

Accredited By NAAC With 'A' Grade (CGPA 3.27)

CRITERIA 1

1.4.1 Feedback Analysis Report

Submitted to Appropriate Bodies



Shri Shivaji Education Society, Amravati's

COLLEGE OF ENGINEERING AND TECHNOLOGY, AKOLA



Founder President : Late Dr. Panjabrao alias Bhausaheb Deshmukh

At. Post. Babhulgaon (Jh.) NH.6, Tal.Dist. AKOLA (M.S.) 444 104 Phone : 0724 - 2259024, 7387523332

President : Shri, Harshvardhan P. Deshmukh

Principal Dr. S. K. Deshmukh

Date: 04/05/2023

Declaration

This is to declare that the information, reports, true copies and numerical data etc

Furnished in this file as supporting documents is verified by IQAC and found correct.

Dr. S. K. Patil

gatil

IQAC Coordinator

Dr. S. K. Patil 1070 Coordinator College of Engineering and Ted 10-00

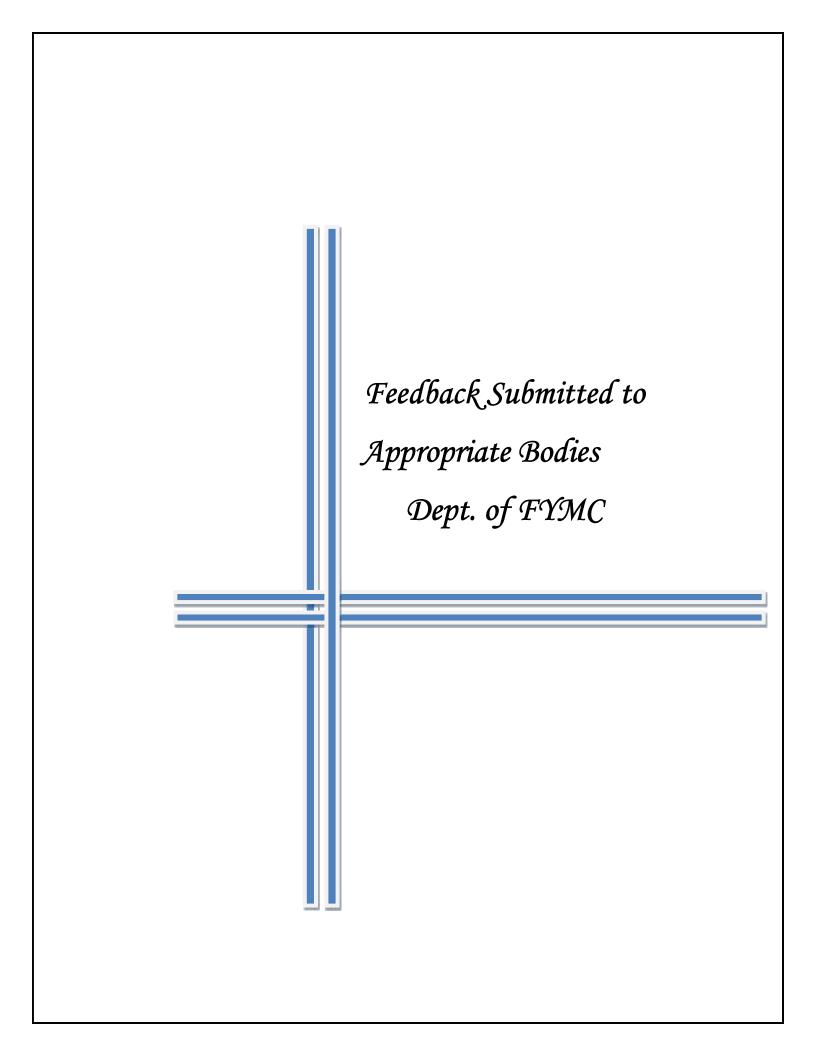
Akola

Dr. S. K. Deshmukh

Principal

Principal
College of Engg.
& Tech., Akela







COLLEGE OF ENGINEERING & TECHNOLOGY, AKOLA

At. Post :- Babhulgaon (Jh) N.H.No. 6, Tal., Dist. Akola. 444 104 (M.S.)

FYMC

Report of Minor changes in syllabl of First Year B. E. / B. Tech.

As per the notification No. 111/ 2019, dated 31/08/2019 of S. G. B. Amravati University, the new syllabi of first year B. E. / B. Tech. common to all program of engineering as per the recommendations of AICTE choice based credit system (CBCS) implemented from academic session 2019-20. The first year monitoring committee of this institute was taken feedback from the students admitted in First year for the academic year 2019-20 at the end of semester and suggestions of concerning subject teachers. The feed analysis committee was submitted analysis report to the chairman FYMC and same was discussed in the FYMC meeting. Most of students in their feedback suggested that , the syllabl of engineering chemistry subject is too lengthy, some topics in Engg. Physics were repeated. Engg. physics and Engg. chemistry faculty also suggested that there is a need to delete and addition of some portion in syllabi of these subjects. Prof. S. J. Nigwal (Faculty of Engg. Physics) was pointed out that, the Course outcomes of Engg. Physics & Lab was not mentioned in the syllabi. FYMC considered their suggestions and decided to put up the same in BOS meeting of Applied Sciences, Humanities & Gen. Engineering Board of S.G.B. Amravati University through BOS member of this institute. The member of BOS Dr. V. T. Bhugul of this institute and the member of BOS from other institute also given their consent in the meeting regarding minor changes in the syllabi , the meeting regarding this conducted in university on dated 25/11/2021.

With reference to SGB Amravati notification No. 03/2022, dated 06/01/2022 it was notified that the authority of university was accepted the minor changes in syllabi of First year B. E. Semester —I & II (Group A & B) In the subject Engineering Mathematics—I, Engineering Mathematics—I, Engineering Physics, Engineering Physics Lab and Engineering Chemistry and same to be implemented from the academic session 2021-2022.

Report Submitted by : Dr. V. T. Bhugul , Member of BOS and Faculty , Applied Sciences, Humanities & Gen. Engineering Board.

> HCD, Engg, Chemistry College of Engineering & Technology

> > AXOLA

NOTIFICATION

No. 01 /2022

Dated: 06 /01/2022

- Subject : (1) Minor changes in the syllabi of the subjects of LAI Engineering Mathematics I, LBI Engineering Mathematics II, LAZ Engineering Physics, LA6 Engineering Physics Lab., 1B2 Engineering Chambatry.
 - (II) Chances & Absorption for the Old Course of the subjects of B.E. Sem. I / II (Group A & B) Ref ce : Notification No. 111/2019 dtd. 31.08.2019.
- It is settified for general information of all concerned that the authorities of the University have accepted to implement the minor changes in the syllabi of the subjects of B.E. Sem. 1 / II (Group A & B) and the chances & equivalence for the old course students to be implemented from the academic session 2021-2022 & onwards in phase wise manner as under:
 - (i) Minor changes in the syllabi of the subjects of IA1 Engineering Mathematics 1, 1B1 Engineering Mathematics II, IA2 Engineering Physics, IA6 Engineering Physics - Lab., IB2 Engineering Chemistry:
 - (i) IA1 Engineering Mathematics 1: On SGBAU Gazette Part II P. No. 487, under the title IA1 Engineering Mathematics 1 under sub title Section A of Unit I: Differential Calculus: in line 1, the words "Rolle's Theorem, Mean Value Theorem" after the words 'Leibniz's Theory' be deleted.
 - (ii) 1B1 Engineering Mathematics II: On SGBAU Gazette Part II P. No. 494, under the title 1B1 Engineering Mathematics II, under sub title Section A of Unit III: Integral Calculus: in line 1, the words "Evolutes and higoslutes" after the words 'mid Gramma function' be deleted.
 - (ai) 1A2 Engineering Physics: On SGBAU Gazette Part II P. No. 488, under the title 1A2 Engineering Physics under sub title Section A of Unit II in line 2, the word "only" after the word "Principle" be deleted and after the word "statement", the words "& its derivation" be added. In line No.4, the words "hims independent Schrodinger equation" after the words "its significance" be deleted and the words "Time energy uncertainty relation" be added before the words "wave function and its significance".
 - (iv) 1A2 Engineering Physics Labr On SGBAU Gazette Part II P. No. 489, under the tribe 1A6 Engineering Physics Lab. Practicals: the words and signs "16) Experiment on the basis of Non Destructive Testing" he substituted by the signs & words "16) Determination of Numerical Aperture & Acceptance angle by using optical fiber kit".
 - (v) 182 Engineering Chemistry: On SGRAU Gazetin Part II P. No. 495, under the sub title Section A 'Industrial Material:' of Unit III, the words "ceramics & refractories, Nanomaterial" after the words 'and Applications of be deleted. Under the sub title Section B in Unit V, in line 6, the words "Conducting Polymers: Introduction, types of conducting polymer and their examples." before the words 'and applications' be deleted. In Unit VI under the sub title Spectruphotometric technique: in line 2 & 3, the words "Surface characterization technique: X-ray diffraction" before the word 'technique' be deleted.
 - (vi) The revised Churse Objectives and Course Outcomes of the subject IA2 Engineering Physics and the Course Objectives and Course Outcomes of IA6 Engineering Physics Lab. shall be as per 'Appendix A' appended with the Notification.
 - (II) Chances & #1 scrption for the Old Course of the subjects of B.E. Sess. 1/11 (Group A & B).
 - (i) IA1 Et. 3 seering Mathematics I: Two (2) chances i.e. Winter-2021 & Summer-2022 and then from Wileer - 2022 be absorbed into revised syllabut of TA1 flagineering Mathematics — I.
 - (ii) IAJ Engineering Physics: Two (2) chances i.e. Winter-2021 & Summer-2022 and then from Winter - 2 322 be absorbed into revised syllabus of IA2 Engineering Physics.
 - (iii) 1B2 Engineering Chemistry: Two (2) chances i.e. winter-2021 & Summer-2022 and thus from winter 2022 be absorbed into revised syllabor of 1B2 Engineering Chemistry.

