |   |            |                      |
| 319. | 1VK20IS033                          | VARSHINI M               |   |            |                      |
| 320. | 1VK20IS034                          | VINUTHA V                |   |            |                      |
| 321. | 1VK20IS035                          | VRITHIKA GARG M          |   |            |                      |
| 322. | Mechanical Engineering              | 6 <sup>th</sup> Semester | Mini Project : 18MEM68 (6th Semester-3rd Year-AY2022-23)                        | 1VK20ME001 | BHARATH G M          |
| 323. |                                     |                          |   | 1VK20ME002 | PRAKASH S            |
| 324. |                                     |                          |   | 1VK20ME003 | VARUN R              |
| 325. |                                     |                          |   | 1VK21ME400 | GOPI A K             |
| 326. |                                     |                          |   | 1VK21ME401 | VINOD S              |

|      |  |                          |   |            |                    |
|------|--|--------------------------|---|------------|--------------------|
| 327. | Artificial Intelligence and Machine Learning | 4 <sup>th</sup> Semester | Intra-Internship<br>21INT49(3rd/4th Semester-<br>SecondYear-AY 2022-23) | 1VK20AI011 | INSIA SARWATH      |
| 328. |  |                          |   | 1VK21AI002 | ANUSHA K M         |
| 329. |  |                          |   | 1VK21AI003 | ARCHANA J          |
| 330. |  |                          |   | 1VK21AI004 | BENNUR KARTHIK     |
| 331. |  |                          |   | 1VK21AI005 | BHAVANA A ASHRIT   |
| 332. |  |                          |   | 1VK21AI006 | BHAVANA B          |
| 333. |  |                          |   | 1VK21AI007 | BOYA LAVANYA       |
| 334. |  |                          |   | 1VK21AI008 | CHAITHANYA R       |
| 335. |  |                          |   | 1VK21AI009 | DIVYA SHREE D G    |
| 336. |  |                          |   | 1VK21AI010 | FATHIMA BANU       |
| 337. |  |                          |   | 1VK21AI011 | KUMAR M D          |
| 338. |  |                          |   | 1VK21AI012 | N DISHANTH NAIK    |
| 339. |  |                          |   | 1VK21AI013 | PAVITHRA H N       |
| 340. |  |                          |   | 1VK21AI014 | PRATYUSH           |
| 341. |  |                          |   | 1VK21AI016 | RISHI L            |
| 342. |  |                          |   | 1VK21AI017 | SAHIL REHMAN       |
| 343. |  |                          |   | 1VK21AI018 | SANJAY M           |
| 344. |  |                          |   | 1VK21AI019 | SECHANA T V        |
| 345. |  |                          |   | 1VK21AI020 | SHAMITA B V        |
| 346. |  |                          |   | 1VK21AI021 | SHASHANK MS        |
| 347. |  |                          |   | 1VK21AI022 | SHRAVAN GS         |
| 348. |  |                          |   | 1VK21AI023 | SRINIDHI S PUJAR   |
| 349. |  |                          |   | 1VK21AI024 | SRUSTI S DESHMUKH  |
| 350. |  |                          |   | 1VK21AI025 | SUDEEP G E         |
| 351. |  |                          |   | 1VK21AI027 | VRUTHVIK D S       |
| 352. |  |                          |   | 1VK21AI026 | SYED SUFIYAN AHMED |
| 353. |  |                          |   | 1VK22AI400 | PUNITH V           |
| 354. | Civil Engineering                            | 4 <sup>th</sup> Semester | Intra-Internship<br>21INT49(3rd/4th Semester-<br>SecondYear-AY 2022-23) | 1VK21CV001 | G NITHIN           |
| 355. |  |                          |   | 1VK21CV002 | GOVIND NAIK        |
| 356. |  |                          |   | 1VK21CV003 | NANDANA N          |
| 357. |  |                          |   | 1VK21CV004 | SOMASHEKHAR        |
| 358. |  |                          |   | 1VK21CV005 | TANUJASHREE K J    |
| 359. |  |                          |   | 1VK21CV006 | VENKATESH GOWDA    |
| 360. |  |                          |   | 1VK21CV400 | BASAVARAJA H       |
| 361. |  |                          |   | 1VK21CV401 | HARSHAVARDHAN A    |

|      |  |                                    |   |            |                    |
|------|--|------------------------------------|---|------------|--------------------|
| 362. | Computer<br>Science and<br>Engineering | 4 <sup>th</sup><br>Semester        | Intra-Internship<br>21INT49(3rd/4th<br>Semester-<br>SecondYear-AY<br>2022-23) | 1VK21CS001 | ABHISHEK P R       |
| 363. |  |                                    |   | 1VK21CS002 | AKASH              |
| 364. |  |                                    |   | 1VK21CS003 | AMRUTHA S          |
| 365. |  |                                    |   | 1VK21CS004 | ANJALI B D         |
| 366. |  |                                    |   | 1VK21CS005 | ANKIT KUMAR RAJ    |
| 367. |  |                                    |   | 1VK21CS006 | ATHARVA SRIVASTAVA |
| 368. |  |                                    |   | 1VK21CS007 | B E RAKSHA         |
| 369. |  |                                    |   | 1VK21CS008 | BASAVARAJAYYASWAMI |
| 370. |  |                                    |   | 1VK21CS009 | BHOOMIKA M         |
| 371. |  |                                    |   | 1VK21CS010 | CHANDAN K          |
| 372. |  |                                    |   | 1VK21CS011 | CHANDANA K R       |
| 373. |  |                                    |   | 1VK21CS012 | CHANDANA L         |
| 374. |  |                                    |   | 1VK21CS013 | CHETHAN L          |
| 375. |  |                                    |   | 1VK21CS014 | DARSHAN K          |
| 376. |  |                                    |   | 1VK21CS015 | DEBORAH SINDHU H K |
| 377. |  |                                    |   | 1VK21CS016 | DEEPAK U           |
| 378. |  |                                    |   | 1VK21CS017 | DHYAN B            |
| 379. |  |                                    |   | 1VK21CS018 | DILIP R            |
| 380. |  |                                    |   | 1VK21CS019 | DIVYA R            |
| 381. |  |                                    |   | 1VK21CS020 | GIRISH N A         |
| 382. |  |                                    |   | 1VK21CS021 | GNANASHREE V       |
| 383. |  |                                    |   | 1VK21CS022 | GOWRI              |
| 384. |  |                                    |   | 1VK21CS023 | GOWTHAM D          |
| 385. |  |                                    |   | 1VK21CS024 | HARISH O           |
| 386. |  |                                    |   | 1VK21CS025 | HARSHITH E         |
| 387. |  |                                    |   | 1VK21CS026 | HARSHITHA G N      |
| 388. |  |                                    |   | 1VK21CS027 | HARSHITHA R        |
| 389. |  |                                    |   | 1VK21CS028 | HARSHITHA S        |
| 390. |  |                                    |   | 1VK21CS029 | HARSHITHA S        |
| 391. |  |                                    |   | 1VK21CS030 | JASHWANTH K A      |
| 392. |  |                                    |   | 1VK21CS031 | JEEVAN R           |
| 393. |  |                                    |   | 1VK21CS032 | KAVYA K            |
| 394. |  |                                    |   | 1VK21CS033 | KENNETH            |
| 395. |  |                                    |   | 1VK21CS034 | KRUTHIKA Y N       |
| 396. |  |                                    |   | 1VK21CS035 | KUSHAL V           |
| 397. |  |                                    |   | 1VK21CS036 | LAVANYA G K        |
| 398. |  |                                    |   | 1VK21CS037 | LIKHITH B S        |
| 399. |  |                                    |   | 1VK21CS038 | LIKHITH GOWDA P L  |
| 400. |  |                                    |   | 1VK21CS039 | LIKITH GOWDA G T   |
| 401. |  |                                    |   | 1VK21CS040 | M SIKANDAR BASHA   |
| 402. | 1VK21CS041                             | MANAS KUMAR PANDEY                 |   |            |                    |
| 403. | 1VK21CS042                             | MEGHANA N                          |   |            |                    |
| 404. | 1VK21CS043                             | MEGHANA R                          |   |            |                    |
| 405. | 1VK21CS044                             | MERCY I                            |   |            |                    |
| 406. | 1VK21CS045                             | MILAN SRINIVAS                     |   |            |                    |
| 407. | 1VK21CS046                             | MUJTABA ALI MOMMAD<br>SHAFEE MULLA |   |            |                    |

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|------|--|--|------------|----------------------|
| 408. |  |  | 1VK21CS047 | NAGARAJ S            |
| 409. |  |  | 1VK21CS048 | NAGESH               |
| 410. |  |  | 1VK21CS049 | NEETHA R             |
| 411. |  |  | 1VK21CS050 | NIKHIL KUMAR SINGH   |
| 412. |  |  | 1VK21CS051 | NITHEESH H D         |
| 413. |  |  | 1VK21CS052 | PAVAN KUMAR CN       |
| 414. |  |  | 1VK21CS053 | PAVITHRA S           |
| 415. |  |  | 1VK21CS054 | POORVIKA B C         |
| 416. |  |  | 1VK21CS055 | PRAJWAL C S          |
| 417. |  |  | 1VK21CS056 | PRAJWAL M            |
| 418. |  |  | 1VK21CS057 | PRAMOD S             |
| 419. |  |  | 1VK21CS058 | PRATYUSHAA K R       |
| 420. |  |  | 1VK21CS059 | PUSHPITHA G          |
| 421. |  |  | 1VK21CS060 | RACHITH RATHOD       |
| 422. |  |  | 1VK21CS061 | RADHA N              |
| 423. |  |  | 1VK21CS062 | RAJEEV KUMAR MANDAL  |
| 424. |  |  | 1VK21CS063 | RAJEEV S             |
| 425. |  |  | 1VK21CS064 | RAJENDRA N           |
| 426. |  |  | 1VK21CS065 | RAJVEER SINGH        |
| 427. |  |  | 1VK21CS066 | RAKESH N             |
| 428. |  |  | 1VK21CS067 | RAKSHITHA J          |
| 429. |  |  | 1VK21CS068 | RAM                  |
| 430. |  |  | 1VK21CS069 | RANJAN G             |
| 431. |  |  | 1VK21CS070 | RESHMA H M           |
| 432. |  |  | 1VK21CS071 | RITWIK SARKAR        |
| 433. |  |  | 1VK21CS072 | ROHITH S             |
| 434. |  |  | 1VK21CS073 | SAMRIDHI RAJ LAKSHMI |
| 435. |  |  | 1VK21CS074 | SHALINI P            |
| 436. |  |  | 1VK21CS075 | SHANMUGAM T          |
| 437. |  |  | 1VK21CS076 | SHREYAS S            |
| 438. |  |  | 1VK21CS077 | SNEHA G P            |
| 439. |  |  | 1VK21CS078 | SOMASHEKAR R         |
| 440. |  |  | 1VK21CS079 | SRI GOWRI G          |
| 441. |  |  | 1VK21CS080 | SRIPADA RAO H        |
| 442. |  |  | 1VK21CS081 | SUMUKHA R KASHYAP    |
| 443. |  |  | 1VK21CS082 | SUMUKHA S            |
| 444. |  |  | 1VK21CS083 | SURYA KUMAR M        |
| 445. |  |  | 1VK21CS084 | TEJESWINI M J        |
| 446. |  |  | 1VK21CS085 | VAISHNAVI L          |
| 447. |  |  | 1VK21CS086 | VANDANA G M          |
| 448. |  |  | 1VK21CS087 | VARUN V              |
| 449. |  |  | 1VK21CS088 | VILAS U              |
| 450. |  |  | 1VK21CS089 | VISHWAS Y S          |
| 451. |  |  | 1VK21CS090 | YADUNANDAN N         |
| 452. |  |  | 1VK21CS091 | YASHODHA             |
| 453. |  |  | 1VK21CS092 | BHOOMIKA             |
| 454. |  |  | 1VK21CS093 | ABHISHEK ANANDA      |

|      |   |                             |  |            |                       |
|------|---|-----------------------------|--|------------|-----------------------|
| 455. |   |                             |  | 1VK22CS400 | AJAY                  |
| 456. |   |                             |  | 1VK22CS401 | K N CHETHAN           |
| 457. |   |                             |  | 1VK22CS402 | NIKHITHA S            |
| 458. |   |                             |  | 1VK22CS403 | SHAZIYA SULTHANA      |
| 459. |   |                             |  | 1VK22CS404 | SHWETA MANJUNATH NAIK |
| 460. |   |                             |  | 1VK22CS405 | VARSHA V              |
| 461. |   |                             |  | 1VK22CS407 | YUVARAJ               |
| 462. | Electronics and<br>Communication<br>Engineering | 4 <sup>th</sup><br>Semester | Intra-Internship<br>21INT49(3rd/4th<br>Semester-<br>Second Year-AY<br>2022-23) | 1VK21EC001 | ABHILASH B A          |
| 463. |   |                             |  | 1VK21EC002 | ADITI SHENOY          |
| 464. |   |                             |  | 1VK21EC003 | ADITYA K              |
| 465. |   |                             |  | 1VK21EC004 | AKSHATHA L            |
| 466. |   |                             |  | 1VK21EC005 | BHAVANA L             |
| 467. |   |                             |  | 1VK21EC006 | BHOOMIKA B            |
| 468. |   |                             |  | 1VK21EC007 | CHANDAN K             |
| 469. |   |                             |  | 1VK21EC008 | CHIDANANDA R S        |
| 470. |   |                             |  | 1VK21EC009 | DEEKSHITHA N          |
| 471. |   |                             |  | 1VK21EC010 | DEEPIKA Y             |
| 472. |   |                             |  | 1VK21EC011 | DHANUSH H R           |
| 473. |   |                             |  | 1VK21EC012 | HARSHITH KUMAR H      |
| 474. |   |                             |  | 1VK21EC013 | JAYANTH R             |
| 475. |   |                             |  | 1VK21EC014 | MANASA T M            |
| 476. |   |                             |  | 1VK21EC015 | MASOOD AHMED          |
| 477. |   |                             |  | 1VK21EC016 | MUDDAHONNESH H D      |
| 478. |   |                             |  | 1VK21EC017 | NIKHIL B S            |
| 479. |   |                             |  | 1VK21EC018 | PAVAN KALYAN R        |
| 480. |   |                             |  | 1VK21EC019 | SANDHYA V R           |
| 481. |   |                             |  | 1VK21EC020 | SHUBHA SHREE T M      |
| 482. |   |                             |  | 1VK21EC021 | TEJA SHREE J DESAI    |
| 483. |   |                             |  | 1VK21EC022 | THORUN L              |
| 484. |   |                             |  | 1VK21EC023 | VARSHINI B N          |
| 485. |   |                             |  | 1VK21EC024 | VIKAS N N             |
| 486. | 1VK21EC400                                      | HARSHA T G                  |  |            |                       |