Sd/-(Dr.J.A.Tidke) Registrac(I/c.) Sant Godge Baba American University

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 1921 - PART TWO - 04

Appendix - A

1A2 ENGINEERING PHYSICS

Aim: To enable the students to correlate the theoretical principles of fundamentals of modern aspects in Physics with application oriented studies of engineering.

Course Objectives: Students will be taught :

- I. Conducting, semiconducting materials.
- Z. Physics of modern engineering materials.
- 3. Electromagnetic phenomenon and wave propagation.
- 4. Application of Quantum Physics to Optical & Electrical phenomena.
- 5. Application of LASERS and Fiber Optics in Engineering & Technology.
- Application of Ultrasonic and acoustics.

Course Outcomes: At the end of Course, Students will be able to:

- Gain the knowledge about semiconducting materials and new engineering materials, semiconducting devices and its applications.
- 2. Co-relate the theoretical principles and fundamentals of modern aspects in Physics.
- 3. Learn basics and application of Quantum Physics in areas of optical electromagnetic Phenomenon.
- 4. Implement the laws of optics and application oriented studies like Lasers and fiber optics communication.
- 5. Know the fundamentals of Optic Fibers.
- 6. Explain the application of fundamentals of acoustics and Ultrasonics.

1A6 ENGINEERING PHYSICS - Lab.

Course Objectives: Students will be taught:

- 1. Characteristics of semiconducting diodes.
- 2. To enhance the basic knowledge of electromagnetic phenomenon and cathode ray oscilloscope.
- 3. To study the phenomenon of Diffraction.
- 4. To understand the phenomenon of Interference.
- 5. study of Optical phenomenon.

Course Outcomes: At the end of Course, Students will be able to :

- Recognize and study the characteristics of semiconducting devices and its applications.
- Apply the fundamentals of electric and magnetic fields to understand the functioning of Cathode Ray Oscilloscope and Hall-offect.
- 3. Learn the interference phenomenon and its applications.
- 4. Employ the phenomenon of Diffraction and its applications.
- 5. Co-relate the principles of Optics with the practical knowledge.

classmate

Group

be change i.e. some postions required to be delete or add. In the meeting it is decided that the member of BOS applied sciences, humanities & general engineering will recomend these suggessions in Bos meeting which will be held in university, also the stuff of engg. Physics. prof. S. J. Ningwal point out that in the sullakus of enoo. Physics couse outcomes of every. Physics Theory 4 less: were not mentioned in the syllabur. The same will be put up in the BOS meeting through our college Bos member Dr. V.T. Bhugul 11) From the parent feelback it was abs the Parents Suggested that cleanlyness and food quality in contene need to be improved. The social. activities like was should be conductor in mid team and notices regulating the same should be displayed in time 30, it is decided to convey the about this to contine committee and concerning authority.

(Students) Theory

| | | | | | 100000000000000000000000000000000000000 | 8 | | | | |
|--------|---------------------|-----------------------|----------------------------|-------------|---|-----|---------|-------|----------|---------|
| Grou | Αq | | В | | Branch | C | ILLA | Sen | nit . | Session |
| | | | | | , | 3 | | bate: | 26/11/19 | 2019-20 |
| Exce | ellent 4 | | Good | 30 | Fair | | 2 | Poor | 1 | |
| Files | | | | | Subje | ٦,٠ | M-I | EP | EM | CP |
| F11751 | Year B.E | / B. Tec | 0. | | Teach | | SSD/SRB | SIN | PDB | ARD |
| Punc | tuality o | the tea | cher | | | | 3 | 3 | 3 | 2 |
| Over | all appe | arance a | nd personal | ity of the | teacher | [| 3 | 2 | 3 | 2 |
| Com | municat | ion skill (| of the teach | ęr | | [| 3 | 2 | 3 | 2 |
| Subj | ea prap | a ation b | ry the teach | er for delo | vering | [| 2 | 3 | 3 | ١ |
| | ecture ty of the | teacher | to explain a | cnerticula | concept | T | 3 | 2 | 3 | 2 |
| | | | of the teach | | | ſ | 2 | 2 | 3 | 1 |
| | teachin | | | | 100-20 | | | | | |
| | erity in t | | | | | 1 | 2 | 2 | 5 . | 2 |
| | | | ching techn | iques like | | | 2 | 2. | 3 | r |
| | | ise studie emeatar | | nethods lil | ke providing | I | Ĺ | 2. | 3 | 1 |
| clas | s notes. | printed r | otes, refere so respond | inces etc. | | 1 | 3 | 2 | 3 | ١ |
| try 5 | tudents | | icting test, r | | | Γ | - | 2 | 3 | 1 |
| disp | laying n | orks. | | | | r | | | L | 2 |
| 2 Ava | dability (| of teache | r during col | lege hours | | 1 | 3 | 3 | - | |
| 3 Rela | tionship | syith stu | idents | | | [| 3 | 3 | 4 | 2_ |
| Anv | othero | bservatio | on | | Total | | 31 | 30 | 41 | 20 |
| 6 | Som | e | chang | req | in en | î.B | neer | Cai | Phys | STC) |

| For of | fice use onl | γ |
|--------|--------------|---|
|--------|--------------|---|

| Subject | Name of Teather | Count |
|---------|----------------------------------|-------|
| 84-4 | Prof.S.D.Deshmukh/Prof.S.R.Bhuse | 31 |
| EP | Prof.5.7 Nigwal | 30 |
| EM. | Prot P.D Bhanawat | 41 |
| CP. | Fror A.R.Deshpando | 20 |

Sol of New York

| Group A | | В | Branch | | Sem | : 1 | Session |
|---|--------------------------|--|---------------------|-----------------------------|-------|----------|---------|
| 27014/// | | chemi' | | cal. | Date: | 26/11/19 | 2019-20 |
| Excellent | 4 | Good 3 | | 2 | Poor | 1 | |
| First Year I | B.E./ B. Te | ch | Subject | M-I | EP | EM | CP |
| 34050301010 | | | | SSD/SRB | SJN | PDB | ARD |
| Punctualit | y of the te | acher | | 4 | 3 | 3 | 7 |
| Overall ap | pearance | and personality of the | e teacher | 4 | 3 | 3 | |
| Communi | cation skill | of the teacher | 1 | 4 | 4 | 4 | 3 |
| Subject pr | eparation | by the teacher for de | elivering | 4 | 13 | 3 | 2 |
| the lectur Ability of | | er to explain a perticu | dar concept | 4 | 3 | 3 | 2. |
| Depth of | knowledge | e of the teacher ofor | the subject • | 4 | 3 | 2 | 2 |
| he is tead 5 Sincerity | thing in teaching | K | | 4 | 4 | 4 | 2 |
| Use of in | novative b | eaching techniques lit | ke practical | 2 | 2 | 2 | 1 |
| A second by the second of the second of | s, case stu opplement | dies etc ary teaching methods | s like providing | 2 | 2 | 2 | 2 |
| | | t notes, references et er to respond to diffi | | 2 | 2 | 2 | 2 |
| by stude 11 Particula | | ducting test, refest, e | valuation, | 3 | 3 | 3 | 1 |
| | ig marks lity of teac | her during college ho | urs | 4 | 13 | 3 | 2 |
| 13 Relation | ship with | students | | Ц | L | Ц | 3 |
| Any oth | observa NCL | otion ply added on sinceria | sylabbus ng phys | _4 <u>5</u> -1ορί ies | 13 | 34. | voire |

| For off | ik | 0 | use | onl | ٧ |
|---------|----|---|-----|-----|---|
|---------|----|---|-----|-----|---|

| Subject | Name of Teacher | Count | |
|---------|-----------------------------------|-------|---|
| IVI-1 | Prof.S.D.Deshmolth/Prof.S.R.Shuse | 45 | |
| EP | Prof.S.i Nigwil | 39 | 1 |
| DM | . Prof.P.D.Bhanawal | 34 | |
| CP | Prof.A.B.Deshpanile | 23 | |

Sodes) of

| Group A | | .15 | | Branch Chi | mical | Sen | Sem: 1 | |
|------------------|--------------------|--------------------------------------|----------------|--------------|---------|-------|----------|--------------|
| | - | | | | | Date. | 26/11/19 | 2019-20 |
| Excelle | nt 4 | Good | 3 | Fall | 2 | Poor | 1 | |
| | | 20,000 | | r.m.o.d | M-I | EP | EM | CP |
| First Yea | ir B.E./ B. | fech. | | Subject | 55D/SRB | SIN | PDB | ARD |
| 11 Q2/100 LV 522 | | Value balan | | (Catalic) | 3 | 3 | 3 | 2 |
| Punctua | inty of the | teacher | | 1 | | | | |
| Overall | appearanc | ce and personali | ty of the t | eacher | 3 | 2 | 3 | 2 |
| Commu | inication 5 | kill of the teache | er | | 4 | 3 | 3 | 2 |
| Subject | preparati | on by the teache | er for deliv | ering | -3 | 2 | 3 | 2 |
| the lect | | | | | - | - | 3 | 7 |
| Ability | of the teac | ther to explain a | perticular | совсерт | 2 | 2 | 5 | 3 |
| 5 Depth o | at knowled | ige of the teach | er ofor the | subject | 2 | 3 | 2 | ı |
| he is te | aching | | | | 3 | 2 | 3 | 2 |
| 5 Sinceri | ty in teach | ing | | | 2 | + | - | - |
| | | teaching techni | iques like j | oractical | 3 | 3 | 3 | 1 |
| | | tudies etc | - Albando III | a mondelling | 3 | 12 | 3 | 2 |
| 9 Use of | suppleme | ntary teaching n | nethous III | 5 binaving | 9 | 1 | 1 7 | |
| Class of | otes, post | ted notes, refere cher to respand | to difficult | ies asked | 3 | 1.2 | 13 | 1 |
| | ni me ica ients | Cries to response | AND MANAGEMENT | | | | | 41 |
| | | onducting test, re | etest, eval | uation, | 2 | 3 | 3 | 2 |
| | ying marks | | | | | | | - |
| | | acher during coll | lege hours | | 3 | 5 | 4 | 3 |
| | | h students | | | 3 | 13 | 4. | 2. |
| | | | | Total | 27 | 132 | 40 | 25 |
| Any o | ther obser | | 1 01 | | 1 | em | ring | 100. |
| Th | r n | Acceptance of the second | ried | syltabu | | Shoul | | deled |
| is | 200 | | uind | | 100 | | 15 | MAN 1. 1. 41 |
| 11 1 | 1 50 | adde | 1 1 | 1860+2 | -the c | 3 | 3 | |
| 2 | 15 | equired | | | | 1 | | |
| For of | fice use or | nly | 710000 | 1000000 | 1 | | | |
| Subj | | Hame of Te | | Count | | | | |
| \$11 | t. Prof. | 5.D.Deshimath/I | Prof.5 8.00 | | 1 | | | |
| E | , | Prof.5.1 No | estraf | 32 | | | | |
| Th | | - 177 T. J. W. H. L. | Marie No. | 10 | 1 | | | |
| | 4 | 45 of P. D.Bha | nawat | 40 | 4 | | | |

CP

| | Group A | В | Branchotecho | micalEnga | Sem | :1 | Session |
|-----|---------------------|---|--------------|-----------|------|----------|---------|
| - 1 | | | | | Date | 26/11/19 | 2019-20 |
| | Excellent 4 | Good 3 | Fair | 2 | Poor | 1 | |
| | First Year B.E./ B. | Tech: | Subject | M-1 | ÉΡ | EM | CP |
| | | | Teacher | SSD/SRB | 51N | PDB | ARD |
| U | Punctuality of the | e teacher | | 4 | 3 | 4 | 2 |
| i | Overall appearan | ce and personality of the | teacher | 4 | 4 | 4 | 3 |
| 1 | Communication | skill of the teacher | | 4 | 3 | 4 | 3 |
| 4 | Subject preparat | ion by the teacher for de | Evering | 3 | 4 | 3 | 3 |
| | the lecture | | | | - | | - |
| ş | Ability of the lea | cher to explain a perticul | ar concept | 4 | 3 | 3 | 3 |
| ΰ | Depth of knowle | dge of the teacher ofor t | he subject | 3 | 3 | 3 | 3 |
| | he is teaching | | | | , | 1 | - 2 |
| 7 | Sincerity in teach | ning | | 4 | 4 | 4 | 3 |
| 8 | Use of innovativ | e teaching techniques lik | e practical | 3 | 3 | 3 | 3 |
| | examples, cases | | - 800° | 0 | 0 | 10 | - |
| 9 | | entary teaching methods | | 3 | 3 | 3 | 2- |
| 11 | | ied notes, references etc acher to respond to diffic | | 4 | 3 | 4 | 3 |
| | by students | | | | | | |
| 1 | | onducting lest, retest, ev | aluation, | 4 | 4 | 14 | 3 |
| | desplaying mark | | | | | 1.0 | 3 |
| NG | Availability of te | racher during college hou | rs . | 3 | 3 | 3 . | - |
| I | t Selationship wit | th students | | 3 | 3 | 3 | 3 |
| | Any other oase | rvation | Total | 46 | 43 | 45 | 37 |

The syllabus topic from engo physics ite rime independent schooldings equation is totally different and not required.

For office use only

| Name of Teacher | Conut |
|----------------------------------|---|
| Prof.S.D.Deshmu3h/Prof.S.R.Bhuse | 46 |
| Prof.5.1.frigwal | 43 |
| , Prof.P.D Bharaevat | 45 |
| Prof. A.R. De Apparate | 37 |
| | Prof.S.D.Deshmoldi/Prof.S.R.Bhuse Prof.S.J.Bigwal Prof.P.D.Bhanawat |

(Vertice)

| | | FEED BACK | | | | |
|-----------------------------------|--|---------------|------------------|-----------|------------|----------------|
| Group A | 15 | Branch | C.S.E. | Sen | is 1 | Session |
| | | | 23 | Date | 26/11/19 | 2019-20 |
| Excellent 4 | Good 3 | Fair | Z | Poor | 1 | |
| en and an an | en La | Subje | t Mit | EP. | EM | CP. |
| First Year D E | , B. Telm | Teach | | 53N | PDB | ARE) |
| Punctuality of | I the teacher | | 4 | 3 | 3 | 4 |
| Overall appea | arance and personality of t | he teacher | 4 | 2 | 3 | 1 |
| Communicati | on skill of the teacher | | 3 | 2 | 2 | 1 |
| Subject prepa | ration by the teacher for r | delisering | 2 | 3 | 3 | 2 |
| the fecture: Ability of the | teacher to explain a pertic | ular concept | 2, | 3 | 3 | 2 |
| Depth of know | wledge of the teacher of or | the subject | 4 | 2 | 2 | 1 |
| he is teaching Sincerity in te | | | 3 | 3 | 3 | . 4 |
| Use of innova | ntive teaching techniques I | ike practical | 2_ | 2. | 2 | 2_ |
| Use of supple | se studies etc ementary teaching method | | 2 | 3 | 3 | _3 |
| | rinted notes, references e teacher to respond to diff | | 3 | 2 | 3 | 2_ |
| by students Particularity | a conducting test, retest, | evaluation, | 2_ | 2 | 2 | 2_ |
| displaying ma | acts t teacher during college ho | PHIS | 2 | 1 1 | 3 | 2 |
| Relations top | | | 2 | 3 | 3 | 2 |
| Any other ut | 1 diffe | rentral (| 35 Went ad | 31 3 m | 135 135 | iebri while |

| for | off | ice | usa | on | y. |
|-----|-----|-----|-----|----|----|
| | | | | | |

| 1 | Subject: | Name of Teacher | Count |
|---|----------|---------------------------------|-------|
| ľ | tit i | Prof.s.Deshimils/Prof.S.R.Bhose | 35 / |
| Ì | 194 | Prof.S.I.Niewal | 31 |
| 1 | EN. | . Frid.P.D.Bhanawat | 35 |
| İ | CP* | Proi. 8-P. Deshpande | 28 |

| 1 | Taroup I | o . | Section | C | Branch | | Sem | e) | Session | |
|-----|---------------------------------|-----------------|-------------------------------|---------------------------|--------------|-------|-------|---------|---------|------|
| ٢ | Jane 1 | | | | | | Date: | 9/11/19 | 2019-20 | |
| | Excellent 4 | 1 | Goud | 1 | Fair | 2 | Poor | 1 | | |
| | First Year B.E | 2/ B. Tr | rch. | | Subject | 14-11 | EE | EC | ED | CS |
| | | | | | Teacher | SRB | SNN | 17/5 | VRR | SRM |
| 1 | Punctuality o | of the to | eacher | | I | 4 | 4 | 4 | 4 | 4 |
| 2 | Overall appe | aram, e | and personal | ity of the t | eacher | 4 | 4 | 4 | 4 | 4 |
| 3 | Communicat | ion skil | of the teach | er | | 4 | 4 | 4 | 4. | 4 |
| 4 | Subject prep | aration | by the teach | er for sells | ering | 4 | 14 | 4 | 4 | 4 |
| | the lecture | | | | | | | | | - |
| 5 | Ability of the | teache | er to explain a | perticular | concept | 4 | 4 | 4 | 4 | 4 |
| ti | Depth of lax | owledge | of the teach | er ofor the | subject | 4 | 4 | 4 | 4 | 4 |
| | he is teachin | g | | | | | | 1 | 17.21 | 12 |
| 7 | Sincerity in t | eaching | | | | 4 | Lr_ | 4 | 4 | 4 |
| 8 | | | aching techn | ques ille p | wactical | 4 | 4 | 4 | 4 | 4 |
| | examples, co | | | and the file | o ere ortine | 4 | 4 | 4 | 4 | 4 |
| 9 | | | ary teaching ru | | E brosiding | 4 | | | | |
| 10 | class notes;; Ability of the | nemted Heach | notes, refere a to respond | sces en: so difficulti | es asked | 4 | 4 | 4 | 4 | 4 |
| | by students | | | | - | | 19 | 9 1 | Le | 4 |
| 11 | Particularity | нь сори | lecting test, re | itest, evalu | ration, | 4 | 4 | 4 | 7 | |
| | displaying m | miks | 50 | | Ī | 7 | 4 | 4 | 4 | 4 |
| 1.2 | Availability (| french | er during suffe | ge hours | L | 4 | | 7 | T . | - |
| 1.3 | Relationship | with st | ialents | | | 4 | 4 | 4 | 4 | 4 |
| | Any other of | | | | Total | 52 | 52 | 52, | 52 | 52 |
| | | nit_ | | lote 9 | ral ca | leul | | | (Value) | n.q. |
| | - do | 0 | toipe | LOC | world to | 1 | 3 fu | 1chism | 1 | |

| Subject | Home of Teacher | Count |
|---------|--------------------|-------|
| Mai | Prof.5.R. Bhose | 52 |
| 61 | D., S.M. Hallword | 52 |
| EC. | Dr. J. V. Shegoba | 52 |
| 413 | Prof.V. R. Rajuros | 52 |
| C5 | Trof S. B. Malponi | 52 |