  
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|      |   |                             |   |            |                    |
|------|---|-----------------------------|---|------------|--------------------|
| 487. | Information<br>Science &<br>Engineering | 4 <sup>th</sup><br>Semester | Intra-Internship<br>21INT49(3rd/4th<br>Semester-<br>SecondYear-AY<br>2022-23) | 1VK21IS001 | ABHISHEK G         |
| 488. |   |                             |   | 1VK21IS002 | AKASH R            |
| 489. |   |                             |   | 1VK21IS003 | AKASH V            |
| 490. |   |                             |   | 1VK21IS004 | AMRUTHA R          |
| 491. |   |                             |   | 1VK21IS005 | ANUSHA H K         |
| 492. |   |                             |   | 1VK21IS006 | ANUSHA P B         |
| 493. |   |                             |   | 1VK21IS007 | BHARATH S          |
| 494. |   |                             |   | 1VK21IS008 | BHAVANA N S        |
| 495. |   |                             |   | 1VK21IS009 | BHUVAN S           |
| 496. |   |                             |   | 1VK21IS010 | C M BHUVAN         |
| 497. |   |                             |   | 1VK21IS011 | DARSHAN N          |
| 498. |   |                             |   | 1VK21IS012 | DEEPA G K          |
| 499. |   |                             |   | 1VK21IS013 | GANASHREE R        |
| 500. |   |                             |   | 1VK21IS014 | H DARSHAN          |
| 501. |   |                             |   | 1VK21IS015 | HARSHITHA K        |
| 502. |   |                             |   | 1VK21IS016 | HARSHITHRAJ B G    |
| 503. |   |                             |   | 1VK21IS017 | INCHARA R          |
| 504. |   |                             |   | 1VK21IS018 | KARAN B            |
| 505. |   |                             |   | 1VK21IS019 | KAVANA C V         |
| 506. |   |                             |   | 1VK21IS020 | LAKSHMI PRASAD V   |
| 507. |   |                             |   | 1VK21IS021 | M R DARSHAN GOWDA  |
| 508. |   |                             |   | 1VK21IS022 | MAHESH A V         |
| 509. |   |                             |   | 1VK21IS023 | MANOJ M SERVEGAR   |
| 510. |   |                             |   | 1VK21IS024 | MANOJ S            |
| 511. |   |                             |   | 1VK21IS025 | MANOJ V            |
| 512. |   |                             |   | 1VK21IS026 | MOHAMMED ABU TALHA |
| 513. |   |                             |   | 1VK21IS027 | MOHAMMED KAIF      |
| 514. |   |                             |   | 1VK21IS028 | MOHAN RAJ G        |
| 515. |   |                             |   | 1VK21IS030 | NAGENDRA GOWDA K   |
| 516. |   |                             |   | 1VK21IS031 | NISHANTH M         |
| 517. |   |                             |   | 1VK21IS032 | PALLAVI R          |
| 518. |   |                             |   | 1VK21IS033 | PAVAN R            |
| 519. |   |                             |   | 1VK21IS034 | POOJA C            |
| 520. | 1VK21IS035                              | PRAJWAL D                   |   |            |                    |
| 521. | 1VK21IS036                              | PRAKRUTHI G                 |   |            |                    |
| 522. | 1VK21IS037                              | PREETHI C B                 |   |            |                    |
| 523. | 1VK21IS039                              | R A HEMANTH                 |   |            |                    |
| 524. | 1VK21IS040                              | RAKESH VN                   |   |            |                    |
| 525. | 1VK21IS041                              | RAKSHITHA D R               |   |            |                    |
| 526. | 1VK21IS042                              | ROHAN T Y                   |   |            |                    |
| 527. | 1VK21IS043                              | ROHITH N                    |   |            |                    |
| 528. | 1VK21IS044                              | SANJAY S J                  |   |            |                    |
| 529. | 1VK21IS045                              | SANKETH S RAYKAR            |   |            |                    |
| 530. | 1VK21IS046                              | SHARAN MANJUNATH            |   |            |                    |
| 531. | 1VK21IS047                              | SNEHA CS                    |   |            |                    |
| 532. | 1VK21IS048                              | SRINIVAS NAIK B             |   |            |                    |
| 533. | 1VK21IS049                              | SRIVARSHA                   |   |            |                    |

  
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|      |                                    |                          |   |                            |                          |
|------|------------------------------------|--------------------------|---|----------------------------|--------------------------|
| 534. |                                    |                          |   | 1VK21IS050                 | SUDEEN S                 |
| 535. |                                    |                          |   | 1VK21IS051                 | SUMANTH S                |
| 536. |                                    |                          |   | 1VK21IS052                 | THANUSHREE K M           |
| 537. |                                    |                          |   | 1VK21IS053                 | TRISHA M J               |
| 538. |                                    |                          |   | 1VK21IS054                 | VIBHA R                  |
| 539. |                                    |                          |   | 1VK21IS055                 | VIDYASHREE               |
| 540. |                                    |                          |   | 1VK21IS056                 | VISHAL V NAYAK           |
| 541. |                                    |                          |   | 1VK21IS057                 | YASHWANTH N              |
| 542. |                                    |                          |   | 1VK21IS058                 | VISHWAS P NAYKAL         |
| 543. |                                    |                          |   | 1VK22IS400                 | SREEMAN GOWDA            |
| 544. | Mechanical Engineering             | 4 <sup>th</sup> Semester | Intra-Internship 21INT49(3rd/4th Semester-SecondYear-AY 2022-23)  | 1VK21ME002                 | LIKITH P                 |
| 545. |                                    |                          |   | 1VK21ME003                 | MANU S                   |
| 546. |                                    |                          |   | 1VK22ME400                 | RAGHVENDRA V             |
| 547. |                                    |                          |   | 1VK22ME401                 | SHREEKANT N D            |
| 548. | First Year AIML/ CSE/ ECE/ ISE/ ME | 2 <sup>nd</sup> Semester | First Year Science Exhibition - IOT Theory and Project Exhibition activities -Mini Project and Vertu-Sync-Virtualizing the IOT(Second semester) | 1VK22AI013                 | GOWTHAM S                |
| 549. |                                    |                          |   | 1VK22AI025                 | NITHIN GOWDA M S         |
| 550. |                                    |                          |   | 1VK22AI024                 | MOHAN GOWDA G R          |
| 551. |                                    |                          |   | 1VK22AI026                 | PANCHAMI R               |
| 552. |                                    |                          |   | 1VK22AI012                 | DIVYA SHREE S            |
| 553. |                                    |                          |   | 1VK22AI031                 | RAKSHITHA S              |
| 554. |                                    |                          |   | 1VK22AI039                 | TARUN T                  |
| 555. |                                    |                          |   | 1VK22AI002                 | AKASH P                  |
| 556. |                                    |                          |   | 1VK22AI004                 | ANUSHA P JOSHI           |
| 557. |                                    |                          |   | 1VK22AI029                 | PRITHVIRAJAN M           |
| 558. |                                    |                          |   | 1VK22AI038                 | SOURAV D GOWDA           |
| 559. |                                    |                          |   | 1VK22AI022                 | MAHALAKSHMI S            |
| 560. |                                    |                          |   | 1VK22AI008                 | CHARISHMA K L            |
| 561. |                                    |                          |   | 1VK22AI035                 | SHARON SANJANA           |
| 562. |                                    |                          |   | 1VK22AI011                 | DIVYA B A                |
| 563. |                                    |                          |   | 1VK22AI045                 | YASHFEEN FATHIMA         |
| 564. |                                    |                          |   | 1VK22AI001                 | AKASH G                  |
| 565. |                                    |                          |   | 1VK22AI027                 | PAVAN M                  |
| 566. |                                    |                          |   | 1VK22AI007                 | CHAMAN S                 |
| 567. |                                    |                          |   | 1VK22AI009                 | CETHAN D                 |
| 568. |                                    |                          |   | 1VK22AI019                 | KUMARASWAMY              |
| 569. |                                    |                          |   | 1VK22AI023                 | MANJULI KUMARI           |
| 570. |                                    |                          |   | 1VK22CS064                 | RAKESH KUMAR S           |
| 571. |                                    |                          |   | 1VK22CS005                 | AKSHAY BHAT              |
| 572. |                                    |                          |   | 1VK22CS076                 | SUNIL B                  |
| 573. |                                    |                          |   | 1VK22CS027                 | HARSHITH P B             |
| 574. |                                    |                          |   | 1VK22CS089                 | VIKAS SM                 |
| 575. |                                    |                          |   | 1VK22CS037                 | M D ABHINAV KARTHIK      |
| 576. |                                    |                          |   | First Year AIML/ CSE/ ECE/ | 2 <sup>nd</sup> Semester |
| 577. | 1VK22CS050                         | NITHIN RAJ M J           |   |                            |                          |
| 578. | 1VK22CS019                         | DEEKSHA A G              |   |                            |                          |
| 579. | 1VK22CS073                         | SOUNDARYA S              |   |                            |                          |

  
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|------|---|-----------------------------|---|------------|-----------------------|
| 580. | ISE/<br>ME  |                             | Exhibition activities<br>-Mini Project and<br>Vertu-Sync-<br>Virtualizing the<br>IOT(Second<br>semester)      | 1VK22CS006 | AKSHAY S              |
| 581. |   |                             |   | 1VK22CS030 | K ARVIN REDDY         |
| 582. |   |                             |   | 1VK22CS060 | RAKSHITHA M           |
| 583. |   |                             |   | 1VK22CS086 | VARSHITHA R           |
| 584. |   |                             |   | 1VK22CS093 | YASHWANTH M           |
| 585. |   |                             |   | 1VK22CS046 | MEDHA SHANKAR BHAT    |
| 586. |   |                             |   | 1VK22CS016 | BINDU N E             |
| 587. |   |                             |   | 1VK22CS080 | TANUSHREE L           |
| 588. |   |                             |   | 1VK22CS017 | CHAITANYA C           |
| 589. |   |                             |   | 1VK22CS028 | HITHAISHINI G         |
| 590. |   |                             |   | 1VK22CS074 | SUCHITRA              |
| 591. |   |                             |   | 1VK22CS082 | TEJASWINI M C         |
| 592. |   |                             |   | 1VK22CS058 | RAKSHITHA H E         |
| 593. |   |                             |   | 1VK22CS068 | SREE MADHU N          |
| 594. |   |                             |   | 1VK22CS088 | VIJAYALAKSHMI         |
| 595. |   |                             |   | 1VK22CS024 | GAGANA KEERTHI        |
| 596. |   |                             |   | 1VK22CS066 | SANGEETHA C N         |
| 597. |   |                             |   | 1VK22CS033 | KAVANA S J            |
| 598. |   |                             |   | 1VK22CS023 | DIANA WILLIAMS        |
| 599. |   |                             |   | 1VK22CS032 | KAVANA A M            |
| 600. |   |                             |   | 1VK22CS057 | RACHANA M R           |
| 601. |   |                             |   | 1VK22CS065 | SAGAR KUMAR M R       |
| 602. |   |                             |   | 1VK22CS051 | NITHYALAKSHMI K       |
| 603. |   |                             |   | 1VK22CS072 | VEDAMURTHI            |
| 604. |   |                             |   | 1VK22CS053 | PRADEEP M             |
| 605. |   |                             |   | 1VK22CS040 | MAHESH R V            |
| 606. |   |                             |   | 1VK22CS001 | ABDUL SATTAR KHAN     |
| 607. |   |                             |   | 1VK22CS084 | USMAN R               |
| 608. |   |                             |   | 1VK22CS022 | DEVA CHARYA           |
| 609. |   |                             |   | 1VK22CS002 | ABHISHEK C            |
| 610. |   |                             |   | 1VK22CS031 | KARAN T R             |
| 611. |   |                             |   | 1VK22CS039 | MAHALAKSHMI H N       |
| 612. |   |                             |   | 1VK22CS078 | SUPRIYA G R           |
| 613. |   |                             |   | 1VK22EC021 | MEENA. N              |
| 614. |   |                             |   | 1VK22EC026 | NIKITHA K H           |
| 615. |   |                             |   | 1VK22EC003 | ANANYA A S            |
| 616. |   |                             |   | 1VK22EC018 | HITASHREE N K         |
| 617. |   |                             |   | 1VK22EC038 | SAHANA A              |
| 618. |   |                             |   | 1VK22EC030 | PUNYALAKSHMI P S      |
| 619. |   |                             |   | 1VK22EC057 | YASHASWINI GOWDA H K  |
| 620. | 1VK22EC034  | RANJITHA K S                |   |            |                       |
| 621. | First Year<br>AIML/<br>CSE/<br>ECE/<br>ISE/<br>ME | 2 <sup>nd</sup><br>Semester | First Year Science<br>Exhibition<br>- IOT Theory and<br>Project<br>Exhibition activities<br>-Mini Project and | 1VK22EC004 | ARPITHA C S           |
| 622. |   |                             |   | 1VK22EC059 | YOGITHA S             |
| 623. |   |                             |   | 1VK22EC019 | J SNEHA               |
| 624. |   |                             |   | 1VK22EC053 | SWATHI M              |
| 625. |   |                             |   | 1VK22EC046 | SNEHA N               |
| 626. |   |                             |   | 1VK22EC014 | GAYATHRI SRI VARSHA Y |

  
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|      |                          |                             |  |  |                               |                   |
|------|--------------------------|-----------------------------|--|--|-------------------------------|-------------------|
| 627. |                          |                             | Vertu-Sync-<br>Virtualizing the<br>IOT(Second<br>semester) | 1VK22EC008   | BHOOMIKHA H S                 |                   |
| 628. |                          |                             |  | 1VK22EC022   | NANDINI D                     |                   |
| 629. |                          |                             |  | 1VK22EC045   | SINCHANA K N                  |                   |
| 630. |                          |                             |  | 1VK22EC042   | SARIKA C                      |                   |
| 631. |                          |                             |  | 1VK22EC035   | RASHMI B                      |                   |
| 632. |                          |                             |  | 1VK22EC048   | SOWMYA SHREE N                |                   |
| 633. |                          |                             |  | 1VK22EC012   | CHETHANA K N                  |                   |
| 634. |                          |                             |  | 1VK22EC016   | HARSHITHA M N                 |                   |
| 635. |                          |                             |  | 1VK22EC024   | NIDHI M                       |                   |
| 636. |                          |                             |  | 1VK22EC029   | PREETHI RADARATTI             |                   |
| 637. |                          |                             |  | 1VK22EC056   | YASHASWINI M N                |                   |
| 638. |                          |                             |  | 1VK22IS048   | SHAIK ABDUL KHADAR<br>JELLANI |                   |
| 639. |                          |                             |  | 1VK22IS041   | POOJA A                       |                   |
| 640. |                          |                             |  | 1VK22IS055   | SRUJAN KUMAR N BANDI          |                   |
| 641. |                          |                             |  | 1VK22IS040   | PADMAJA                       |                   |
| 642. |                          |                             |  | 1VK22IS043   | BHAKTHI R                     |                   |
| 643. |                          |                             |  | 1VK22IS002   | ABHINAYA N NAIK               |                   |
| 644. |                          |                             |  | 1VK22IS007   | ANKITHA N V                   |                   |
| 645. |                          |                             |  | 1VK22IS030   | MANASA H N                    |                   |
| 646. |                          |                             |  | 1VK22IS017   | HARISH G                      |                   |
| 647. |                          |                             |  | 1VK22IS018   | HARSHITHA K C                 |                   |
| 648. |                          |                             |  | 1VK22IS028   | KRUTHAN A                     |                   |
| 649. |                          |                             |  | 1VK22IS042   | PRAGNITHA K P                 |                   |
| 650. |                          |                             |  | 1VK22IS046   | RISHI M                       |                   |
| 651. |                          |                             |  | 1VK22IS046   | BHUVANA K S                   |                   |
| 652. |                          |                             |  | 1VK22IS037   | NIHARIKHA P                   |                   |
| 653. |                          |                             |  | 1VK22IS010   | CHAITANYA                     |                   |
| 654. |                          |                             |  | 1VK22IS052   | SNEHA                         |                   |
| 655. |                          |                             |  | 1VK22IS004   | AISHWARYA Y R                 |                   |
| 656. |                          |                             |  | 1VK22IS024   | KAVITHA S                     |                   |
| 657. |                          |                             |  | 1VK22IS023   | KAVITHA A                     |                   |
| 658. |                          |                             |  | 1VK22IS015   | GAYATHRI C                    |                   |
| 659. |                          |                             |  | 1VK22IS027   | KIRAN T R                     |                   |
| 660. |                          |                             |  | 1VK22IS059   | TULSI PRASAD K                |                   |
| 661. |                          |                             |  | 1VK22IS061   | VIKAS L                       |                   |
| 662. |                          |                             |  | 1VK22IS013   | DEEPAK V                      |                   |
| 663. |                          |                             |  | 1VK22IS011   | CHANDAN A P                   |                   |
| 664. |                          |                             |  | 1VK22ME006   | SNEHA S                       |                   |
| 665. | 1st Year CSE<br>and AIML | 2 <sup>nd</sup><br>Semester |  | IOT Theory and<br>Project<br>Exhibition activities<br>Project Exhibition<br>VIRTU-SYNC<br>Virtualizing IoT<br>Experience (2nd<br>semester) | 1VK22AI003                    | ANU N             |
| 666. |                          |                             |  |  | 1VK22AI005                    | B VARDHAN         |
| 667. |                          |                             |  |  | 1VK22AI006                    | BHOOMIKA R        |
| 668. |                          |                             |  |  | 1VK22AI010                    | DEVARAJ           |
| 669. |                          |                             |  |  | 1VK22AI014                    | HEMANTH M         |
| 670. |                          |                             |  |  | 1VK22AI015                    | JAI SURYAA A H    |
| 671. |                          |                             |  |  | 1VK22AI016                    | KARTHIK KUMAR V G |
| 672. |                          |                             |  |  | 1VK22AI017                    | KIRANMAI U I      |