Ventres)

| ñ | Group B | Section C | Branch C | nd hour | Sem | :1 | Session | |
|---|------------------------|-------------------------------------|--------------|---------|----------------|----------|----------------|-----|
| | Group G | | | 13 | Date | 29/11/19 | 2019-20 | |
| | Excellent 4 | Good 3 | Fair | 2 | Poor | 1 | | |
| | First Year B.E./ B. Te | eti. | Subject | M-0 | EE. | EC | ED | C5 |
| | macrear or to se | Cit | Teacher | SRB | SNN | 195 | VRR | SRN |
| | Punctuality of the te | eacher | | 4 | 4 | 4 | 4 | 3 |
| | Overall appearance | and personality of the | teacher | 4 | 4 | 4 | L _t | 4 |
| | Communication skil | | | 4 | 3 | 4 | 3 | 3 |
| | | n by the teacher for deli | vernig | 3 | 4. | 4 | 4 | 3 |
| | tive lecture | | | 3 | Z ₄ | 14 | 4 | 3 |
| | | er to explain a perticula | | 3 | 4 | L | 4 | 2 |
| | | ge of the reacher ofor th | e subject | | | | | |
| | he is teaching | 24 | | 4 | 4 | 14 | 3 | 3 |
| | Sincerity in teachir | | | - 1 | 67 | 1 5 | 2 | 4 |
| | | teaching cost-oliques like | proctical | 4 | 3 | -5 | 2 | |
| | examples, case sto | ides etc tary teaching mothods l | ke providing | 3 | 3 | 4 | 3 | 3 |
| | tice of supplemen | d notes, references etc. | | 9/ | | | | |
| 1 | O Ability of the icac | her to respond to diffice | lties arlord | 3 | 4 | 3 | 4 | 2 |
| | by students | | | , | | L. | 2 . | 4 |
| |) Particubelly if co | nducting test, retest, ev | aluation, | 4 | 3 | 4 | 2 | 7 |
| | displaying marks | | | 1 3 | 1. | 4 | 4 | 3 |
| | 2 Avadability of tea | cher during cultage hour | | 2_ | | 1 | - | |
| | 3 Retribuship with | audents | | 4 | -3 | 14 | Z _t | 3 |
| | Any other abserv | amordom day | Total | 46 | 47 | 50 | 47 | 38 |

Chang or delete some perhan of syllabus.

| Subject | Name of Teacher | Count |
|---------|----------------------|-------|
| M-it | Prof.5.R. Bluss | 46 |
| 11 | Do.5 N.Nidozag | 47 |
| £C | Or T. V. Stingokar | 50 |
| ED | PhotoVisto Registral | 47 |
| ĆS. | Prof. 5.30 (Alabasia | 38 |

Sour d

| Group | U | Section D | | Branch : | CSE. | Sem: | 1 | Session | |
|---------------------|------------------------|------------------------------------|-----------------|-----------|---------|------|----------|---------|-----|
| I a series | | I feed a | | | | Date | 26-11-19 | 2019-20 | |
| Excellen | 1 4 | Good 3 | | Fair | 2 | Poor | 1 | | |
| First Year | r B.E./ B. 1 | ech. | | Subjec | II-M | EE | FC | EO | CS |
| | | | | Teache | r · SRB | KUD | VIII | VRR | SRA |
| Punctua | lity of the | teacher | | | 3 | 4 | 4 | 4 | 3 |
| Overall: | эрреагано | e and personality | of the teach | ver | 4 | 4 | 3 | 4 | 3 |
| Commu | rications | kill of the teacher | | | 4 | 3. | 4 | 3 | 4 |
| Subject the lect | | on by the teacher | for delivering | E | 4 | 4 | 4 | 3 | 3 |
| Ability | of the tea | cher to explain a p | perticular con | ncept | 3 | 4 | 4 | 4 | 4 |
| | | dge of the teacher | r of ar the sul | bject | 4 | 4 | L | 4 | 4 |
| | eaching | | | | - | 1 2 | - vo 1 | | 3 |
| 7 Sincer | ity in teac | ning | | | 3 | L | .24 | 3 | 0 |
| | | ve teaching technic studies etc | ques like pra | ctical | 4 | 3 | .4 | 3 | 4 |
| | | centary teaching m | ethods like p | gnibivore | 4 | 21 | 4 | 4 | 4 |
| class | notes, pri | nted notes, referer | nces etc | | , | | | | - 1 |
| | | cathe to respond | to difficulties | asked | .4 | L | 4 | 4 | 4 |
| | tudents instrute in | conducting test, ii | otest, evaluar | tion, | 21 | 4 | 4 | 4 | 3 |
| | Naving son | | | | | | | | |
| | | teacher Auring coli | lege hours | | 4 | 4 | Li | 4 | 4 |
| 15 ftel | lationship | with students | | | 3 | L | 4 | 3 | 4 |
| Ac | y other ob | servation | | Total | 48 | 150 | 5 | 47 | 4 |

The syllabor of Engy Chemishy to too lengthy though.

For office use only

| latipect | Name of Teacher | Count |
|----------|-----------------------|-------|
| 63.11 | PicLS R. Bluse | 48. |
| 8.6 | Frof. K. O. Dodhanich | 50 |
| EC. | Dr. V. Y. Whogol | 57 |
| (10) | Peak's R. Rajoria | Ep7 |
| 105 | most som Malpoor | 47 |

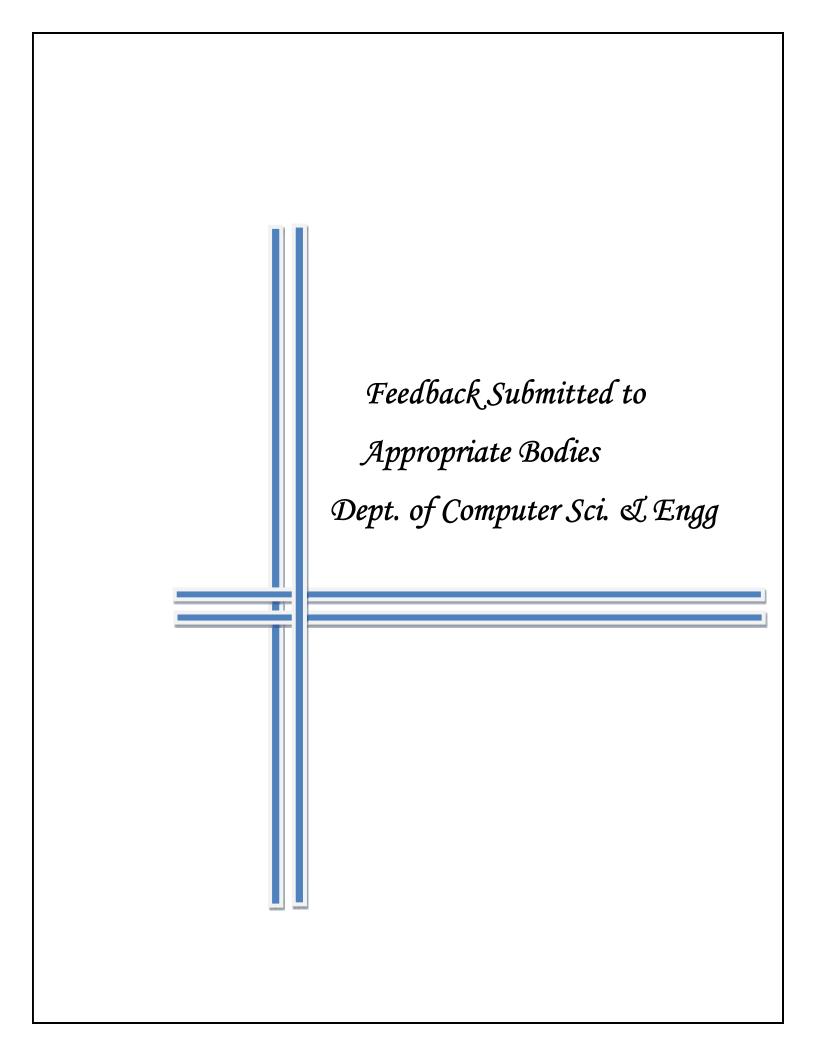
Spection

| - | Group | В | Section | D | Bran | ich Che | minal Engl | 5em | | Session | |
|------|----------------|---------------|------------------|------------|--------------|---------|------------|-------|----------|---------|-----|
| | Excellent | 4 | Good | 3 | | Fair 2 | . 7 | Date: | 26-11-19 | 2019-20 | |
| - 1 | | Service is a | | | | | | | | | |
| | First Year B | E/# 1 | ech. | | | Subject | MH | EE | EC | 60 | C5. |
| | ev commonstant | THE RESIDENCE | ENCOCAE CO. | | 7 | eacher | SRB | KUD | VTB | VRR | SBN |
| | Punctuality | of tines | CONTRACTOR C | | | | 3 | 4 | 4 | 3 | 4 |
| 3 | Overail app | earance | e and personal | ty of the | teacher | [| 3 | 4 | 4 | L | L |
| (| Communic | ation sk | II of the teach | er | | E | 3 | 4 | 4 | 4 | 3 |
| - | Subject ive | paratio | n by the teach | er for del | ivering | F | 4 | 4 | 4 | L | 4 |
| 3 | the tectane | | | | 1001202022 | - | | | 1 24 | | |
| 1 | thoryotti | ie teach | ier to explain a | perticul | arconcept | L | 4 | 4 | 4 | 4 | 4 |
| - | Depth of k | nowled | e of the teach | er ofor th | ne subject | | 4 | 4 | 4 | 3 | 3 |
| 3 | he is teach | ng | | | | | | | 1-7-1 | | |
| 11.2 | Sincerity in | teachin | ·K | | | | 2_ | 4 | 4 | 3 | 4 |
| | Use of mone | wative t | touching techni | iques like | practical | Γ | 4 | 4 | 4 | 3 | 3 |
| 1 | examples. | case sto | elies exc | | | | | - | | • | |
| 2 | Use of supp | plement | tary teaching ii | ethoris F | ike providir | ng g | . 3 | 4 | 4 | 3 | 4 |
| 9 | class note. | printe | d notes, refere | oces etc | | | | | | | |
| 13 | Ability of th | ne teach | ier ta respond | to difficu | lties asked | | 2 | 4 | 2 | 2_ | 4 |
| | by student | 8 | | | | | | | | | |
| | Particulant | y in con | ducting test, n | Hest, evi | duation, | 1 | 4 | 3 | 4 | 2 | 7. |
| | displaying | marks | | | | | | | | | |
| 2 | правардия | of text | her (bring co2 | ege hour | 5 | 1 | 2 | 4_ | 3 | 2 | 4 |
| | Relationals | p with: | stucionts | | | | 1 | 4 | 4 | 4 | 3 |
| | Any other | | | | 1 | otal | 39 | 51 | 49 | 41 | 45 |

Tot court not possible solve on questions of Englishing population of the solve of

| Subject | Name of Teacher | Count |
|---------|-----------------------|-------|
| 121-11 | Prof.5.R. Bhuse | 39 |
| Fl: | traf. E. U. Deshmuith | 2 |
| EC. | Or, V. 1. Dhugal | 49 |
| 135 | Octivit Equit | 41 . |
| 1.5 | Pool 5, E. Malpinii | 45 |

May s





Shri Shivaji Education Society, Amravati's College of Engineering & Technology, Akola Department of Computer Science & Engineering

Report on changes done in new syllabus framing

As per the notification no SGBAU/6-D/BOS/A- 56 /2020 dated 30 /07/2020 and SGBAU/6-D/BOS/A- 79 /2021 dated 26/07/2021 received from S.G.B.A University for the preparation of the syllabus of B.E (Comp Sci & Engg/ Comp Engg) as per AICTE Model a session was arranged by the Head of Dept CSE with teaching faculties of the dept with the agenda to make teachers and students aware of the syllabus framing (Choice based credit system) as per AICTE model for the session 2020-2021. A feedback from Teachers and some students from the CSE dept of 2nd, 3rd, 4th year at the end of semester 2019-2020 was taken consisting of the points as given in feedback form attached with the report. The feedback and suggestions received from the teachers and students was thoroughly analyzed by analysis committee and was submitted to the S.G.B.A University CSE BOS members.

Some of the changes done in the syllabus are mentioned below

- As per the students and teachers feedback received four technical tracks are provided for selection (Professional elective) is provided from 5th sem to 8th sem viz Internet of Things, Introduction to cybersecurity, Big Data and data Science, Artificial Intelligence.
- Electronics subject from 3rd Sem EDC and 4th sem ADIC are merged and reduced to one subject ie ADE which is framed to study in 3rd sem second year.
- Subject and syllabus of the from 5th sem and 6th sem CO₊ CA is merged and framed to one ie CAO computer architecture and organisation.
- 4. Interdisciplinary subject choice selection Open elective is provided in 5th and 6th sem.
- Theoretical subjects like FSDP and CRM is removed and Professional Ethics subject like Social science and Engineering, Security policy and governence is included in the syllabus.
- 6. Latest technical courses and language like Python, PHP, Jenkins etc have been included.
- 7. Updation in the syllabus of some of the subjects like AI,OS,DSGT etc is done.

Many other changes and updations in the new syllabus framing has been done above are some of the points mention.

Dr S.L.Satarkar

(HOD, CSE)

SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI

FOUR YEAR DEGREE COURSE IN BACHELOR OF ENGINEERING

BRANCH: COMPUTER SCIENCE & ENGINEERING - SEMESTER PATTERN (CREDIT GRADE SYSTEM)

SEMESTER: THIRD

| | | | | | er colonia | OF STREET | | | | | Examir | ration Sch | eme | | | |
|-------|--------------|--|---------|----------------|------------|------------------|--------------|----------------------------------|-------------------------------------|--|--------|-----------------------------|--------------|--------------|-------|-----------------------------|
| | | 3 | | 3 | eaching | Scheme | - | | | | | | | Pract | ical | |
| | | | | ours p Week | | feek | | Theory | | | | | Max | Warks | | |
| Sr No | Subject Code | Subject Name | Lecture | Tutorial | Q/d | Total Hours/Week | Total Hours/ | Duratio n of paper (Hr) | Max Marks Theor V Paper | Max Marks College Assessmen t | Total | Min Passin & Marks | Externa I | Interna I | Total | Min Passin g Marks |
| Theo | ry | | | | | | 10-71 | -W | | | | | | | | |
| 1 | 3KS01 | Mathematics-III | 3 | -1 | | - 4 | 4 | 3 | 80 | 20 | 100 | 40 | | | | |
| 2 | 3K502 | Discrete Structure & Graph Theory | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | | | | |
| 3 | 3KSD3 | Object Oriented Programming | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | | | | 1 |
| 4 | 3K504 | Data Structures | 3 | | | 2 | 3 | 3 | 80 | 20 | 100 | 40 | | | | |
| 5 | 3K505 | Analog & Digital Electronics | 3 | | | 3 | 3. | 3 | 80 | 20 | 100 | 40 | | | | |
| 6 | 4E506 | Environmental Studies * | 2 | | | 2 | 0 | | | | | | | | 4 | |
| Pract | icals | | | | | | | | | | | | | | | |
| 7 | 3KS06 | Object Oriented Programming (Java) Lab | | | 2 | 2 | 1 | | | | | | 25 | 25 | 50 | 25 |
| 8 | 3KS07 | Data Structures Lab | | | 2 | 2 | 1 | | | | | | 25 | 25 | 50 | 25 |
| 9 | 3K508 | Analog & Digital Electronics Lab | | | 2 | 2 | 1 | | | | | | 25 | 25 | 50 | 25 |
| 10 | 3KS09 | € Skill-Lab I (#) | | | 2 | 2 | 1 | | | | | | 25 | 25 | 50 | 25 |
| - | 14450000 | Total | 17 | 13 | 0 | 26 | 20 | | | | 500 | | | | 200 | |
| | | | | | | | | | | | | | | Total | 700 | |

^{*} As per the Ordinance No. 42 of 2005

C Shill Late I - based on technology like -Python/Djargo etc. to be decided by Individual Dept. of respective College



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI

FOUR YEAR DEGREE COURSE IN BACHELOR OF ENGINEERING

BRANCH: COMPUTER SCIENCE & ENGINEERING - SEMESTER PATTERN (CREDIT GRADE SYSTEM)

SEMESTER: FOURTH

| _ | | | | Service | | alerson. | | Examination Scheme | | | | | | | | | | |
|--------|--------------|---|---------|----------|--------|------------------|--------|----------------------------------|-------------------------------------|--|-------|-------------------------|-------------|--------------|---------|-------------------------|--|--|
| | | | | Teach | ing So | hema | | | | | | | | Pract | ical | | | |
| | | Hours per Week | | | | | | | | Theory | | Max | Marks | | | | | |
| Sr No | Subject Code | Subject Name | Lecture | Tutorial | D/D | Total Hours/Week | Credit | Duratio n of paper (Hr) | Max Marks Theor Y Paper | Max Marks College Assessmen t | Total | Min Passing Marks | Externa | Interna I | Total | Min Passing Marks | | |
| Theor | y | | | | | | | | - | 20 | 200 | 40 | | | | | | |
| 1 | 4KS01 | Artificial Intelligence | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | - | _ | _ | | _ | | |
| 2 | 4K502 | Data Communication & Networking | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | | | - | 1 | | |
| 3 | 4KS03 | Operating System | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | _ | | | - | | |
| 4 | 4K504 | , Microprocessor & Assembly Lang. Prog. | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | _ | _ | - | - | | |
| 5 | 4K505 | Theory of Computation | 3 | 1 | | 4 | 4 | 3 | 80 | 20 | 100 | 40 | - | _ | _ | - | | |
| 6 | 4ES06 | Environmental Studies * | 2 | | | 2 | 2 | 3 | 80 | 20 | 100 | 40 | _ | _ | | | | |
| Practi | | | | | | | | | | | r- | _ | 1 500 | 1 | 1 7 6 9 | 25 | | |
| 7 | 4KS06 | Date Communication & Networking Lab | | | 2 | 2 | 1 | | | | | | 25 | 25 | 50 | 25 | | |
| 8 | 4KS07 | Operating System Lab | | | 2 | 2 | 1 | | | | | - | 25 | 25 | 50 | 25 | | |
| 9 | 4KS08 | Microprocessor & Assembly Lang, Prog. Lab | | | 2 | 2 | 1 | | | | | | 25 | 25 | 50 | - | | |
| 10 | 4KS09 | C Skill-Lab II (#) | | | 2 | 2 | 1 | | | | | - | 25 | 25 | 50 | 25 | | |
| | | Total | 17 | 1 | II. | 26 | 22 | | | | 500 | | | - | 200 | - | | |
| - | | | | | | | | | | | | | | Total | 800 | | | |