|      |                       |                          |  |            |                    |
|------|-----------------------|--------------------------|--|------------|--------------------|
| 673. |                       |                          |  | 1VK22AI018 | KAUSHIK M N        |
| 674. |                       |                          |  | 1VK22AI020 | LIKHITHA R         |
| 675. |                       |                          |  | 1VK22AI021 | LIKITHA SHREE S A  |
| 676. |                       |                          |  | 1VK22AI030 | RAHUL M            |
| 677. |                       |                          |  | 1VK22AI032 | RANGALAKSHMI R     |
| 678. |                       |                          |  | 1VK22AI033 | SAGAR B R          |
| 679. |                       |                          |  | 1VK22AI034 | SAKSHI             |
| 680. |                       |                          |  | 1VK22AI036 | SHIVANI M          |
| 681. |                       |                          |  | 1VK22AI037 | SINCHANA K R       |
| 682. |                       |                          |  | 1VK22AI040 | UMESH H V          |
| 683. |                       |                          |  | 1VK22AI041 | VARNITHA N R       |
| 684. |                       |                          |  | 1VK22AI042 | VISHNU S BHARADWAJ |
| 685. |                       |                          |  | 1VK22AI043 | VIVEK S S MATH     |
| 686. |                       |                          |  | 1VK22AI044 | VIVEK S D          |
| 687. |                       |                          |  | 1VK22CS003 | AISHWARYA          |
| 688. |                       |                          |  | 1VK22CS004 | AKASH M            |
| 689. |                       |                          |  | 1VK22CS007 | ALLWYN JOSEPH      |
| 690. |                       |                          |  | 1VK22CS008 | ANJALI M           |
| 691. |                       |                          |  | 1VK22CS009 | ANJUSHREE J        |
| 692. |                       |                          |  | 1VK22CS010 | ANUSHA S NAIK      |
| 693. |                       |                          |  | 1VK22CS011 | ASHLESH V          |
| 694. |                       |                          |  | 1VK22CS012 | BALAJI C N         |
| 695. |                       |                          |  | 1VK22CS013 | BHAVANA T S        |
| 696. |                       |                          |  | 1VK22CS014 | BHOOMIKA S         |
| 697. |                       |                          |  | 1VK22CS015 | BIBI HAJIRA M S    |
| 698. |                       |                          |  | 1VK22CS018 | CHINMAY B M        |
| 699. |                       |                          |  | 1VK22CS020 | DEEKSHA K          |
| 700. |                       |                          |  | 1VK22CS021 | DEEKSHITHA D A     |
| 701. |                       |                          |  | 1VK22CS025 | H K MANASA         |
| 702. |                       |                          |  | 1VK22CS026 | HARSHA K J         |
| 703. |                       |                          |  | 1VK22CS029 | JAGADISH B S       |
| 704. |                       |                          |  | 1VK22CS034 | KAVYA MOGER        |
| 705. |                       |                          |  | 1VK22CS035 | KRUTHIKA N         |
| 706. |                       |                          |  | 1VK22CS038 | M R POOJA          |
| 707. |                       |                          |  | 1VK22CS041 | MANASA SANJAY      |
| 708. |                       |                          |  | 1VK22CS042 | MANASA Y G         |
| 709. |                       |                          |  | 1VK22CS043 | MANOJ C            |
| 710. |                       |                          |  | 1VK22CS044 | MANOJ M D          |
| 711. |                       |                          |  | 1VK22CS045 | MAYUR GOWDA S J    |
| 712. |                       |                          |  | 1VK22CS047 | MEGHANA S          |
| 713. |                       |                          |  | 1VK22CS048 | NIRANJAN GOWDA B J |
| 714. |                       |                          |  | 1VK22CS049 | NIRANJAN N         |
| 715. |                       |                          |  | 1VK22CS052 | P SHYAM KULKARNI   |
| 716. |                       |                          |  | 1VK22CS054 | PRAJWAL P P        |
| 717. |                       |                          |  | 1VK22CS056 | PRATHAM R          |
| 718. |                       |                          |  | 1VK22CS061 | RAKSHITHA V        |
| 719. |                       |                          |  | 1VK22CS062 | RAMYA UMESH NAIK   |
|      | 1st Year CSE and AIML | 2 <sup>nd</sup> Semester | IOT Theory and Project Exhibition activities<br>Project Exhibition<br>VIRTU-SYNC<br>Virtualizing IoT Experience (2nd semester) |            |                    |

|      |  |  |  |            |                    |
|------|--|--|--|------------|--------------------|
| 720. |  |  |  | 1VK22CS063 | RANJITHA M L       |
| 721. |  |  |  | 1VK22CS067 | SHAMBHAVI          |
| 722. |  |  |  | 1VK22CS069 | SHRUTI GAJARE      |
| 723. |  |  |  | 1VK22CS070 | SNEHA D            |
| 724. |  |  |  | 1VK22CS071 | SOHEL SHAIKH       |
| 725. |  |  |  | 1VK22CS075 | SUHAS REDDY        |
| 726. |  |  |  | 1VK22CS079 | TANIYA DEEPAK SHET |
| 727. |  |  |  | 1VK22CS081 | TEJAS REDDY Y S    |
| 728. |  |  |  | 1VK22CS083 | UDAY KIRAN L V     |
| 729. |  |  |  | 1VK22CS085 | VARSHITHA B V      |
| 730. |  |  |  | 1VK22CS087 | VARUN R            |
| 731. |  |  |  | 1VK22CS090 | VINAYAK            |
| 732. |  |  |  | 1VK22CS091 | VISHAL REDDY       |
| 733. |  |  |  | 1VK22CS092 | YASEEN M L         |
| 734. |  |  |  | 1VK22CS094 | YOGESH GOWDA Y R   |

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Bangalore - 560 074



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AN INSTITUTE OF JANATHA EDUCATION SOCIETY  
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## Index Sheet

1.3.2. Percentage of students undertaking Project work/fieldwork/Internships (Data for the latest completed academic year (2022-23))

### Summary Sheet

| Sl. No   | Description   | No. of Students | Project work/fieldwork/Internships                                | Duration according to VTU Curriculum |
|--|---|-----------------|---|--------------------------------------|
| 1  | Total Number of students undertaking project work (Latest Completed Final Year 2022-23)                 | 132             | Project(Phase-I and Phase-II)                                     | 8 Months                             |
| 2  | Total Number of students undertaking fieldwork (Latest Completed 3 <sup>rd</sup> Year 2022-2023)        | 22              | Fieldwork   | 4 Months                             |
| 3  | Mini Projects (Latest Completed 3 <sup>rd</sup> Year 2022-2023)   | 172             | Mini Projects   | 4 Months                             |
| 4  | Total Number of students undertaking Internship (Latest Completed 2 <sup>nd</sup> Year 2022-23)         | 221             | Internships   | 1 Month as per VTU Regulations       |
| 5  | Total Number of students undertaking Project Exhibition (Latest Completed 1 <sup>st</sup> Year 2022-23) | 187             | Project Exhibition & IOT Theory and Project Exhibition activities | 4 Months                             |
| Total Number of students undertaking project work, Field Work, Internship and Mini Project |   | 734             |   |                                      |
| Total number of students during the latest completed academic year 2022-23                 |   | 812             |   |                                      |
| Percentage   |   | 90%             |   |                                      |

  
29/02/2024

Principal

VIVEKANANDA INSTITUTE OF TECHNOLOGY  
Bangalore - 560 074

## SYLLABUS

ALL THE DEPARTMENTS OF THE INSTITUTION  
FOLLOWS THE SYLLABUS AND SCHEME PRESCRIBED  
BY VTU

THE LINK FOR THE SAME IS GIVEN BELOW.

THE PROJECT AND INTERNSHIP ARE COMPULSARY  
SUBJECTS UNDER VTU DURING 8 TH SEMESTER OF  
THEIR COURSE.

### 2018 SCHEME

<https://vtu.ac.in/b-e-scheme-syllabus/#menu1>

### 2021 SCHEME

<https://vtu.ac.in/b-e-scheme-syllabus/#menu05>

### 2022 SCHEME

<https://vtu.ac.in/b-e-scheme-syllabus/#menu05>

  
29/02/2024

Principal

VIVEKANANDA INSTITUTE OF TECHNOLOGY  
Bangalore - 560 074

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI**  
**Scheme of Teaching and Examination 2018 - 19**  
**Choice Based Credit System (CBCS) AND Outcome Based Education (OBE)**  
**(Effective from the academic year 2018 - 19)**

**VIII SEMESTER**

| 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                    | 18CS81  | Internet of Things        | CS / IS  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 2            | PEC                    | 18CS82X | Professional Elective - 4 | CS / IS  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 3            | Project                | 18CSP83 | Project Work Phase - 2    | CS / IS  | --                   | --        | 2                  | 03                | 40         | 60         | 100        | 3           |
| 4            | Seminar                | 18CSS84 | Technical Seminar         | CS / IS  | --                   | --        | 2                  | 03                | 40         | 60         | 100        | 3           |
| 5            | INT                    | 18CSI85 | Internship                | (Completed during the intervening vacations of VI and VII semesters and /or VII and VIII semesters.) |                      |           |                    | 03                | 40         | 60         | 100        | 3           |
| <b>TOTAL</b> |                        |         |                           |  | <b>06</b>            | <b>--</b> | <b>04</b>          | <b>15</b>         | <b>260</b> | <b>240</b> | <b>500</b> | <b>18</b>   |

**Note: PCC: Professional Core, PEC: Professional Elective, OEC: Open Elective, INT: Internship.**

**Professional Electives - 4**

| Course code under 18CS82X | Course Title                           |
|---------------------------|--|
| 18CS821                   | Mobile Computing                       |
| 18CS822                   | Storage Area Networks                  |
| 18CS823                   | NoSQL Database                         |
| 18CS824                   | Multicore Architecture and Programming |

**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).



*R. Srinivas*  
 29/02/2024  
 Principal

VIVEKANANDA INSTITUTE OF TECHNOLOGY  
 Bangalore - 560 074



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI**  
**Scheme of Teaching and Examination 2018 – 19**  
**Choice Based Credit System (CBCS) AND Outcome Based Education (OBE)**  
**(Effective from the academic year 2018 – 19)**

| VII SEMESTER |                        |         |   |   |                      |           |                    |                   |            |            |            |             |
|--------------|------------------------|---------|---|---|----------------------|-----------|--------------------|-------------------|------------|------------|------------|-------------|
| 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                    | 18CS71  | Artificial Intelligence and Machine Learning            | CS / IS   | 4                    | --        | --                 | 03                | 40         | 60         | 100        | 4           |
| 2            | PCC                    | 18CS72  | Big Data Analytics                                      | CS / IS   | 4                    | --        | --                 | 03                | 40         | 60         | 100        | 4           |
| 3            | PEC                    | 18CS73X | Professional Elective – 2                               | CS / IS   | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 4            | PEC                    | 18CS74X | Professional Elective – 3                               | CS / IS   | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 5            | OEC                    | 18CS75X | Open Elective –B  | CS / IS   | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 6            | PCC                    | 18CSL76 | Artificial Intelligence and Machine Learning Laboratory | CS / IS   | --                   | --        | 2                  | 03                | 40         | 60         | 100        | 2           |
| 7            | Project                | 18CSP77 | Project Work Phase - 1                                  | CS / IS   | --                   | --        | 2                  | --                | 100        | --         | 100        | 1           |
| 8            | INT                    | --      | 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) |                      |           |                    |                   |            |            |            |             |
| <b>TOTAL</b> |                        |         |   |   | <b>17</b>            | <b>--</b> | <b>04</b>          | <b>18</b>         | <b>340</b> | <b>360</b> | <b>700</b> | <b>20</b>   |

**Note:** PCC: Professional core, PEC: Professional Elective, OEC: Open Elective, INT: Internship.

**Professional Elective - 2**

| Course code under 18CS73X | Course Title                              |
|---------------------------|---|
| 18CS731                   | Software Architecture and Design Patterns |
| 18CS732                   | High Performance Computing                |
| 18CS733                   | Advanced Computer Architecture            |
| 18CS734                   | User Interface Design                     |

**Professional Electives – 3**

| Course code under 18CS74X | Course Title                                    |
|---------------------------|---|
| 18CS741                   | Digital Image Processing                        |
| 18CS742                   | Network management                              |
| 18CS743                   | Natural Language Processing                     |
| 18CS744                   | Cryptography                                    |
| 18CS745                   | Robotic Process Automation Design & Development |

**Open Elective –B (Not for CSE / ISE Programs)**

| Course code under 18CS75X | Course Title  |
|---------------------------|---|
| 18CS751                   | Introduction to Big Data Analytics                            |
| 18CS752                   | Python Application Programming                                |
| 18CS753                   | Introduction to Artificial Intelligence                       |
| 18CS754                   | Introduction to Dot Net framework for Application Development |

Students can select any one of the open electives offered by any Department (Please refer to the list of open electives under 18CS75X).

Selection of an open elective is not allowed provided,

- 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 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/ Adviser/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 guides, 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, 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 takeup/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.