^{*} As per the Ordinance No. 42 of 2005

C Skill Lab N - based on tachnology like -PHP, Web Technology, Respiserry Pi/Ardino, etc. to be decided by individual Dept. of respective College



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI FOUR YEAR DEGREE COURSE IN BACHELOR OF ENGINEERING

BRANCH: COMPUTER SCIENCE & ENGINEERING - SEMESTER PATTERN (CREDIT GRADE SYSTEM)

SEMESTER: FIFTH

| | | | | | | | | | | | Examin | ation 5ch | eme . | | | |
|---------|-----------------|--|---------|----------|--------|--------------------------------|------------------------------|-----------------------------------|------------------------------------|-----------|-------------------------|----------------------|----------------------------|----------------------------------|------------------------|-----------|
| | | | | Teac | hing 5 | cheme | | | | (E180ASY) | | | | Practi | cal | |
| | | | Нос | ars/W | cek | 200 | | | | Theory | | | Max I | Marks | | |
| Sr No | Subject Code | Subject Name | Lecture | Tutorial | g/d | Total Hours/ Week Credit | Duration of paper (Hr) | Marks Marks Theory Paper | Max Marks College Assessment | Total | Min Passing Marks | External | Internal | Total | Min Passin Marks | |
| Theory | 8 | | | | | | | | | - | | | | | | 10- |
| 1 | 58501 | Database Management Systems | 4 | | | 4 | 4 | 3 | 80 | 20 | 100 | 40 | | | | |
| 2 | 5KS02 | Compiler Design | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | | _ | - | |
| 3 | 5K503 | Computer Architecture & Organization | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | | | _ | |
| 4 | 5K504 | Professional Elective-I (#) | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | | _ | | |
| 5 | 5K505 | Open Elective - I (5) | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | | | | |
| Practic | als | I A STATE OF THE S | 12.00 | | | | | | - | | | | 1 | 200 | 50 | 25 |
| 6 | 5KS06 | Database Management Systems Lab (@) | | | 2 | 2 | 1 | | - | - | | _ | 25 | 25 | 50 | 25 |
| 7 | 5KS07 | Compiler Design Lab | | | 2 | 2 | 1 | | | - | - | _ | 25 | 25 | 50 | 25 |
| 8 | 5KS08 | Emerging Technology Lab#1 | | | 2 | 2 | 1 | | | _ | | - | 25 | - | 50 | 25 |
| 9 | 5KS09 | C Skill Lab III (*) | | | 2 | - 7 | 1 | | | | - | - | 25 | 25 | 200 | 10 |
| 100 | | Total | 3.6 | 0 | 8 | 24 | 20 | | - | _ | 580 | - | - | Total | 700 | - |
| | | | | | | | | | | - | - | | COLUMN TO SECUL | 100000 | 1000 | - |
| | Track | # Professional Elective-I | | | 120 | | ipen Ele | | | - | | 1035 | lools & Tech | g Technolog | | CONTRACT. |
| | Al | Cognitive Technologies | | ÷ | undan | nentals of | Finance | & Accountin | Ē. | 4 | Tracit | less suis | son, Micros | the Publishers of the Population | O-DOWNSHIP I | |
| | DS | Data Science and Statistics | | p | rincip | ies of Ma | riceting | for Engineerin | ng | | Al | TensorFi Torch, N | ow, Apache europh | SystemML, | Caffe, Op | enNN. |
| | IoT | Internet of Things | 1 | E | ntrep | reneurshi | p | | | | DS | R, Pytho | n, Cassandra | , Apache H | adoop | |
| | Cy. | Introduction to Cyber Security | | @ | Practi | als using | Mongo | DB,MySQL | | | loT | | DeviceHive | | | |
| | Cy. Security | Introduction to Cyber Security | | @ | Practi | sals using | Mongo | DB,MySQL | | | loT CS | | , DeviceHive x, OpenVPN | | | |

^{*} C Skill Lab III - based on technology like - Angular & React, Express, Node.js etc. to be decided by Individual Dept. of respective College

An Orientation Program of 15 hours duration /MOOC on Indian Constitution to be offered to the students during the Vth Semester

Open Electiva I to be opted from the courses offered by other engineering technology boards of the university /Massive Open learning Courses (MOCC) such as SWAYAM pertaining to the profession



SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI FOUR YEAR DEGREE COURSE IN BACHELOR OF ENGINEERING

BRANCH: COMPUTER SCIENCE & ENGINEERING - SEMESTER PATTERN (CREDIT GRADE SYSTEM)

SEMESTER: SIXTH

| | | | | | | | | | | | Exami | nation 5ch | eme | | | |
|------------------|--------------|------------------------------------|---------|----------------|---------|------------------|--------|------------------------------|-----------------------------------|------------------------------------|-------|-------------------------|----------|----------|-------|-------------------------|
| | | | | Teach | hing So | heme | | | | | | | | Pract | ical | |
| | | | 100 | ours p Week | | Veek | | | | Theory | | | Max | Marks | | |
| 있 년 Theory | Subject Code | Subject Name | Lecture | Tutorial | 0/4 | Total Hours/Week | Credit | Duration of paper (Hr) | Marks Marks Theory Paper | Max Marks College Assessment | Total | Min Passing Marks | External | Internal | Total | Min Passing Marks |
| Theory | , | | | | | | | | | | | 100 | | | | |
| 1 | 6K501 | Security Policy & Governance | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | - | | | |
| 2 | 6KS02 | Design & Analysis of Algorithm | 4 | | | -4 | 4 | 3 | 80 | 20 | 100 | 40 | | | - | |
| 3 | 6K503 | Software Engineering | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | | | | |
| 4 | 6K504 | Professional Elective-II [#] | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | | | | |
| 5 | 6KS05 | Open Elective - II (\$) | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | | | | |
| Practis | cals | | | | | | | | | | _ | _ | 1 22 | 1 | 1 | |
| 6 | 6KS06 | Design & Analysis of Algorithm Lab | | | 2 | 32 | 1 | | | | | | 25 | 25 | 50 | 25 |
| 7 | 6KS07 | Software Engineering Lab | | W | 2 | 2 | 1 | | | | | | 25 | 25 | 50 | 25 |
| 8 | 6K508 | Emerging Technology Lab# II | | l i | 2 | -2 | 1 | | | | | | 25 | 25 | 50 | .25 |
| 9 | 6KS09 | CSkill Lab IV (*) | | - | 2 | 2 | 1 | | | | | | 25 | 25 | 50 | 25 |
| - | 91000 | Total | 3.6 | | 8 | 24 | 20 | | | | 500 | | | | .200 | |
| | | | | | | | | | | | | | | Total | 700 | |

| Track | # Professional Elective-II |
|-------------|-----------------------------|
| Al | Natural Language Processing |
| DS | Big Data Analytics |
| foT | Sensors & Actuators |
| Cy.Security | Cryptography |

| Computational Biology | |
|-----------------------------|--|
| Cyber Law & Ethics | |
| Intellectual Property Right | |

FOSS Tools & Technology for Practicals

| Drack. | Emerging Technology Lab# II |
|--------|---|
| Al | Natural Language Toolkit (METX), SpaCy, PyTorch-NLP, Natural, Netext, TextBlob |
| DS. | MMME, Spark, Nep4t, MangoDB, Hive, Storm. |
| loT | Devicehub, Zetta, Noda-RED, Flutter, M2MLabs Marrispring |
| cs | VeraCrypt, ModSecurity, AdBlocker, CheckShortURU, SPAMfighter, SpamBufly |

An Orientation Program of 15 hours duration /MOOC on Indian Constitution to be offered to the students during the Vth Semester

Open Elective II to be opted from the courses offered by other engineering technology boards of the university /Massive Open learning Courses (MOOC) such as SWAYAM pertaining to the profession



^{*} C Skill Lab IV - based on technology like - DevOp to be decided by Individual Dept. of respective College

SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI FOUR YEAR DEGREE COURSE IN BACHELOR OF ENGINEERING

BRANCH: COMPUTER SCIENCE & ENGINEERING - SEMESTER PATTERN (CREDIT GRADE SYSTEM)

SEMESTER: SEVENTH

| | _ | | Examination Scheme | | | | | | | | | | | | | |
|---------|--------------|--|--------------------|----------------|--------|------------------|--------|------------------------------|---------------------------------|------------------------------------|-------|-------------------------|-----------|----------|-------|-------------------------|
| | | | | Teach | ing Sc | heme | | | | | | | Practical | | | |
| | | | | ours p Week | | Jeek | | | | Theory | | | Max Marks | | | - |
| SrNo | Subject Code | Subject Name | Lecture | Tutorial | 0/4 | Total Hours/Week | Credit | Duration of paper (Hr) | Max Marks Theory Paper | Max Marks College Assessment | Total | Min Passing Marks | External | Internal | Total | Min Passing Marks |
| Theory | | | | | | | | | | | 100 | 40 | | | | |
| 1 | 7K501 | Social Science & Engineering Economics | 3. | _ | | 3 | 3: | 3 | 80 | 20 | 100 | 40 | | | - | |
| 2 | 7K502 | Computer Graphics | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | | - | | | - |
| 3 | 7KS03 | Cloud Computing | 4 | | | 4 | 4 | 3 | 80 | 20 | 100 | 40 | - | | - | - |
| 4 | 7K504 | Professional Elective-III (#) | 3 | | | 3 | 3 | 3 | 80 | 20 | 100 | 40 | - | | - | |
| 5 | 7K505 | Professional Elective-IV (5) | 3 | | 1 | 3 | 3 | 3 | 80 | 20 | 100 | 40 | | | | 1 |
| Practic | als | | | | | | | | - | 1 | _ | | 1 | .25 | 50 | 25 |
| 6 | 7KS06 | Computer Graphics Lab | | | 2 | 2 | 1 | | | | | - | 25 | - | - | - Commission of the |
| 7 | 7KS07 | Emerging Technology Labit III | | | 2 | 2 | 1 | | | | | | 25 | 25 | 50 | 25 |
| 8 | 7KS08 | Emerging Technology Lab# IV | | | 2 | 3 | 1 | | | | | | 25 | 25 | 50 | 25 |
| 9 | 7K509 | Project & Seminar | | | 8 | 8 | 4 | | | | | | | 50 | 50 | 25 |
| - 2 | 10.343 | Total | 15 | | 14 | 30 | 23 | | | | 500 | | | | 300 | 1 |
| _ | | 1900 | | | | | | | | | | | | Total | 700 | |

| Track | # Professional Elective-III |
|-----------------|-----------------------------|
| Al | Robotics |
| DS | Data Warehousing & Mining |
| Tol | Embedded Systems |
| Cy.Securit V | Digital Forensits |

| Emerging Technology Lab# III | |
|----------------------------------|--|
| ROS, YARP, MRPT, Gozebo, DROCOS | |
| RapidMiner, Weka, Scrapy, Pandas | |
| ThingsBoard, Kinoma, SneWhere | |
| Security Onion, LastPass,KeePAss | |

| Emerging Technology Lab# V |
|------------------------------------|
| thereum, Bigchain DB, Corda |
| OpenCV, SimpleCV, Keras, Caffe |
| OpenEaagles, Repast, OpenSimulator |

← FOSS Tools & Technology for Practicals ↑

\$ Professional Elective-IV

Blockchain Fundamentals

Image Processing

Optimization Techniques



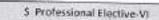
SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI FOUR YEAR DEGREE COURSE IN BACHELOR OF ENGINEERING BRANCH: COMPUTER SCIENCE & ENGINEERING - SEMESTER PATTERN (CREDIT GRADE SYSTEM)

| | | | - | | _ | SE | MESTE | R: EIGHTH | V-9160 00100 | POSSESSION ST | | 0.000.000 | | | | |
|---------|--------------|-----------------------------------|---------------------------------|----------|-----|------------------|--------|------------------------------|---------------------------------|------------------------------------|-------|-------------------------|----------|----------|--------|-----------------------|
| | | | Teaching Scheme Examination Sch | | | | | | | | heme | | | | | |
| | | | - | faurs | per | 1 2 | | Theory | | | | | | Prac | ctical | 7.5 |
| | 507 | | _ | Wee | k | Jeek | | | | 1110004 | | | Max | Marks | | |
| Sr No | Subject Code | Subject Name | Lecture | Tutorial | 0/0 | Total Hours/Week | Credit | Duration of paper (Hr) | Max Marks Theory Paper | Max Marks College Assessment | Total | Min Passing Marks | External | Internal | Total | Min Passin Mark |
| Theor | | W | | 1 | | | | | | | | | | 100 may | | |
| 1 | 8KS01 | Object Oriented Analysis & Design | 3 | 1 | | 3 | 3 | 3 | 00 | | 24.5 | | | | | |
| 2 | 88502 | Professional Ethics & Management | 3 | | | 3 | 3 | 3 | 80 | 2.0 | 100 | 40 | | | | |
| 3 | 8K503 | Professional Elective V (#) | 3 | | | 2 | 3 | 3 | 80 | 20 | 100 | 40 | | | | |
| 4 | 8KS04 | Professional Elective VI (\$) | 3 | | | -3 | - | 3 | 80 | 20 | 100 | 40 | | | | |
| Practic | als | 112 | - | | - | 3 | 3 | 3 | 80 | 20 | 100 | 40 | | | | |
| 5 | 8KS05 | Emerging Technology Lab# V | | | 2 | 124 | | | | | | | | A ELEV | | |
| 6 | 8KS06 | Emerging Technology Lab# VI | | | 2 | 2 | 1 | - | | | | | 25 | 25 | 50 | 25 |
| 7 | BKS07 | Project & Seminar | 100 | | 12 | 12 | 1 | | | | | | 25 | 25 | 50 | 25 |
| | | Total | 12 | | 16 | 2.0 | 6 | | | | | | 75 | 75 | 150 | 75 |
| | | 7000 | | | 49. | -74 | 7.0 | | | | 400 | | | | 250: | - |
| | | | - | 100 | | | | | | | | | | Total | cen | |

| Track | # Professional Elective V |
|-------------|-----------------------------|
| Al | Virtual & Augmented Reality |
| DS | Machine Learning and Al |
| foT | Wireless Sensor Networks |
| Cy.Security | System & Software Security |

| | Emerging Technology Labir IV |
|-----------|---|
| Google's | ARCore, AR.js, ARToolkit, DraidAR, Brio, Adobe Aero |
| R Studio, | Drange, D3.js, Ggplot2, Jupyter Notebooks |
| DSA,Thin | ger, RIOT, OpenRemote, Argay |
| Wireshart | k, Burp Suit, Nessus |

| | Emerging Technology Laby VI |
|----|--|
| Н | yperledger, HydraChain, MultiChain, Elements |
| 50 | ogle Colab, GPUImage, Cuda, Aforge/Accord.NET |
| 6 | R-Tools, Locust.id; https://, Apache.iMeter, Siege |



Distributed Ledger Technology

Multimedia Computing

Modeling & Simulation



5KS01 Database Management Systems (L-4, T-0, C-4)

Course Prerequisite: Discrete Mathematics, Data Structures and Algorithm

Course Objectives: Throughout the course, students will be expected to demonstrate their understanding of Database Management Systems by being able to do each of the following:

- To understand the fundamental concepts of database management system.

To learn database query languages.

 To give systematic database design approaches covering conceptual design, logical design and an overview of physical design.

To understand the query processing and optimization

To learn basics of transaction management and concurrency control.

Course Outcomes (Expected Outcome): On completion of the course, the students will be able to

1. Model, design and normalize databases for real life applications

Discuss data models, conceptualize and depict a database system using ER diagram.

3. Query Database applications using Query Languages like SQL

- 4. Design & develop transaction processing approach for relational databases
- 5. Understand validation framework like integrity constraints, triggers and assertions.

Unit I: Introduction to DBMS Hours: 8

Database System Applications, Purpose of database systems, View of Data, Database Languages Database Architecture, Database Users and Administrators, Entity-Relationship Model, Constraints, Removing sedandard attributes in Entity sets, E-R diagrams, Reduction to Relational Schemas, E-R design issues, Extended E-R Festures. (8)

Unit II: Relational Algebra, SQL Hours: 8

Relational Model: Structure of Relational Databases, Database schema, keys, schema diagram, relational query languages, relational operators, The Relational Algebra, Overview of SQL query language, SQL data definition, Basic Structure of SQL queries, Additional basic operations, Set Operations, Noll Values, Aggregate Functions, Nested Subqueries, Modification of the Database Operations, Join expressions, Views.

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2021 - PART TWO - 468

Unit III: Relational Database Design Hours: 8

Integrity Constraints, SQL data types and schemas, Authorization, Triggers, Features of good relational designs, atomic domains and First Normal Form, decomposition using functional dependencies, Functional dependency theory, Algorithms for decomposition, Decomposition using multi-valued dependencies, More Normal Forms, Database Design Process.

Unit IV: Query Processing and Query Optimization Hours: 8

Query Processing: Overview, Measures of Query Cost, Selection Operation, Sorting, Join Operation, Other Operations, Evaluation of Expressions, Query Optimization: Overview, Transformation of Relational Expressions, Estimating Statistics of Expression Results, Choice of Evaluation Plans, Materialized Views.

Unit V: Transaction Management Hours: 8

Transaction Concept, Sample transaction model, Storage structure, Transaction Atomicity and Dumbility, transaction isolation, Serializability, transaction isolation and atomicity, transaction isolation levels, Implementation of Isolation levels, Transactions as SQL statements

Unit VI: Concurrency Control and recovery system Hours: 8

Lock-Based Protocols, Deadlock Handling, Multiple Granulanties, Timestamp- Based Protocols, Validation-Based Protocols, Multi-version schemes, Recovery system Failure classification, Storage, Recovery & Atomicky, Recovery algorithm, buffer management, Failure with loss of nonvolatile storage, early lock release and logical undo operations, Remote Backup Systems

Text Book: Abraham Silberschatz, Henry F. Korth, S. Sudanhan, DATABASE SYSTEM CONCEPTS, Sorth Edition, McGraw Hill

Reference Books:

- 1. Raghu Ramakrishnun and Johannes Gehrice, Database Management Systems, McGraw-Hill
- 2. Shamkam B. Navathe, Ramez Elmasri, Database Systems, Pearson Higher Education
- 3. Gerein-Molina, Ullman, Widom: Database System Implementation, Pearson education.
- 4. S. K. Singh: Database Systems, Concepts, Design and Applications, Pearson Education.
- 5. G.K. Gupta: Darabase Management Systems, McGraw Hill.
- 6. Toledo and Cushman: Database Management Systems, (Schaum's Outlines)



5KS02 COMPILER DESIGN (L-3, T-0, C-3)

Course Pro-requisite: Basic knowledge of Discrete Mathematics, Theory of Computation Course Objectives: Throughout the course, students will be expected to demonstrate their understanding of Compiler Design by being able to do each of the following:

To learn concepts of programming language translation and phases of compiler design

- To understand the common forms of parsers.

· To study concept of syntax directed definition and translation scheme for the representation of language

To illustrate the various optimization techniques for designing various optimizing compilers Course Outcomes (Expected Outcome). On completion of the course, the students will be able to

Describe the fundamentals of compiler and various phases of compilers

Design and implement LL and LR pursers

Solve the various parsing techniques like SLR, CLR, LALR.