  
 Principal  
 20/02/2024  
**VIVEKANANDA INSTITUTE OF TECHNOLOGY**  
 Bangalore - 560 074

**VIVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI**  
**Scheme of Teaching and Examination 2018 – 19**  
**Choice Based Credit System (CBCS) AND Outcome Based Education (OBE)**  
**(Effective from the academic year 2018 – 19)**

**VI SEMESTER**

| 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                    | 18CS61   | System Software and Compilers                  | CS / IS  | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 2            | PCC                    | 18CS62   | Computer Graphics and Visualization            | CS / IS  | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 3            | PCC                    | 18CS63   | Web Technology and its applications            | CS / IS  | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 4            | PEC                    | 18CS64X  | Professional Elective -I                       | CS / IS  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 5            | OE                     | 18CS65X  | Open Elective –A                               | CS / IS  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 6            | PCC                    | 18CSL66  | System Software Laboratory                     | CS / IS  | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
| 7            | PCC                    | 18CSL67  | Computer Graphics Laboratory with mini project | CS / IS  | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
| 8            | MP                     | 18CSMP68 | Mobile Application Development                 | CS / IS  | --                   | --        | 2                  | 03                | 40         | 60         | 100        | 2           |
| 9            | INT                    | --       | Internship                                     | (To be carried out during the intervening vacations of VI and VII semesters) |                      |           |                    | --                | --         | --         | --         | --          |
| <b>TOTAL</b> |                        |          |  |  | <b>15</b>            | <b>10</b> | <b>06</b>          | <b>24</b>         | <b>320</b> | <b>480</b> | <b>800</b> | <b>24</b>   |

**Note: PCC: Professional core, PEC: Professional Elective, OE: Open Elective, MP: Mini-project, INT: Internship.**

**Professional Elective -I****Course code under 18XX64X****Course Title**

|         |                                      |
|---------|--------------------------------------|
| 18CS641 | Data Mining and Data Warehousing     |
| 18CS642 | Object Oriented Modelling and Design |
| 18CS643 | Cloud Computing and its Applications |
| 18CS644 | Advanced JAVA and J2EE               |
| 18CS645 | System Modelling and Simulation      |

**Open Elective –A (Not for CSE / ISE Programs)**

|         |  |
|---------|--|
| 18CS651 | Mobile Application Development                 |
| 18CS652 | Introduction to Data Structures and Algorithms |
| 18CS653 | Programming in JAVA                            |
| 18CS654 | Introduction to Operating System               |

Students can select any one of the open electives offered by any Department (Please refer to the list of open electives under 18CS65X). Selection of an open elective is not allowed provided,

- 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 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/ Adviser/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 belongs 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 takeup/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.

*Rajaram*  
 23/02/2024  
 Principal

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI**  
**B.E. in Computer Science and Engineering**  
**Scheme of Teaching and Examinations 2021**  
**Outcome-Based Education(OBE) and Choice Based Credit System (CBCS)**  
**(Effective from the academic year 2021 - 22)**

**IV SEMESTER**

| Sl. No       | Course and Course Code      | Course Title                                | Teaching Department (TD) and Question Paper Setting Board (PSB) | Teaching Hours /Week   |          |                    |             | Examination       |            |             | Credits   |             |
|--------------|-----------------------------|---|---|--|----------|--------------------|-------------|-------------------|------------|-------------|-----------|-------------|
|              |                             |   |   | Theory Lecture   | Tutorial | Practical/ Drawing | Self -Study | Duration in hours | CIE Marks  | SEE Marks   |           | Total Marks |
|              |                             |   |   | L  | T        | P                  | S           |                   |            |             |           |             |
| 1            | BSC<br>21CS41               | Mathematical Foundations for Computing      | Maths   | 2  | 2        | 0                  |             | 03                | 50         | 50          | 100       | 3           |
| 2            | IPCC<br>21CS42              | Design and Analysis of Algorithms           | Any CS Board Department   | 3  | 0        | 2                  |             | 03                | 50         | 50          | 100       | 4           |
| 3            | IPCC<br>21CS43              | Microcontroller and Embedded Systems        |   | 3  | 0        | 2                  |             | 03                | 50         | 50          | 100       | 4           |
| 4            | PCC<br>21CS44               | Operating SystemS                           |   | 2  | 2        | 0                  |             | 03                | 50         | 50          | 100       | 3           |
| 5            | AEC<br>21BE45               | Biology For Engineers                       | BT, CHE, PHY  | 2  | 0        | 0                  |             | 02                | 50         | 50          | 100       | 2           |
| 6            | PCC<br>21CSL46              | Python Programming Laboratory               | Any CS Board Department   | 0  | 0        | 2                  |             | 03                | 50         | 50          | 100       | 1           |
| 7            | HSMC<br>21KSK37/47          | Sanskrutika Kannada                         | HSMC  | 1  | 0        | 0                  |             | 01                | 50         | 50          | 100       | 1           |
|              | HSMC<br>21KBK37/47          | Balake Kannada                              |   |  |          |                    |             |                   |            |             |           |             |
|              | OR                          |   |   |  |          |                    |             |                   |            |             |           |             |
|              | HSMC<br>21CIP37/47          | Constitution of India & Professional Ethics |   |  |          |                    |             |                   |            |             |           |             |
| 8            | AEC<br>21CS48X/21C<br>SL48X | Ability Enhancement Course- IV              | TD and PSB:<br>Concerned<br>department                          | If offered as theory Course  |          |                    |             | 01                | 50         | 50          | 100       | 1           |
|              |                             |   |   | 1  | 0        | 0                  |             |                   |            |             |           |             |
|              |                             |   |   | If offered as lab. course  |          |                    |             | 02                |            |             |           |             |
|              |                             |   |   | 0  | 0        | 2                  |             |                   |            |             |           |             |
| 9            | UHV<br>21UH49               | UniversalHumanValues                        | Any Department  | 1  | 0        | 0                  |             | 01                | 50         | 50          | 100       | 1           |
| 10           | INT<br>21INT49              | Inter/Intra Institutional Internship        | Evaluation By the appropriate authorities                       | Completed during the intervening period of II and III semesters by students admitted to first year of BE./B.Tech and during the intervening period of III and IV semesters by Lateral entry students admitted to III semester. |          |                    |             | 3                 | 100        | --          | 100       | 2           |
| <b>Total</b> |                             |   |   |  |          |                    |             | <b>550</b>        | <b>450</b> | <b>1000</b> | <b>22</b> |             |

**Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs**

|   |                    |                             |       |    |    |    |    |    |     |    |     |   |
|---|--------------------|-----------------------------|-------|----|----|----|----|----|-----|----|-----|---|
| 1 | NCMC<br>21MATDIP41 | Additional Mathematics - II | Maths | 02 | 02 | -- | -- | -- | 100 | -- | 100 | 0 |
|---|--------------------|-----------------------------|-------|----|----|----|----|----|-----|----|-----|---|

**Note:** BSC: Basic Science Course, IPCC: Integrated Professional Core Course, PCC: Professional Core Course, AEC -Ability Enhancement Courses, HSMC: Humanity and Social Science and Management Courses, UHV- Universal Human Value Courses.

L -Lecture, T - Tutorial, P- Practical/ Drawing, S - Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.

21KSK37/47 Sanskrutika Kannada is for students who speak, read and write Kannada and 21KBK37/47 Balake Kannada is for non-Kannada speaking, reading, and writing students.

Integrated Professional Core Course (IPCC): Refers to Professional Theory Core Course Integrated with Practical's of the same course. Credit for IPCC can be 04 and its Teaching - Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from practical part of IPCC shall be included in the SEE question paper. For more details the regulation governing the Degree of Bachelor of Engineering /Technology (BE/B.Tech.) 2021-22 may be referred

**Non - credit mandatory course (NCMC):**

**Additional Mathematics - II:**

(1) Lateral entry Diploma holders admitted to III semester of B.E./B.Tech., shall attend the classes during the IV semester to complete all the formalities of the course and appear for the Continuous Internal Evaluation (CIE). 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 an F grade. In such a case, the student has to fulfil the course requirements during subsequent semester/s to earn the qualifying CIE marks. These courses are slated for CIE only and has no SEE.  
 (2) Additional Mathematics I and II shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses shall be mandatory for the award of degree.  
 (3) Successful completion of the course Additional Mathematics II shall be indicated as satisfactory in the grade card. Non-completion of the courses Additional Mathematics I shall be indicated as Unsatisfactory.

**Ability Enhancement Course - IV**

|          |                        |          |               |
|----------|------------------------|----------|---------------|
| 21CSL481 | Web Programming        | 21CSL483 | R Programming |
| 21CS482  | Unix Shell Programming | 21CS484  |               |

**Internship of 04 weeks during the intervening period of IV and V semesters; 21INT68 Innovation/ Entrepreneurship/ Societal based Internship.**

(1) All the students shall have to undergo a mandatory internship of 04 weeks during the intervening period of IV and V semesters. The internship shall be slated for CIE only and will not have SEE. The letter grade earned through CIE shall be included in the VI semester grade card. The internship shall be considered as a head of passing and shall be considered for vertical progression and for the award of degree. Those, who do not take up / complete the internship shall be considered under F (fail) grade and shall have to complete during subsequently after satisfying the internship requirements.

(2) Innovation/ Entrepreneurship Internship shall be carried out at industry, State and Central Government / Non-government organizations (NGOs), micro, small and medium enterprise (MSME), Innovation centers or Incubation centers. Innovation need not be a single major breakthrough; it can also be a series of small or incremental changes. Innovation of any kind can also happen outside of the business world.

Entrepreneurship internships offers a chance to gain hands on experience in the world of entrepreneurship and helps to learn what it takes to run a small entrepreneurial business by performing intern duties with an established company. This experience can then be applied to future business endeavours. Start-ups and small companies are a preferred place to learn the business ticks for future entrepreneurs as learning how a small business operates will serve the intern well when he/she manages his/her own company. Entrepreneurship acts as a catalyst to open the minds to creativity and innovation. Entrepreneurship internship can be from several sectors, including technology, small and medium-sized, and the service sector.

**(3) Societal or social internship.**

Urbanization is increasing on a global scale; and yet, half the world's population still resides in rural areas and is devoid of many things that urban population enjoy. Rural internship, is a work-based activity in which students will have a chance to solve/reduce the problems of the rural place for better living.

As proposed under the AICTE rural internship programme, activities under Societal or social internship, particularly in rural areas, shall be considered for 40 points under AICTE activity point programme.

*Rajesh Kumar*  
 22/02/2024

VIVEKANANDA INSTITUTE OF TECHNOLOGY  
 Bangalore - 560 074

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI**  
**B.E. in Electronics and Communication Engineering (ECE)**  
**Scheme of Teaching and Examinations 2021**  
**Outcome-Based Education (OBE) and Choice Based Credit System (CBCS)**  
**(Effective from the academic year 2021 - 22)**

**IV SEMESTER**

| Sl. No       | Course and Course Code | Course Title                                | Teaching Department (TD) and Question Paper Setting Board (PSB) | Teaching Hours /Week   |          |                    |            | Examination       |            |             | Credits   |             |
|--------------|------------------------|---|---|--|----------|--------------------|------------|-------------------|------------|-------------|-----------|-------------|
|              |                        |   |   | Theory Lecture   | Tutorial | Practical/ Drawing | Self-Study | Duration in hours | CIE Marks  | SEE Marks   |           | Total Marks |
|              |                        |   |   | L  | T        | P                  | S          |                   |            |             |           |             |
| 1            | BSC<br>21EC41          | Maths for Communication Engineers           | TD, PSB-Maths   |  |          |                    |            | 03                | 50         | 50          | 100       | 3           |
| 2            | IPCC<br>21EC42         | Digital Signal Processing                   | TD: ECE<br>PSB: ECE   | 3  | 0        | 2                  |            | 03                | 50         | 50          | 100       | 4           |
| 3            | IPCC<br>21EC43         | Circuits & Controls                         | TD: ECE<br>PSB: ECE   | 3  | 0        | 2                  |            | 03                | 50         | 50          | 100       | 4           |
| 4            | PCC<br>21EC44          | Communication Theory                        | TD: ECE<br>PSB: ECE   | 3  | 0        | 0                  | 1          | 03                | 50         | 50          | 100       | 3           |
| 5            | AEC<br>21BE45          | Biology For Engineers                       | BT, CHE, PHY  | 2  | 0        | 0                  |            | 02                | 50         | 50          | 100       | 2           |
| 6            | PCC<br>21ECL46         | Communication Laboratory I                  | TD: ECE<br>PSB: ECE   | 0  | 0        | 2                  |            | 03                | 50         | 50          | 100       | 1           |
| 7            | HSMC<br>21KSK37/47     | Samskrutika Kannada                         | HSMC  | 1  | 0        | 0                  |            | 01                | 50         | 50          | 100       | 1           |
|              | HSMC<br>21KSK37/47     | Balake Kannada                              |   |  |          |                    |            |                   |            |             |           |             |
|              | OR                     |   |   |  |          |                    |            |                   |            |             |           |             |
|              | HSMC<br>21CIP37/47     | Constitution of India & Professional Ethics |   |  |          |                    |            |                   |            |             |           |             |
| 8            | AEC<br>21EC48X         | Ability Enhancement Course- IV              | TD and PSB:<br>Concerned department                             | If offered as theory Course  |          |                    |            | 01                | 50         | 50          | 100       | 1           |
|              |                        |   |   | 1  | 0        | 0                  |            |                   |            |             |           |             |
|              |                        |   |   | If offered as lab. course  |          |                    |            | 02                |            |             |           |             |
|              |                        |   |   | 0  | 0        | 2                  |            |                   |            |             |           |             |
| 9            | UHV<br>21UH49          | Universal Human Values                      | Any Department  | 1  | 0        | 0                  |            | 01                | 50         | 50          | 100       | 1           |
| 10           | INT<br>21INT49         | Inter/Intra Institutional Internship        | Evaluation By the appropriate authorities                       | Completed during the intervening period of II and III semesters by students admitted to first year of BE./B.Tech and during the intervening period of III and IV semesters by Lateral entry students admitted to III semester. |          |                    |            | 3                 | 100        | --          | 100       | 2           |
| <b>Total</b> |                        |   |   |  |          |                    |            | <b>550</b>        | <b>450</b> | <b>1000</b> | <b>22</b> |             |

**Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs**

|   |                    |                             |       |    |    |    |    |    |     |    |     |   |
|---|--------------------|-----------------------------|-------|----|----|----|----|----|-----|----|-----|---|
| 1 | NCMC<br>21MATDIP41 | Additional Mathematics - II | Maths | 02 | 02 | -- | -- | -- | 100 | -- | 100 | 0 |
|---|--------------------|-----------------------------|-------|----|----|----|----|----|-----|----|-----|---|

**Note:** BSC: Basic Science Course, IPCC: Integrated Professional Core Course, PCC: Professional Core Course, AEC –Ability Enhancement Courses, HSMC: Humanity and Social Science and Management Courses, UHV- Universal Human Value Courses.  
L –Lecture, T – Tutorial, P- Practical/ Drawing, S – Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.

21KSK37/47 Samskrutika Kannada is for students who speak, read and write Kannada and 21KSK37/47 Balake Kannada is for non-Kannada speaking, reading, and writing students.

**Integrated Professional Core Course (IPCC):** Refers to Professional Theory Core Course Integrated with Practicals of the same course. Credit for IPCC can be 04 and its Teaching – Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from practical part of IPCC shall be included in the SEE question paper. For more details the regulation governing the Degree of Bachelor of Engineering /Technology (BE/B.Tech.) 2021-22 may be referred.

**Non – credit mandatory course (NCMC):**

**Additional Mathematics - II:**

(1) Lateral entry Diploma holders admitted to III semester of B.E./B.Tech., shall attend the classes during the IV semester to complete all the

formalities of the course and appear for the Continuous Internal Evaluation (CIE). 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 an F grade. In such a case, the student has to fulfill the course requirements during subsequent semester/s to earn the qualifying CIE marks. These courses are slated for CIE only and have no SEE.

(2) Additional Mathematics I and II shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses shall be mandatory for the award of degree.

(3) Successful completion of the course Additional Mathematics II shall be indicated as satisfactory in the grade card. Non-completion of the courses Additional Mathematics II shall be indicated as Unsatisfactory.

#### Ability Enhancement Course - IV

|         |                   |         |                             |
|---------|-------------------|---------|-----------------------------|
| 21EC481 | Embedded C Basics | 21EC483 | Octave / Scilab for Signals |
| 21EC482 | C++ Basics        | 21EC484 | DAQ using LabVIEW           |

**Internship of 04 weeks during the intervening period of IV and V semesters; 21INT68 Innovation/ Entrepreneurship/ Societal based Internship.**

(1) All the students shall have to undergo a mandatory internship of 04 weeks during the intervening period of IV and V semesters. The internship shall be slated for CIE only and will not have SEE. The letter grade earned through CIE shall be included in the VI semester grade card. The internship shall be considered as a head of passing and shall be considered for vertical progression and for the award of degree. Those, who do not take up / complete the internship shall be considered under F (fail) grade and shall have to complete during subsequently after satisfying the internship requirements.

(2) Innovation/ Entrepreneurship Internship shall be carried out at industry, State and Central Government /Non-government organizations (NGOs), micro, small and medium enterprise (MSME), Innovation centres or Incubation centres. Innovation need not be a single major breakthrough; it can also be a series of small or incremental changes. Innovation of any kind can also happen outside of the business world.

Entrepreneurship internships offers a chance to gain hands on experience in the world of entrepreneurship and helps to learn what it takes to run a small entrepreneurial business by performing intern duties with an established company. This experience can then be applied to future business endeavours. Start-ups and small companies are a preferred place to learn the business ticks for future entrepreneurs as learning how a small business operates will serve the intern well when he/she manages his/her own company. Entrepreneurship acts as a catalyst to open the minds to creativity and innovation. Entrepreneurship internship can be from several sectors, including technology, small and medium-sized, and the service sector.

(3) Societal or social internship.

Urbanization is increasing on a global scale; and yet, half the world's population still resides in rural areas and is devoid of many things that urban population enjoy. Rural internship is a work-based activity in which students will have a chance to solve/reduce the problems of the rural place for better living.

As proposed under the AICTE rural internship programme, activities under Societal or social internship, particularly in rural areas, shall be considered for 40 points under AICTE activity point programme.

  
29/02/2024

Principal

VIVEKANANDA INSTITUTE OF TECHNOLOGY  
Bangalore - 560 074

**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)**

**Programme: B.E: Electronics & Communication Engineering**

**VI SEMESTER**

| 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                    | 18EC61   | Digital Communication       |   | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 2            | PCC                    | 18EC62   | Embedded Systems            |   | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 3            | PCC                    | 18EC63   | Microwave and Antennas      |   | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 4            | PEC                    | 18XX64X  | Professional Elective -I    |   | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 5            | OEC                    | 18XX65X  | Open Elective -A            |   | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 6            | PCC                    | 18ECL66  | Embedded Systems Laboratory |   | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
| 7            | PCC                    | 18ECL67  | Communication Laboratory    |   | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
| 8            | MP                     | 18ECMP68 | Mini-project                |   | --                   | --        | 2                  | 03                | 40         | 60         | 100        | 2           |
| 9            | Internship             | --       | Internship                  | To be carried out during the vacation/s of VI and VII semesters and /or VII and VIII semesters. |                      |           |                    |                   |            |            |            |             |
| <b>TOTAL</b> |                        |          |                             |   | <b>15</b>            | <b>10</b> | <b>6</b>           | <b>24</b>         | <b>320</b> | <b>480</b> | <b>800</b> | <b>24</b>   |

**Note: PCC: Professional core, PEC: Professional Elective, OE: Open Elective, MP: Mini-project.**

**Professional Elective -I**

| Course code under 18XX64X | Course Title                        |
|---------------------------|-------------------------------------|
| 18EC641                   | Operating System                    |
| 18EC642                   | Artificial Neural Networks          |
| 18EC643                   | Data Structures using C++           |
| 18EC644                   | Digital System Design Using Verilog |
| 18EC645                   | Nanoelectronics                     |
| 18EC646                   | Python Application Programming      |

36

  
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**OPEN ELECTIVE group-B**

|                |                                |
|----------------|--------------------------------|
| 18EC651        | Signal Processing              |
| 18EC652        | Sensors & Signal Conditioning  |
| <b>18EC653</b> | <b>Virtual Instrumentation</b> |
| <b>18EC654</b> | <b>Microcontrollers</b>        |
| <b>18EC655</b> | <b>Basic VLSI Design</b>       |

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,

- 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.

  
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**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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**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)**

**Programme: B.E: Electronics & Communication Engineering**

**VII SEMESTER**

| 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                    | 18EC71  | Computer Networks         |                     | 3   | --        | --                 | 03                | 40        | 60         | 100        | 3           |
| 2            | PCC                    | 18EC72  | VLSI Design               |                     | 3   | --        | --                 | 03                | 40        | 60         | 100        | 3           |
| 3            | PEC                    | 18XX73X | Professional Elective - 2 |                     | 3   | --        | --                 | 03                | 40        | 60         | 100        | 3           |
| 4            | PEC                    | 18XX74X | Professional Elective - 3 |                     | 3   | --        | --                 | 03                | 40        | 60         | 100        | 3           |
| 5            | OEC                    | 18XX75X | Open Elective -B          |                     | 3   | --        | --                 | 03                | 40        | 60         | 100        | 3           |
| 6            | PCC                    | 18ECL76 | Computer Networks Lab     |                     | --  | 2         | 2                  | 03                | 40        | 60         | 100        | 2           |
| 7            | PCC                    | 18ECL77 | VLSI Laboratory           |                     | --  | 2         | 2                  | 03                | 40        | 60         | 100        | 2           |
| 8            | Project                | 18ECP78 | Project Work Phase - I    |                     | --  | --        | 2                  | --                | 100       | --         | 100        | 1           |
| 9            | Internship             | --      | Internship                |                     | (If not completed during the vacation of VI and VII semesters, it shall be carried out during the vacation of VII and VIII semesters) |           |                    |                   |           |            |            |             |
| <b>TOTAL</b> |                        |         |                           |                     | <b>15</b>   | <b>04</b> | <b>06</b>          | <b>21</b>         | <b>38</b> | <b>420</b> | <b>800</b> | <b>20</b>   |

**Note:** PCC: Professional core, PEC: Professional Elective.

**Professional Elective - 2**

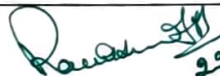
| Course code under 18XX73X | Course Title                  |
|---------------------------|-------------------------------|
| 18EC731                   | Real Time Systems             |
| 18EC732                   | Satellite Communication       |
| 18EC733                   | Digital Image Processing      |
| 18EC734                   | DSP Algorithms & Architecture |

38

*Ravindranth*  
 29/02/2024

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| Course code under 18XX74X   | Course Title                             |
|---|--|
| 18EC741   | IOT & Wireless Sensor Networks           |
| 18EC742   | Automotive Electronics                   |
| 18EC743   | Multimedia Communication                 |
| 18EC744   | Cryptography                             |
| 18EC745   | Machine Learning with Python             |
| <b>Open Elective -B</b>   |  |
| 18EC751   | Communication Theory                     |
| 18EC752   | Neural Networks                          |
| <b>18EC753</b>  | <b>ARM Embedded Systems</b>              |
| <b>18EC754</b>  | <b>Digital Systems Design using VHDL</b> |
| <p>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 18XX75X).</p> <p>Selection of an open elective shall not be allowed if,</p> <ul style="list-style-type: none"> <li>• The candidate has studied the same course during the previous semesters of the programme.</li> <li>• The syllabus content of open elective is similar to that of the Departmental core courses or professional electives.</li> <li>• A similar course, under any category, is prescribed in the higher semesters of the programme.</li> </ul> <p>Registration to electives shall be documented under the guidance of Programme Coordinator/ Advisor/Mentor.</p>   |  |
| <p><b>Project work:</b><br/>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.</p> <p><b>CIE procedure for Project Work Phase - 1:</b></p> <p><b>(i) Single discipline:</b>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.<br/>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.</p> <p><b>(ii) Interdisciplinary:</b> 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.</p> |  |

  
 29/02/2024

The CIE marks awarded for the project work phase -1, shall be based on the evaluation of project work phase -1 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.

**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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| 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)                        |                        |                                  |                                     |                     |  |           |                    |                   |            |            |            |             |
| Programme: B.E: Electronics & Communication Engineering             |                        |                                  |                                     |                     |  |           |                    |                   |            |            |            |             |
| VIII SEMESTER   |                        |                                  |                                     |                     |  |           |                    |                   |            |            |            |             |
| 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                    | 18EC81                           | Wireless and Cellular Communication |                     | 3  | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 2   | PEC                    | 18XX82X                          | Professional Elective - 4           |                     | 3  | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 3   | Project                | 18ECP83                          | Project Work Phase - 2              |                     | --   | --        | 2                  | 03                | 40         | 60         | 100        | 8           |
| 4   | Seminar                | 18ECS84                          | Technical Seminar                   |                     | --   | --        | 2                  | 03                | 100        | --         | 100        | 1           |
| 5   | Internship             | 18ECI85                          | Internship                          |                     | Completed during the vacation/s of VI and VII semesters and /or VII and VIII semesters.) |           |                    | 03                | 40         | 60         | 100        | 3           |
| <b>TOTAL</b>  |                        |                                  |                                     |                     | <b>06</b>  | <b>--</b> | <b>04</b>          | <b>15</b>         | <b>260</b> | <b>240</b> | <b>500</b> | <b>18</b>   |
| <b>Note:</b> PCC: Professional Core, PEC: Professional Elective.    |                        |                                  |                                     |                     |  |           |                    |                   |            |            |            |             |
| <b>Professional Elective - 4</b>                                    |                        |                                  |                                     |                     |  |           |                    |                   |            |            |            |             |
| <b>Course code under 18XX82X</b>                                    |                        | <b>Course Title</b>              |                                     |                     |  |           |                    |                   |            |            |            |             |
| 18EC821   |                        | Network Security                 |                                     |                     |  |           |                    |                   |            |            |            |             |
| 18EC822   |                        | Micro Electro Mechanical Systems |                                     |                     |  |           |                    |                   |            |            |            |             |
| 18EC823   |                        | Radar Engineering                |                                     |                     |  |           |                    |                   |            |            |            |             |
| 18EC824   |                        | Optical Communication Networks   |                                     |                     |  |           |                    |                   |            |            |            |             |
| 18EC825   |                        | Biomedical Signal Processing     |                                     |                     |  |           |                    |                   |            |            |            |             |

*[Signature]*  
29/02/2024

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Bangalore - 560 074

**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 belongs 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 8<sup>th</sup> 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).

*Ramesh S*  
29/02/2024

| VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI                    |                        |  |   |  |          |   |            |                   |           |           |             |         |
|--|------------------------|--|---|--|----------|---|------------|-------------------|-----------|-----------|-------------|---------|
| B.E. in MECHANICAL ENGINEERING                                     |                        |  |   |  |          |   |            |                   |           |           |             |         |
| Scheme of Teaching and Examinations 2021                           |                        |  |   |  |          |   |            |                   |           |           |             |         |
| Outcome-Based Education(OBE) and Choice Based Credit System (CBCS) |                        |  |   |  |          |   |            |                   |           |           |             |         |
| (Effective from the academic year 2021 - 22)                       |                        |  |   |  |          |   |            |                   |           |           |             |         |
| IV SEMESTER  |                        |  |   |  |          |   |            |                   |           |           |             |         |
| Sl. No   | Course and Course Code | Course Title   | Teaching Department (TD) and Question Paper Setting | Teaching Hours /Week   |          |   |            | Examination       |           |           |             | Credits |
|  |                        |  |   | Theory Lecture   | Tutorial | / | Self-Study | Duration in hours | CIE Marks | SEE Marks | Total Marks |         |
|  |                        |  |   | L  | T        | P | S          |                   |           |           |             |         |
| 1  | BSC<br>21ME41          | Complex Analysis, Probability and Linear Programming | Maths   | 2  | 2        | 0 | 0          | 03                | 50        | 50        | 100         | 3       |
| 2  | IPCC<br>21ME42         | Machining Science and Jigs & Fixtures                | TD: ME<br>PSB: ME                                   | 3  | 0        | 2 | 0          | 03                | 50        | 50        | 100         | 4       |
| 3  | IPCC<br>21ME43         | Fluid Mechanics                                      | TD: ME<br>PSB: ME                                   | 3  | 0        | 2 | 0          | 03                | 50        | 50        | 100         | 4       |
| 4  | PCC<br>21ME44          | Mechanics of Materials                               | TD: ME<br>PSB: ME                                   | 2  | 2        | 0 | 0          | 03                | 50        | 50        | 100         | 3       |
| 5  | AEC<br>21BE45          | Biology For Engineers                                | BT, CHE,<br>PHY                                     | 2  | 0        | 0 | 0          | 02                | 50        | 50        | 100         | 2       |
| 6  | PCC<br>21MEL46         | Mechanical Measurements and Metrology Lab            | TD: ME<br>PSB: ME                                   | 0  | 0        | 2 | 0          | 03                | 50        | 50        | 100         | 1       |
| 7  | HSMC<br>21KSK37/47     | Samskrutika Kannada                                  | HSMC  | 1  | 0        | 0 | 0          | 01                | 50        | 50        | 100         | 1       |
|  | HSMC<br>21KBK37/47     | Balake Kannada                                       |   |  |          |   |            |                   |           |           |             |         |
|  | OR                     |  |   |  |          |   |            |                   |           |           |             |         |
|  | HSMC<br>21CIP37/47     | Constitution of India & Professional Ethics          |   |  |          |   |            |                   |           |           |             |         |
| 8  | AEC<br>21XX48X         | Ability Enhancement Course- IV                       | TD and PSB:<br>Concerned department                 | If offered as theory Course  |          |   |            | 01                | 50        | 50        | 100         | 1       |
|  |                        |  |   | 0  | 2        | 0 |            |                   |           |           |             |         |
|  |                        |  |   | If offered as lab. Course  |          |   |            | 02                |           |           |             |         |
|  |                        |  |   | 0  | 0        | 2 |            |                   |           |           |             |         |
| 9  | UHV<br>21UH49          | UniversalHumanValues                                 | Any Department                                      | 1  | 0        | 0 |            | 01                | 50        | 50        | 100         | 1       |
| 10   | INT<br>21INT49         | Inter/Intra Institutional Internship                 | Evaluation By the appropriate authorities           | Completed during the intervening period of II and III semesters by students admitted to first year of BE /B Tech and during the intervening period of III and IV semesters by Lateral entry students admitted to III semester. |          |   |            | 3                 | 100       | --        | 100         | 2       |

*Ravishankar*  
29/02/2024

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Bangalore - 560 074

|  |                                       |                                |         |   |    |    |    |    |     | Total | 550 | 450 | 1000 | 22 |  |
|--|---------------------------------------|--------------------------------|---------|---|----|----|----|----|-----|-------|-----|-----|------|----|--|
| <b>Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs</b>   |                                       |                                |         |   |    |    |    |    |     |       |     |     |      |    |  |
| 1  | NCMC<br>21MATDIP41                    | Additional Mathematics -<br>II | Maths   | 02  | 02 | -- | -- | -- | 100 | --    | 100 | 0   |      |    |  |
| <p><b>Note:</b> BSC: Basic Science Course, IPCC: Integrated Professional Core Course, PCC: Professional Core Course, AEC –Ability Enhancement Courses, HSMC: Humanity and Social Science and Management Courses, UHV- Universal Human Value Courses.</p> <p>L –Lecture, T – Tutorial, P- Practical/ Drawing, S – Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.</p> <p>21KSK37/47 Samskrutika Kannada is for students who speak, read and write Kannada and 21KBK37/47 Balake Kannada is for non-Kannada speaking, reading, and writing students.</p> <p><b>Integrated Professional Core Course (IPCC):</b> Refers to Professional Theory Core Course Integrated with Practicals of the same course. Credit for IPCC can be 04 and its Teaching – Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from practical part of IPCC shall be included in the SEE question paper. For more details the regulation governing the Degree of Bachelor of Engineering /Technology (BE/B.Tech.) 2021-22 may be referred.</p> <p><b>Non – credit mandatory course (NCMC):</b><br/> <b>Additional Mathematics - II:</b><br/> <b>(1)</b> Lateral entry Diploma holders admitted to III semester of B.E./B.Tech., shall attend the classes during the IV semester to complete all the formalities of the course and appear for the Continuous Internal Evaluation (CIE). 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 an F grade. In such a case, the student has to fulfill the course requirements during subsequent semester/s to earn the qualifying CIE marks. These courses are slated for CIE only and has no SEE.<br/> <b>(2)</b> Additional Mathematics I and II shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses shall be mandatory for the award of degree.<br/> <b>(3)</b> Successful completion of the course Additional Mathematics II shall be indicated as satisfactory in the grade card. Non-completion of the courses Additional Mathematics II shall be indicated as Unsatisfactory.</p> |                                       |                                |         |   |    |    |    |    |     |       |     |     |      |    |  |
| <b>Ability Enhancement Course – IV</b>   |                                       |                                |         |   |    |    |    |    |     |       |     |     |      |    |  |
| 21ME481  | Spread Sheets for Engineers (0-0-2-0) |                                | 21ME483 | Fundamentals of Augmented Reality (0-2-0-0) |    |    |    |    |     |       |     |     |      |    |  |
| 21ME482  | Introduction to AI and ML (0-2-0-0)   |                                |         |   |    |    |    |    |     |       |     |     |      |    |  |
| <p><b>Internship of 04 weeks during the intervening period of IV and V semesters; 21INT68 Innovation/ Entrepreneurship/ Societal based Internship.</b></p> <p><b>(1)</b> All the students shall have to undergo a mandatory internship of 04 weeks during the intervening period of IV and V semesters. The internship shall be slated for CIE only and will not have SEE. The letter grade earned through CIE shall be included in the VI semester grade card. The internship shall be considered as a head of passing and shall be considered for vertical progression and for the award of degree. Those, who do not take up / complete the internship shall be considered under F (fail) grade and shall have to complete during subsequently after satisfying the internship requirements.</p> <p><b>(2)</b> Innovation/ Entrepreneurship Internship shall be carried out at industry, State and Central Government /Non-government organizations (NGOs), micro, small and medium enterprise (MSME), Innovation centers or Incubation centers. Innovation need not be a single major breakthrough, it can also be a series of small or incremental changes. Innovation of any kind can also happen outside of the business world.</p> <p>Entrepreneurship internships offers a chance to gain hands on experience in the world of entrepreneurship and helps to learn what it takes to run a small entrepreneurial business by performing intern duties with an established company. This experience can then be applied to future business endeavours. Start-ups and small companies are a preferred place to learn the business tack ticks for future entrepreneurs as learning how a small business operates will serve the intern well when he/she manages his/her own company. Entrepreneurship acts as a catalyst to open the minds to creativity and innovation. Entrepreneurship internship can be from several sectors, including technology, small and medium-sized, and the service sector.</p> <p><b>(3)</b> Societal or social internship.</p> <p>Urbanization is increasing on a global scale; and yet, half the world's population still resides in rural areas and is devoid of</p>   |                                       |                                |         |   |    |    |    |    |     |       |     |     |      |    |  |

Principal  
23/02/2024



30.08.2022

many things that urban population enjoy. Rural internship, is a work-based activity in which students will have a chance to solve/reduce the problems of the rural place for better living.

As proposed under the AICTE rural internship programme, activities under Societal or social internship, particularly in rural areas, shall be considered for 40 points under AICTE activity point programme.

  
29/02/2024

Principal

VIVEKANANDA INSTITUTE OF TECHNOLOGY  
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**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)**

| VI SEMESTER  |                        |         |   |   |                      |           |                    |                   |            |            |            |             |
|--------------|------------------------|---------|---|---|----------------------|-----------|--------------------|-------------------|------------|------------|------------|-------------|
| 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                    | 18ML61  | Finite Element Methods                    |   | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 2            | PCC                    | 18ML62  | Design of Machine Elements II             |   | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 3            | PCC                    | 18ML63  | Heat Transfer                             |   | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 4            | PLC                    | 18ML64X | Professional Elective -I                  |   | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 5            | OIE                    | 18ML65X | Open Elective -A                          |   | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 6            | PCC                    | 18ML66  | Computer Aided Modelling and Analysis Lab |   | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
| 7            | PCC                    | 18ML67  | Heat Transfer Lab                         |   | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
| 8            | MP                     | 18ML68  | Mini-project                              |   | --                   | --        | 2                  | 03                | 40         | 60         | 100        | 2           |
| 9            | Internship             | --      | Internship                                | To be carried out during the vacation/s of VI and VII semesters and /or VII and VIII semesters. |                      |           |                    |                   |            |            |            |             |
| <b>TOTAL</b> |                        |         |   |   | <b>15</b>            | <b>10</b> | <b>06</b>          | <b>24</b>         | <b>320</b> | <b>480</b> | <b>800</b> | <b>24</b>   |

Note: PCC: Professional core, PEC: Professional Elective, OE: Open Elective, MP: Mini-project.

**Professional Elective - I**

| Course code under 18XX64X | Course Title                       | Course code under 18XX64X | Course Title                     |
|---------------------------|------------------------------------|---------------------------|----------------------------------|
| 18ML641                   | Non-Traditional Machining          | 18ME644                   | Vibrations and Noise Engineering |
| 18ML642                   | Refrigeration and Air conditioning | 18ME645                   | Composite Materials Technology   |
| 18ML643                   | Theory of Elasticity               | 18ML646                   | Entrepreneurship Development     |

**Open Elective -A**

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,

- 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 (SEL) 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 belongs 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

*Ravindra*  
29/02/2024

Principal

**VIVEKANANDA INSTITUTE OF TECHNOLOGY**  
Bangalore - 560 074

**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)**

**VII SEMESTER**

| 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                    | 18ME71  | Control Engineering                     |  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 2            | PCC                    | 18ME72  | Computer Aided Design and Manufacturing |  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 3            | PFC                    | 18ME73X | Professional Elective - 2               |  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 4            | PEC                    | 18ME74X | Professional Elective - 3               |  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 5            | OEC                    | 18ME75X | Open Elective -B                        |  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 6            | PCC                    | 18MEL76 | Computer Integrated Manufacturing Lab   |  | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
|              | PCC                    | 18MEL77 | Design Lab                              |  | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
| 7            | Project                | 18MEP78 | Project Work Phase - 1                  |  | --                   | --        | 2                  | --                | 100        | --         | 100        | 1           |
| 8            | Internship             | --      | Internship                              | (If not completed during the vacation of VI and VII semesters, it shall be carried out during the vacation of VII and VIII semesters ) |                      |           |                    |                   |            |            |            |             |
| <b>TOTAL</b> |                        |         |   |  | <b>15</b>            | <b>04</b> | <b>06</b>          | <b>18</b>         | <b>340</b> | <b>360</b> | <b>700</b> | <b>20</b>   |

**Professional Elective - 2**

| Course code under 18XX73X | Course Title                 | Course code under 18XX73X | Course Title             |
|---------------------------|------------------------------|---------------------------|--------------------------|
| 18ME731                   | Design for Manufacture       | 18ME734                   | Total Quality Management |
| 18ME732                   | Automation and Robotics      | 18ME735                   | Operations Research      |
| 18ME733                   | Computational Fluid Dynamics |                           |                          |

**Professional Electives - 3**

| Course code under 18XX74X | Course Title                                       | Course code under 18XX74X | Course Title       |
|---------------------------|--|---------------------------|--------------------|
| 18ME741                   | Additive Manufacturing                             | 18ME744                   | Mechatronics       |
| 18ML742                   | Emerging Sustainable Building Cooling Technologies | 18ML745                   | Project Management |
| 18ME743                   | Theory of Plasticity                               |                           |                    |

**Open Elective -B**

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 18XX75X).

Selection of an open elective shall not be allowed if,

- 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.

*Ravishankar*  
23/02/2024

Principal

**VIVEKANANDA INSTITUTE OF TECHNOLOGY**  
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**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)**

**VIII SEMESTER**

| 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                    | 18ML81   | Energy Engineering        |  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 2            | PEC                    | 18ME82X  | Professional Elective - 4 |  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 3            | Project                | 18NI P83 | Project Work Phase - 2    |  | --                   | --        | 2                  | 03                | 40         | 60         | 100        | 8           |
| 4            | Seminar                | 18MI.S84 | Technical Seminar         |  | --                   | --        | 2                  | 03                | 100        | --         | 100        | 1           |
| 5            | Internship             | 18XX185  | Internship                | Completed during the vacation/s of VI and VII semesters and /or VII and VIII semesters ) |                      |           |                    | 03                | 40         | 60         | 100        | 3           |
| <b>TOTAL</b> |                        |          |                           |  | <b>06</b>            | <b>--</b> | <b>04</b>          | <b>15</b>         | <b>260</b> | <b>240</b> | <b>500</b> | <b>18</b>   |

**Note:** PCC: Professional Core, PEC: Professional Elective

**Professional Electives - 4**

| Course code under 18XX82X | Course Title                           | Course code under 18XX82X | Course Title           |
|---------------------------|--|---------------------------|------------------------|
| 18MI.821                  | CNC Machine Tools                      | 18MI.824                  | Automobile Engineering |
| 18MI.822                  | Tribology                              | 18MI.825                  | Tool Design            |
| 18MF823                   | Non-Destructive Testing and Evaluation | 18ME826                   | Fracture Mechanics     |

**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 belongs 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).

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29/02/2024

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**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI**  
**Artificial Intelligence and Machine Learning (AI)**  
 Scheme of Teaching and Examinations  
 Outcome Based Education (OBE) and Choice Based Credit System (CBCS)  
 (Effective from the academic year 2018 - 19)

**V SEMESTER**

| 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                   | 18CS51  | Management and Entrepreneurship for IT Industry | HSMC   | 2                    | 2         | --                 | 03                | 40         | 60         | 100        | 3           |
| 2            | PCC                    | 18AI52  | Python Programming                              | CS / IS / AI   | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 3            | PCC                    | 18CS53  | Database Management System                      | CS / IS / AI   | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 4            | PCC                    | 18CS54  | Automata Theory and Computability               | CS / IS / AI   | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 5            | PCC                    | 18AI55  | Principles of Artificial Intelligence           | CS / IS / AI   | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 6            | PCC                    | 18AI56  | Mathematics for Machine Learning                | CS / IS / AI   | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 7            | PCC                    | 18AIL57 | Artificial Intelligence Laboratory              | CS / IS / AI   | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
| 8            | PCC                    | 18CSL58 | DBMS Laboratory with mini project               | CS / IS / AI   | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
| 9            | HSMC                   | 18CIV59 | Environmental Studies                           | Civil/<br>Environmental<br>[Paper setting:<br>Civil Engineering Board] | 1                    | --        | --                 | 02                | 40         | 60         | 100        | 1           |
| <b>TOTAL</b> |                        |         |   |  | <b>18</b>            | <b>10</b> | <b>4</b>           | <b>26</b>         | <b>360</b> | <b>540</b> | <b>900</b> | <b>25</b>   |

**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.

*Ravindra H*  
29/02/2024

Principal

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**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI**  
**Artificial Intelligence and Machine Learning (AI)**  
 Scheme of Teaching and Examinations  
 Outcome Based Education (OBE) and Choice Based Credit System (CBCS)  
 (Effective from the academic year 2018 - 19)

**VI SEMESTER**

| 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                    | 18AI61  | Machine Learning                                      | CS / IS / AI   | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 2            | PCC                    | 18AI62  | Digital Image Processing                              | CS / IS / AI   | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 3            | PCC                    | 18AI63  | Java for Mobile Applications                          | CS / IS / AI   | 3                    | 2         | --                 | 03                | 40         | 60         | 100        | 4           |
| 4            | PEC                    | 18AI64X | Professional Elective -I                              | CS / IS / AI   | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 5            | OEC                    | 18AI65X | Open Elective -A                                      | CS / IS / AI   | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 6            | PCC                    | 18AIL66 | Machine Learning Laboratory                           | CS / IS / AI   | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
| 7            | PCC                    | 18AIL67 | Digital Image Processing Laboratory with mini project | CS / IS / Ai   | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
| 8            | MP                     | 18AIL68 | Mobile Application Development Laboratory             | CS / IS / AI   | --                   | 2         | 2                  | 03                | 40         | 60         | 100        | 2           |
| 9            | INT                    | --      | Internship  | (To be carried out during the intervening vacations of VI and VII semesters) |                      |           |                    | --                | --         | --         | --         | --          |
| <b>TOTAL</b> |                        |         |   |  | <b>15</b>            | <b>12</b> | <b>6</b>           | <b>24</b>         | <b>320</b> | <b>480</b> | <b>800</b> | <b>24</b>   |

Note: PCC: Professional core, PEC: Professional Elective, OE: Open Elective, MP: Mini-project, INT: Internship.

**Professional Elective -I**

| Course code under 18XX64X   | Course Title                                   |
|---|--|
| 18AI641   | Natural Language Processing                    |
| 18AI642   | Software Project and Management                |
| 18AI643   | Web Programming                                |
| 18AI644   | Foundation for Data Science                    |
| <b>Open Elective -A (18CS65x are not to be opted by CSE / ISE /AIML Programs)</b> |  |
| 18CS651   | Mobile Application Development                 |
| 18CS652   | Introduction to Data Structures and Algorithms |
| 18CS653   | Programming in JAVA                            |
| 18CS654   | Introduction to Operating System               |

Students can select any one of the open electives offered by any Department (Please refer to the list of open electives under 18CS65X).

Selection of an open elective is not allowed provided.

- 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 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/ Adviser/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 takeover/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.

11.06.2021

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 Bangalore - 560 074

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI**  
**Artificial Intelligence and Machine Learning (AI)**  
 Scheme of Teaching and Examinations  
 Outcome Based Education (OBE) and Choice Based Credit System (CBCS)  
 (Effective from the academic year 2018 - 19)

**VII SEMESTER**

| 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                    | 18AI71  | Advanced Artificial Intelligence             | CS / IS / AI  | 4                    | --        | --                 | 03                | 40         | 60         | 100        | 4           |
| 2            | PCC                    | 18AI72  | Advanced Machine Learning                    | CS / IS / AI  | 4                    | --        | --                 | 03                | 40         | 60         | 100        | 4           |
| 3            | PEC                    | 18AI73X | Professional Elective - 2                    | CS / IS / AI  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 4            | PEC                    | 18AI74X | Professional Elective - 3                    | CS / IS / AI  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 5            | OEC                    | 18AI75X | Open Elective -B                             | CS / IS / AI  | 3                    | --        | --                 | 03                | 40         | 60         | 100        | 3           |
| 6            | PCC                    | 18AIL76 | AI and ML Application Development Laboratory | CS / IS / AI  | --                   | --        | 2                  | 03                | 40         | 60         | 100        | 1           |
| 7            | Project                | 18AIP77 | Project Work Phase - 1                       | CS / IS / AI  | --                   | --        | 2                  | --                | 100        | --         | 100        | 2           |
| 8            | INT                    | --      | 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) |                      |           |                    |                   |            |            |            |             |
| <b>TOTAL</b> |                        |         |  |   | <b>17</b>            | <b>--</b> | <b>4</b>           | <b>18</b>         | <b>340</b> | <b>360</b> | <b>700</b> | <b>20</b>   |

**Note:** PCC: Professional core, PEC: Professional Elective, OEC: Open Elective, INT: Internship.

**Professional Elective - 2**

| Course code under 18CS73X | Course Title                       |
|---------------------------|------------------------------------|
| 18AI731                   | Internet of Things                 |
| 18AI732                   | Multiagent Systems                 |
| 18AI733                   | Blockchain Technology              |
| 18AI734                   | Cloud Computing and Virtualization |

**Professional Electives - 3**

| Course code under 18CS74X | Course Title                    |
|---------------------------|---------------------------------|
| 18AI741                   | Fuzzy Logic & its Applications  |
| 18AI742                   | Computer Vision                 |
| 18AI743                   | Semantic Web and Social Network |
| 18AI744                   | Business Intelligence           |

**Open Elective -B (18CS75x are not to be opted by CSE / ISE / AIML Programs)**

|         |   |
|---------|---|
| 18CS751 | Introduction to Big Data Analytics                            |
| 18CS752 | Python Application Programming                                |
| 18CS753 | Introduction to Artificial Intelligence                       |
| 18CS754 | Introduction to Dot Net framework for Application Development |

Students can select any one of the open electives offered by any Department (Please refer to the list of open electives under 18CS75X). Selection of an open elective is not allowed provided,

- 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 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/ Adviser/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 - I, shall be based on the evaluation of the project work phase - I 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 - I, shall be based on the evaluation of project work phase - I 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.

**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 takeup/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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**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI**  
**B.E. in Artificial Intelligence and Machine Learning**  
**Scheme of Teaching and Examinations 2021**  
**Outcome-Based Education (OBE) and Choice Based Credit System (CBCS)**  
**(Effective from the academic year 2021 - 22)**

**IV SEMESTER**

| Sl. No       | Course and Course Code | Course Title                                | Teaching Department (TD) and Question Paper Setting Board (PSB) | Teaching Hours /Week   |          |                    |            | Examination       |            |            |             | Credits   |
|--------------|------------------------|---|---|--|----------|--------------------|------------|-------------------|------------|------------|-------------|-----------|
|              |                        |   |   | Theory Lecture   | Tutorial | Practical/ Drawing | Self-Study | Duration in hours | CIE Marks  | SEE Marks  | Total Marks |           |
|              |                        |   |   | L  | T        | P                  | S          |                   |            |            |             |           |
| 1            | BSC 21CS41             | Mathematical Foundations for Computing      | Maths   | 2  | 2        | 0                  |            | 03                | 50         | 50         | 100         | 3         |
| 2            | IPCC 21CS42            | Design and Analysis of Algorithms           | Any CS Board Department   | 3  | 0        | 2                  |            | 03                | 50         | 50         | 100         | 4         |
| 3            | IPCC 21CS43            | Microcontroller and Embedded Systems        |   | 3  | 0        | 2                  |            | 03                | 50         | 50         | 100         | 4         |
| 4            | PCC 21CS44             | Operating Systems                           |   | 2  | 2        | 0                  |            | 03                | 50         | 50         | 100         | 3         |
| 5            | AEC 21BE45             | Biology For Engineers                       | BT, CHE, PHY  | 2  | 0        | 0                  |            | 02                | 50         | 50         | 100         | 2         |
| 6            | PCC 21CSL46            | Python Programming Laboratory               | Any CS Board Department   | 0  | 0        | 2                  |            | 03                | 50         | 50         | 100         | 1         |
| 7            | HSMC 21KSK37/47        | Sanskritika Kannada                         | HSMC  | 1  | 0        | 0                  |            | 01                | 50         | 50         | 100         | 1         |
|              | HSMC 21KBK37/47        | Balake Kannada                              |   |  |          |                    |            |                   |            |            |             |           |
|              | OR                     |   |   |  |          |                    |            |                   |            |            |             |           |
|              | HSMC 21CIP37/47        | Constitution of India & Professional Ethics |   |  |          |                    |            |                   |            |            |             |           |
| 8            | AEC 21CS48X/21C SL48X  | Ability Enhancement Course- IV              | TD and PSB: Concerned department                                | If offered as theory Course  |          |                    |            | 01                | 50         | 50         | 100         | 1         |
|              |                        |   |   | 1  | 0        | 0                  |            |                   |            |            |             |           |
|              |                        |   |   | If offered as lab. course  |          |                    |            | 02                |            |            |             |           |
|              |                        |   |   | 0  | 0        | 2                  |            |                   |            |            |             |           |
| 9            | UHV 21UH49             | Universal Human Values                      | Any Department  | 1  | 0        | 0                  |            | 01                | 50         | 50         | 100         | 1         |
| 10           | INT 21INT49            | Inter/Intra Institutional Internship        | Evaluation By the appropriate authorities                       | Completed during the intervening period of II and III semesters by students admitted to first year of BE./B.Tech and during the intervening period of III and IV semesters by Lateral entry students admitted to III semester. |          |                    |            | 3                 | 100        | --         | 100         | 2         |
| <b>Total</b> |                        |   |   |  |          |                    |            |                   | <b>550</b> | <b>450</b> | <b>1000</b> | <b>22</b> |

**Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs**

|   |                 |                             |       |    |    |    |    |    |     |    |     |   |
|---|-----------------|-----------------------------|-------|----|----|----|----|----|-----|----|-----|---|
| 1 | NCMC 21MATDIP41 | Additional Mathematics - II | Maths | 02 | 02 | -- | -- | -- | 100 | -- | 100 | 0 |
|---|-----------------|-----------------------------|-------|----|----|----|----|----|-----|----|-----|---|

**Note:** BSC: Basic Science Course, IPCC: Integrated Professional Core Course, PCC: Professional Core Course, AEC –Ability Enhancement Courses, HSMC: Humanity and Social Science and Management Courses, UHV- Universal Human Value Courses.

L –Lecture, T – Tutorial, P- Practical/ Drawing, S – Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination. 21KSK37/47 Sanskritika Kannada is for students who speak, read and write Kannada and 21KBK37/47 Balake Kannada is for non-Kannada speaking, reading, and writing students.

Integrated Professional Core Course (IPCC): Refers to Professional Theory Core Course Integrated with Practical's of the same course. Credit for IPCC can be 04 and its Teaching – Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from practical part of IPCC shall be included in the SEE question paper. For more details the regulation governing the Degree of Bachelor of Engineering /Technology (BE/B.Tech.) 2021-22 may be referred.

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 29/02/2024  
 Principal



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|---|------------------------|----------|--------------------------------------|---|----------------------|-----------|--------------------|-------------------|------------|------------|-------------|---------|
| CIVIL ENGINEERING   |                        |          |                                      |   |                      |           |                    |                   |            |            |             |         |
| 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   |                        |          |                                      |   |                      |           |                    |                   |            |            |             |         |
| 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                    | 18CV61   | Design of Steel Structural Elements  | Civil Engg.   | 3                    | 2         | --                 | 03                | 40         | 60         | 100         | 4       |
| 2   | PCC                    | 18CV62   | Applied Geotechnical Engineering     | Civil Engg.   | 3                    | 2         | --                 | 03                | 40         | 60         | 100         | 4       |
| 3   | PCC                    | 18CV63   | Hydrology and Irrigation Engineering | Civil Engg.   | 3                    | 2         | --                 | 03                | 40         | 60         | 100         | 4       |
| 4   | PEC                    | 18CV64X  | Professional Elective -1             | Civil Engg.   | 3                    | --        | --                 | 03                | 40         | 60         | 100         | 3       |
| 5   | OEC                    | 18CV65X  | Open Elective -A                     | Civil Engg.   | 3                    | --        | --                 | 03                | 40         | 60         | 100         | 3       |
| 6   | PCC                    | 18CVL66  | Software Application Laboratory      | Civil Engg.   | --                   | 2         | 2                  | 03                | 40         | 60         | 100         | 2       |
| 7   | PCC                    | 18CVL67  | Environmental Engineering Laboratory | Civil Engg.   | --                   | 2         | 2                  | 03                | 40         | 60         | 100         | 2       |
| 8   | EP                     | 18CVEP68 | Extensive Survey project             | Civil Engg.   | --                   | 2         | 2                  | 03                | 40         | 60         | 100         | 2       |
| 9   | Internship             | --       | Internship                           | To be carried out during the vacation/s of VI and VII semesters and /or VII and VIII semesters. |                      |           |                    |                   |            |            |             |         |
| <b>TOTAL</b>  |                        |          |                                      | <b>15</b>   | <b>12</b>            | <b>06</b> | <b>24</b>          | <b>320</b>        | <b>480</b> | <b>800</b> | <b>24</b>   |         |
| <b>Note: PCC: Professional core, PEC: Professional Elective, OE: Open Elective, MP: Mini-project.</b> |                        |          |                                      |   |                      |           |                    |                   |            |            |             |         |
| <b>Professional Elective -1</b>   |                        |          |                                      |   |                      |           |                    |                   |            |            |             |         |
| <b>Course code under 18CV64X</b>  |                        |          |                                      |   |                      |           |                    |                   |            |            |             |         |
| 18CV641   |                        |          | Matrix Method of Structural Analysis |   |                      |           |                    |                   |            |            |             |         |

  
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|   |  |
|---|--|
| 18CV642   | Solid Waste Management                       |
| 18CV643   | Alternate Building Materials                 |
| 18CV644   | Ground Improvement Techniques                |
| 18CV645   | Railway, Harbours, Tunnelling & Airports     |
| <b>Open Elective -A</b>   |  |
| <b>Course code under 18CV65X</b>  |  |
| 18CV651   | Remote Sensing & GIS                         |
| 18CV652   | Traffic Engineering                          |
| 18CV653   | Occupational Health & Safety                 |
| 18CV654   | Sustainability Concepts in Civil Engineering |
| <b>18CV655</b>  | <b>Intelligent Transportation Systems</b>    |
| <b>18CV656</b>  | <b>Conservation of Natural Resources</b>     |
| <p>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).</p> <p>Selection of an open elective shall not be allowed if,</p> <ul style="list-style-type: none"> <li>• The candidate has studied the same course during the previous semesters of the programme.</li> <li>• The syllabus content of open elective is similar to that of the Departmental core courses or professional electives.</li> <li>• A similar course, under any category, is prescribed in the higher semesters of the programme.</li> </ul> <p>Registration to electives shall be documented under the guidance of Programme Coordinator/ Advisor/Mentor.</p> |  |
| <p><b>Internship:</b> 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.</p>  |  |
| <p><b>AICTE activity Points:</b> 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.</p>   |  |

  
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**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)**

**Programme: CIVIL ENGINEERING**

**VII SEMESTER**

| 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                    | 18CV71  | Quality Surveying and Contract Management | Civil Engg.  | 3                    | --        | --                 | 03                | 40         | 60         | 100       | 3           |
| 2            | PCC                    | 18CV72  | Design of RCC and Steel Structures        | Civil Engg.  | 3                    | --        | --                 | 03                | 40         | 60         | 100       | 3           |
| 3            | PEC                    | 18CV73X | Professional Elective - 2                 | Civil Engg.  | 3                    | --        | --                 | 03                | 40         | 60         | 100       | 3           |
| 4            | PEC                    | 18CV74X | Professional Elective - 3                 | Civil Engg.  | 3                    | --        | --                 | 03                | 40         | 60         | 100       | 3           |
| 5            | OEC                    | 18CV75X | Open Elective -B                          | Civil Engg.  | 3                    | --        | --                 | 03                | 40         | 60         | 100       | 3           |
| 6            | PCC                    | 18CVL76 | Computer Aided Detailing of Structures    | Civil Engg.  | --                   | 2         | 2                  | 03                | 40         | 60         | 100       | 2           |
| 7            | PCC                    | 18CVL77 | Geotechnical Engineering Laboratory       | Civil Engg.  | --                   | 2         | 2                  | 03                | 40         | 60         | 100       | 2           |
| 8            | Project                | 18CVP78 | Project Work Phase - 1                    |  | --                   | --        | 2                  | --                | 100        | --         | 100       | 1           |
| 9            | Internship             | --      | Internship                                | (If not completed during the vacation of VI and VII semesters, it shall be carried out during the vacation of VII and VIII semesters ) |                      |           |                    |                   |            |            |           |             |
| <b>TOTAL</b> |                        |         |   |  | <b>15</b>            | <b>04</b> | <b>06</b>          | <b>21</b>         | <b>380</b> | <b>420</b> | <b>00</b> | <b>20</b>   |


**Note:** PCC: Professional core, PEC: Professional Elective.

**Professional Elective - 2**


| Course code under 18CV73X | Course Title                      |
|---------------------------|-----------------------------------|
| 18CV731                   | Theory of Elasticity              |
| 18CV732                   | Air Pollution and Control         |
| 18CV733                   | Pavement Materials & Construction |
| 18CV734                   | Ground Water Hydraulics           |
| 18CV735                   | Masonry Structures                |

**Professional Electives - 3**

| Course code under 18CV74X | Course Title                         |
|---------------------------|--------------------------------------|
| 18CV741                   | Earthquake Engineering               |
| 18CV742                   | Design Concepts of Building Services |
| 18CV743                   | Reinforced Earth Structures          |

  
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|  |   |
|--|---|
| 18CV744  | Design of Hydraulic Structures          |
| 18CV745  | Urban Transport Planning                |
| <b>Open Elective -B</b>  |   |
| <b>Course code under 18CV75X</b>   | <b>Course Title</b>                     |
| 18CV751  | Finite Element Method                   |
| 18CV752  | Numerical Methods and Applications      |
| 18CV753  | Environmental Protection and Management |
| <p>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 18XX75X).</p> <p>Selection of an open elective shall not be allowed if,</p> <ul style="list-style-type: none"> <li>The candidate has studied the same course during the previous semesters of the programme.</li> <li>The syllabus content of open elective is similar to that of the Departmental core courses or professional electives.</li> <li>A similar course, under any category, is prescribed in the higher semesters of the programme.</li> </ul> <p>Registration to electives shall be documented under the guidance of Programme Coordinator/ Advisor/Mentor.</p>  |   |
| <p><b>Project work:</b><br/>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.</p> <p><b>CIE procedure for Project Work Phase - 1:</b></p> <p>(i) <b>Single discipline:</b> 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.</p> <p>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.</p> <p>(ii) <b>Interdisciplinary:</b> 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.</p> <p>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.</p> <p><b>Internship:</b> 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.</p> <p><b>AICTE activity Points:</b> 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.</p> |   |

  
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| 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)  |                        |                                 |                                 |  |                      |           |                    |                   |            |            |             |           |
| Programme: CIVIL ENGINEERING  |                        |                                 |                                 |  |                      |           |                    |                   |            |            |             |           |
| VIII SEMESTER   |                        |                                 |                                 |  |                      |           |                    |                   |            |            |             |           |
| Sl. No  | Course and Course code |                                 | Course Title                    | Teaching Department  | Teaching Hours /Week |           |                    | Examination       |            |            |             |           |
|   |                        |                                 |                                 |  | Theory Lecture       | Tutorial  | Practical/ Drawing | Duration in hours | CIE Marks  | SEE Marks  | Total Marks | Credits   |
|   |                        |                                 |                                 |  | L                    | T         | P                  |                   |            |            |             |           |
| 1   | PCC                    | 18CV81                          | Design of Pre-stressed Concrete | Civil Engg.  | 3                    | --        | --                 | 03                | 40         | 60         | 100         | 3         |
| 2   | PEC                    | 18CV82X                         | Professional Elective - 4       | Civil Engg.  | 3                    | --        | --                 | 03                | 40         | 60         | 100         | 3         |
| 3   | Project                | 18CV83                          | Project Work Phase - 2          | Civil Engg.  | --                   | --        | 16                 | 03                | 40         | 60         | 100         | 4         |
| 4   | Seminar                | 18CV84                          | Technical Seminar               | Civil Engg.  | --                   | --        | 2                  | 03                | 100        | --         | 100         | 1         |
| 5   | Internship             | 18CV185                         | Internship                      | Completed during the vacation/s of VI and VII semesters and /or VII and VIII semesters.) |                      |           |                    | 03                | 40         | 60         | 100         | 3         |
| <b>TOTAL</b>  |                        |                                 |                                 |  | <b>06</b>            | <b>--</b> | <b>18</b>          | <b>15</b>         | <b>260</b> | <b>240</b> | <b>500</b>  | <b>18</b> |
| <b>Note:</b> PCC: Professional Core, PEC: Professional Elective.  |                        |                                 |                                 |  |                      |           |                    |                   |            |            |             |           |
| <b>Professional Electives - 4</b>   |                        |                                 |                                 |  |                      |           |                    |                   |            |            |             |           |
| <b>Course code under 18CV82X</b>  |                        | <b>Course Title</b>             |                                 |  |                      |           |                    |                   |            |            |             |           |
| 18CV821   |                        | Bridge Engineering              |                                 |  |                      |           |                    |                   |            |            |             |           |
| 18CV822   |                        | Prefabricated Structures        |                                 |  |                      |           |                    |                   |            |            |             |           |
| 18CV823   |                        | Advanced Foundation Engineering |                                 |  |                      |           |                    |                   |            |            |             |           |
| 18CV824   |                        | Rehabilitation & Retrofitting   |                                 |  |                      |           |                    |                   |            |            |             |           |
| 18CV825   |                        | Pavement Design                 |                                 |  |                      |           |                    |                   |            |            |             |           |
| <b>Project Work</b>   |                        |                                 |                                 |  |                      |           |                    |                   |            |            |             |           |
| <b>CIE procedure for Project Work Phase - 2:</b>  |                        |                                 |                                 |  |                      |           |                    |                   |            |            |             |           |
| <b>(i) Single discipline:</b> 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.<br>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.  |                        |                                 |                                 |  |                      |           |                    |                   |            |            |             |           |
| <b>(ii) Interdisciplinary:</b> 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. |                        |                                 |                                 |  |                      |           |                    |                   |            |            |             |           |
| <b>SEE for Project Work Phase - 2:</b>  |                        |                                 |                                 |  |                      |           |                    |                   |            |            |             |           |

  
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**(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 belongs 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).

  
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|--|------------------------|--|---|--|----------|--------------------|-------------|-------------------|------------|------------|-------------|-----------|
| B.E. in Civil Engineering  |                        |  |   |  |          |                    |             |                   |            |            |             |           |
| Scheme of Teaching and Examinations 2021   |                        |  |   |  |          |                    |             |                   |            |            |             |           |
| Outcome-Based Education (OBE) and Choice Based Credit System (CBCS)  |                        |  |   |  |          |                    |             |                   |            |            |             |           |
| (Effective from the academic year 2021 - 22)   |                        |  |   |  |          |                    |             |                   |            |            |             |           |
| IV SEMESTER  |                        |  |   |  |          |                    |             |                   |            |            |             |           |
| Sl. No   | Course and Course Code | Course Title   | Teaching Department (TD) and Question Paper Setting Board (PSB) | Teaching Hours /Week   |          |                    |             | Examination       |            |            |             | Credits   |
|  |                        |  |   | Theory Lecture   | Tutorial | Practical/ Drawing | Self -Study | Duration in hours | CIE Marks  | SEE Marks  | Total Marks |           |
|  |                        |  |   | L  | T        | P                  | S           |                   |            |            |             |           |
| 1  | BSC<br>21MAT41         | Complex Analysis, Probability and Statistical Methods. | TD, PSB-Maths   |  |          |                    |             | 03                | 50         | 50         | 100         | 3         |
| 2  | IPCC<br>21CV42         | Fluid Mechanics and Hydraulics                         | TD: Civil Engg<br>PSB: Civil Engg                               | 2  | 2        | 2                  |             | 03                | 50         | 50         | 100         | 4         |
| 3  | IPCC<br>21CV43         | Public Health Engineering                              | TD: Civil Engg<br>PSB: Civil Engg                               | 2  | 2        | 2                  |             | 03                | 50         | 50         | 100         | 4         |
| 4  | PCC<br>21CV44          | Analysis of Structures                                 | TD: Civil Engg<br>PSB: Civil Engg                               | 2  | 2        | 0                  |             | 03                | 50         | 50         | 100         | 3         |
| 5  | AEC<br>21BE45          | Biology for Engineers                                  | BT, CHE, PHY  | 1  | 2        | 0                  |             | 02                | 50         | 50         | 100         | 2         |
| 6  | PCC<br>21CVL46         | Earth Resources and Engineering Lab                    | TD: Geology<br>PSB: Geology                                     | 0  | 0        | 2                  |             | 03                | 50         | 50         | 100         | 1         |
| 7  | HSMC<br>21KSK37/47     | Samskrutika Kannada                                    | HSMC  | 0  | 2        | 0                  |             | 01                | 50         | 50         | 100         | 1         |
|  | HSMC<br>21KKB37/47     | Balake Kannada   |   |  |          |                    |             |                   |            |            |             |           |
|  | OR                     |  |   |  |          |                    |             |                   |            |            |             |           |
|  | HSMC<br>21CIP37/47     | Constitution of India & Professional Ethics            |   |  |          |                    |             |                   |            |            |             |           |
| 8  | AEC<br>21CV48X         | Ability Enhancement Course- IV                         | TD and PSB:<br>Concerned<br>department                          | If offered as theory Course  |          |                    |             | 01                | 50         | 50         | 100         | 1         |
|  |                        |  |   | 0  | 2        | 0                  |             |                   |            |            |             |           |
|  |                        |  |   | If offered as lab. course  |          |                    |             | 02                |            |            |             |           |
|  |                        |  |   | 0  | 0        | 2                  |             |                   |            |            |             |           |
| 9  | UHV<br>21UH49          | Universal Human Values                                 | Any<br>Department   | 0  | 2        | 0                  |             | 01                | 50         | 50         | 100         | 1         |
| 10   | INT<br>21INT49         | Inter/Intra Institutional Internship                   | Evaluation By<br>the<br>appropriate<br>authorities              | Completed during the intervening period of II and III semesters by students admitted to first year of BE./B.Tech and during the intervening period of III and IV semesters by Lateral entry students admitted to III semester. |          |                    |             | 3                 | 100        | -          | 100         | 2         |
| <b>Total</b>   |                        |  |   |  |          |                    |             |                   | <b>550</b> | <b>450</b> | <b>1000</b> | <b>22</b> |
| Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs  |                        |  |   |  |          |                    |             |                   |            |            |             |           |
| 1  | NCCM<br>21MATDIP41     | Additional Mathematics - II                            | Maths   | 02   | 02       | --                 | --          | --                | 100        | --         | 100         | 0         |
| <p><b>Note:</b> BSC: Basic Science Course, IPCC: Integrated Professional Core Course, PCC: Professional Core Course, AEC –Ability Enhancement Courses, HSMC: Humanity and Social Science and Management Courses, UHV- Universal Human Value Courses.</p> <p>L –Lecture, T – Tutorial, P- Practical/ Drawing, S – Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.</p> <p>21KSK37/47 Samskrutika Kannada is for students who speak, read and write Kannada and 21KKB37/47 Balake Kannada is for non-Kannada speaking, reading, and writing students.</p> <p><b>Integrated Professional Core Course (IPCC):</b> Refers to Professional Theory Core Course Integrated with Practical of the same course. Credit for IPCC can be 04 and its Teaching-Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from the practical part of IPCC shall be included in the SEE question paper. For more details, the regulation governing the Degree of Bachelor of Engineering /Technology (BE/B.Tech.) 2021-22 may be referred.</p> |                        |  |   |  |          |                    |             |                   |            |            |             |           |

**Non – credit mandatory course (NMC):****Additional Mathematics - II:**

(1) Lateral entry Diploma holders admitted to III semester of B.E./B.Tech., shall attend the classes during the IV semester to complete all the formalities of the course and appear for the Continuous Internal Evaluation (CIE). 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 an F grade. In such a case, the student has to fulfill the course requirements during subsequent semester/s to earn the qualifying CIE marks. These courses are slated for CIE only and have no SEE.

(2) Additional Mathematics I and II shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses shall be mandatory for the award of degree.

(3) Successful completion of the course Additional Mathematics II shall be indicated as satisfactory in the grade card. Non-completion of the courses. Additional Mathematics II shall be indicated as Unsatisfactory.

**Ability Enhancement Course - IV**

|         |  |         |                 |
|---------|--|---------|-----------------|
| 21CV481 | Data Cleaning and Preparation with Python Pandas | 21CV484 | Project Finance |
| 21CV482 | GIS with Quantum GIS                             | 21CV485 | Green Buildings |
| 21CV483 | Technical Writing Skills                         |         |                 |

**Internship of 04 weeks during the intervening period of IV and V semesters; 21INT68 Innovation/ Entrepreneurship/ Societal Internship.**

(1) All the students shall have to undergo a mandatory internship of 04 weeks during the intervening period of IV and V semesters. The internship shall be slated for CIE only and will not have SEE. The letter grade earned through CIE shall be included in the VI semester grade card. The internship shall be considered as a head of passing and shall be considered for vertical progression and for the award of degree. Those, who do not take up / complete the internship shall be considered under F (fail) grade and shall have to complete it subsequently after satisfying the internship requirements.

(2) **Innovation/ Entrepreneurship** Internship shall be carried out at industry, State and Central Government /Non-government organizations (NGOs), micro, small and medium enterprises (MSME), Innovation centres, or Incubation centers etc. Innovation need not be a single major breakthrough; it can also be a series of small or incremental changes. Innovation of any kind can also happen outside of the business world.


Entrepreneurship internships offer a chance to gain hands-on experience in the world of entrepreneurship and help to learn what it takes to run a small entrepreneurial business by performing intern duties with an established company. This experience can then be applied to future business endeavors. Start-ups and small companies are a preferred places to learn the business tactics for future entrepreneurs as earning how a small business operates will serve the intern well when he/she manages his/her own company. Entrepreneurship acts as a catalyst to open minds to creativity and innovation. Entrepreneurship internships can be from several sectors, including technology, small and medium-sized sector, and the service sector.

(3) **Societal or Social Internship.** Urbanization is increasing on a global scale; and yet, half the world's population still resides in rural areas and is devoid of many things that urban population enjoys. The rural internship is a work-based activity in which students will have a chance to solve/reduce the problems of the rural place for better living.

  
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|  |  |             |     |
|--|--|-------------|-----|
| Course Title:  | Introduction to Internet of Things (IOT) |             |     |
| Course Code:   | BETCK105II/205II                         | CIE Marks   | 50  |
| Course Type (Theory/Practical /Integrated )  | Theory                                   | SEE Marks   | 50  |
|  |  | Total Marks | 100 |
| Teaching Hours/Week (L:T:P: S)   | 3-0-0-0                                  | Exam Hours  | 03  |
| Total Hours of Pedagogy  | 40 hours                                 | Credits     | 03  |
| <b>Course objectives</b> <ul style="list-style-type: none"> <li>Understand about the fundamentals of Internet of Things and its building blocks along with their characteristics.</li> <li>Understand the recent application domains of IoT in everyday life.</li> <li>Gain insights about the current trends of Associated IOT technologies and IOT Analytics.</li> </ul>   |  |             |     |
| <b>Teaching-Learning Process</b><br>These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes. <ol style="list-style-type: none"> <li>Lecturer method (L) need not to be only a traditional lecture method, but alternative effective teaching methods could be adopted to attain the outcomes.</li> <li>Use of Video/Animation to explain functioning of various concepts.</li> <li>Encourage collaborative (Group Learning) Learning in the class.</li> <li>Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking.</li> <li>Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develop design thinking skills such as the ability to design, evaluate, generalize, and analyze information rather than simply recall it.</li> <li>Introduce Topics in manifold representations.</li> <li>Show the different ways to solve the same problem with different circuits/logic and encourage the students to come up with their own creative ways to solve them.</li> <li>Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding</li> <li>Use any of these methods: Chalk and board, Active Learning, Case Studies</li> </ol> |  |             |     |
| <b>Module-1 (8 hours of pedagogy)</b>  |  |             |     |
| <b>Basics of Networking:</b> Introduction, Network Types, Layered network models<br><br><b>Emergence of IoT:</b> Introduction, Evolution of IoT, Enabling IoT and the Complex Interdependence of Technologies, IoT Networking Components<br><br>Textbook 1: Chapter 1- 1.1 to 1.3 Chapter 4 - 4.1 to 4.4   |  |             |     |
| <b>Module-2 (8 hours of pedagogy)</b>  |  |             |     |
| <b>IoT Sensing and Actuation:</b> Introduction, Sensors, Sensor Characteristics, Sensorial Deviations, Sensing Types, Sensing Considerations, Actuators, Actuator Types, Actuator Characteristics.<br><br>Textbook 1: Chapter 5 - 5.1 to 5.9   |  |             |     |
| <b>Module-3 (8 hours of pedagogy)</b>  |  |             |     |

  
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IoT Processing Topologies and Types: Data Format, Importance of Processing In IoT, Processing Topologies, IoT Device Design and Selection Considerations, Processing Offloading.

Textbook 1: Chapter 6 – 6.1 to 6.5

**Module-4 ( 8 ours of pedagogy)**

**ASSOCIATED IOT TECHNOLOGIES**

Cloud Computing: Introduction, Virtualization, Cloud Models, Service-Level Agreement in Cloud Computing, Cloud Implementation, Sensor-Cloud: Sensors-as-a-Service.

**IOT CASE STUDIES**

Agricultural IoT – Introduction and Case Studies

Textbook 1: Chapter 10– 10.1 to 10.6; Chapter 12- 12.1-12.2

**Module-5 (8 hours of pedagogy)**

**IOT CASE STUDIES AND FUTURE TRENDS**

Vehicular IoT – Introduction

Healthcare IoT – Introduction, Case Studies

IoT Analytics – Introduction

Textbook 1: Chapter 13– 13.1; Chapter 14- 14.1-14.2; Chapter 17- 17.1

**Course outcome (Course Skill Set)**

At the end of the course the student will be able to:

|     |   |
|-----|---|
| C01 | Describe the evolution of IoT, IoT networking components, and addressing strategies in IoT. |
| C02 | Classify various sensing devices and actuator types.  |
| C03 | Demonstrate the processing in IoT.  |
| C04 | Explain Associated IOT Technologoes   |
| C05 | Illustrate architecture of IOT Applications   |

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