Examine the concept of Syntax-Directed Definition and translation

5. Assess the concept of Intermediate-Code Generation and run-time environment.

Explain the concept code generation and code optimization.

Unit I: Introduction to Compiler Hours: 06

Introduction to Compilers: Language Processor, The Structure of a Compiler. Lexical Analysis: The role of lexical analyzer, Input Buffering, Specification of tokens, Recognition of sokens, The Jexical analyzer generator Lex, Finite Automata, From Regular Expressions to Finite Automata, State minimization of DFA

Unit II: Syntax Analysis Hours: 07

Systax Analysis: The role of the parser, Review of context free grammar for syntax analysis: Parse Tree and Derivation, Ambiguity in Grammar, Elimination of left recursion and left factoring. Top down parsing: recursive descent pursang, productive parsers, Transition diagrams for productive parsers, FIRST and FOLLOW, LL (1) Grammars, Construction of predictive parsing tables, Non recursive predictive parsing. Error recovery in predictive

Unit III: Bottom up parsing Hours: 07

Bottom up parsing. Hundle pruning, Stack implementation of Shift Reduce Parsing, conflicts during shift reduce parsing Introduction to LR parsing: Simple LR, Items and the LR(0) Automation, The LR-Parsing algorithm, Construction of SER parsing table, More powerful LR Passer: canonical LR(1) Items, Constructing LR(1) sets of stems and canonical LR(1) parsing tables, Constructing LALR parsing tables, The parser generator Yaco Unit IV: Syntax Directed Translation Hours: 07

Syntax Directed Translation: Syntax directed definitions, inherited and synthesized attributes, Evaluation orders of SDD's: Dependency Graphs, S-attributed definitions, L-attributed definition. Application of Syntax-Directed Translation: Construction of systex trees. Syntax-directed Translation Schemes

Unit V: Intermediate-Code Generation Hours: 07

Intermediate-Code Generation: Variants of Syntax Trees: Directed Acyclic Graphs(DAG), Three Address Code. Ran Time Environments: Storage Organization, Static versus Dynamic Storage Organization, Stack Allocation of Space: Activation trees, Activation Records, Calling Sequences, Variables Length data on stack. Access to Nonlocal Data on the Stack, Heap Manager. The Memory Manager. Introduction to Garbage Collection: Design Goals for

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2021 - PART TWO - 469

Unit VI: Code Generation Hours: 06

Code Generation: Issues in Design of a Code generator, The Target Language, Address in the target code, Basic blocks and flow graphs. Optimization of Basic Blocks, Peephole Optimization and The Principal sources of

Text Book: Alfred V. Also, Monica S. Lam, Ravi Sethi, Jeffrey D. Ullman Compilers: "Principles, Techniques and Tools", Pearson Education Second Edition.

Reference Books:

D. M. Dhamdhere, Compiler Construction—Principles and Praetice, (2/e), Masmillan India.

 Alfred V. Aho, Ravi Sethi, Jeffrey D. Ullman Compilers: "Principles, Techniques and Tools", Pearson Education (Low Price Edition).

Andrew Appel, Modern Compiler Implementation in C, Cambridge University press

4 K.C. Louden "Computer Construction—Pranciples and Practice" India Edition, CENGAGE.

5. Bennett J.P., "Introduction to Compiling Techniques", 2/e (TMH).



SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2021 - PART TWO - 470

5KS04 COGNITIVE TECHNOLOGIES (L-3, T-0, C-3)

Course Prerequisite: Basic knowledge of Artificial Intelligence, Programming and Data Structures.

Course Objectives: Throughout the course, students will be expected to demonstrate their understanding of Cognitive Technologies by being able to do each of the following:

 This course intends to introduce concept of cognitive technologies and important approaches of cognitive technologies.

· Student will learn and analyze key concept of cognitive technologies.

 Students will gain an understanding of innovation concepts, terminology, current and future trends in cognitive technologies.

 Introduces students to IBM Watson platform, an artificially intelligent computer system capable of answering questions posed in natural language, developed in IBM's Deep QA project.
 Course Outcomes (Expected Outcome): On completion of the course, the students will be able to

Describe the Cognitive computing and principles of cognitive systems.

2. Identify role of Natural Language Processing in cognitive system.

3. Outline application of advanced analytics in cognitive computing.

4. Justify rule of Cloud and Distributed Computing in Cognitive Computing.

5. Assess the process of building a Cognitive Application.

6. Identify the Emerging Areas and Future Applications of Cognitive Computing.

Unit I: Foundation of Cognitive Computing & Design Principle of Cognitive Systems Hours: 07
The Foundation of Cognitive Computing. Cognitive Computing as a New Generation, The Uses of Cognitive
Systems, What Makes a System Cognitive, Guining Insights from Data, Domains Where Cognitive Computing Is
Well Suited, Artificial Intelligence as the Foundation of Cognitive Computing, Understanding Cognition, Two
Systems of Judgment and Choice, Understanding Complex Relationships Between Systems, The Elements of a
Cognitive System, Infrastructure and Deployment Modulities.

Design Principles for Cognitive Systems: Components of a Cognitive System, Building the Corpus, Bringing Data into the Cognitive System, Machine Learning, Hypotheses Generation and Scoring, Presentation and Visualization Services.

Unit II: NLP and Big Data in Cognitive System Hours: 07

Natural Language Processing in Support of a Cognitive System: The Role of NLP in a Cognitive System, Semantic Web, Applying Natural Language Technologies to Business Problems.

The Relationship Between Big Data and Cognitive Computing: Dealing with Human-Generated Data, Defining Big Data, The Architectural Foundation for Big Data, Analytical Data Warehouses, Hadoop, Data in Motion and Streaming Data, Integration of Big Data with Traditional Data.

Unit III: Knowledge Representation and Advance Analytics in Cognitive Computing Hours: 06
Representing Knowledge in Taxonomies and Ontologies: Representing Knowledge, Developing a Cognitive
System, Defining Taxonomies and Ontologies, Explaining How to Represent Knowledge, Models for Knowledge
Representation. Applying Advanced Analytics to Cognitive Computing: Advanced Analytics Is on a Path to
Cognitive Computing, Key Capabilities in Advanced Analytics, Using Advanced Analytics to Create Value, Impact
of Open Source Tools on Advanced Analytics.

Unit IV: Role of Cloud and Distributed Computing in Cognitive Computing Hours: 07

The Role of Cloud and Distributed Computing in Cognitive Computing Leveraging Distributed Computing for Shared Resources, Why Cloud Services Are Fundamental to Cognitive Computing Systems, Characteristics of Cloud Computing, Cloud Computing Models, Delivery Models of the Cloud, Managing Workloads, Security and Governance, Data Integration and Management in the Cloud.

The Business Implications of Cognitive Computing: Preparing for Change, Advantages of New Disruptive Models, What Does Knowledge Mean to the Business?, The Difference with a Cognitive Systems Approach, Meshing Data Together Differently, Using Business Knowledge to Plan for the Future, Answering Business Questions in New Ways, Building Business Specific Solutions, Making Cognitive Computing a Reality, How a Cognitive Application Can Change a Market.

Unit V: IBM Watson and Process of Building a Cognitive Application Hours: 07

IBM's Watson as a Cognitive System: Watson Defined, Advancing Research with a "Goard Chollenge", Preparing Watson for Jeopardy, Preparing Watson for Commercial Applications, The Components of DeepQA Architecture. The Process of Building a Cognitive Application. The Emerging Cognitive Platform, Defining the Objective, Defining the Domain, Understanding the Intended Users and Defining their Attributes, Defining Questions and Exploring Insights, Creating and Refining the Corpora, Training and Testing.

Building a Cognitive Healthcare Application: Foundations of Cognitive Computing for Healthcare, Constituents in the Healthcare Ecosystem, Learning from Patterns in Healthcare Data, Building on a Foundation of Big Data Analytics, Cognitive Applications across the Healthcare Ecosystem, Starting with a Cognitive Application for Healthcare, Using Cognitive Applications to Improve Health and Wellness, to Enhance the Electronic Medical Record and to Improve Clinical Teaching.

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2021 - PART TWO - 471

Unit VI: Emerging Areas and Future Application Hours: 06

Smarter Cities: Cognitive Computing in Government: How Cities Have Operated, The Characteristics of a Smart City, The Rise of the Open Data Movement Will Fuel Cognitive Cities, The Internet of Everything and Smarter Cities, Understanding the Ownership and Value of Data, Smarter Approaches to Preventative Healthcare, Building a Smarter Transportation Infrastructure, Using Analytics to Close the Workforce Skills Gap, Creating a Cognitive Community Infrastructure, The Next Phase of Cognitive Cities.

Emerging Cognitive Computing Areas: Characteristics of Ideal Markets for Cognitive, Computing Vertical Markets and Industries

SKS04 INTERNET OF THINGS [L-3, T-0, C-3]

Course Prerequisite: Basic knowledge of Internet and Microprocessor & Assembly Language Programming Course Objectives: Throughout the course, students will be expected to demonstrate their understanding of Internet of Things by being able to do each of the following:

- To learn and understand fundamental of IoT

To study the design methodology and different IoT platform

To understand usefulness of IoT for society

To design and implement application of IoT using various sensor

Course Outcomes (Expected Outcome): On completion of the course, the students will be able to:

1. Understand the basics of IoT

Understand design methodology and platforms involved in IoT

3. Apply the knowledge to interface various sensors with IoT development

4. Design and Implement IoT system for real time application

Unit I: Hours: 6

Introduction to Internet of Things, Definition & Characterestics of IoT, Physical Design of IoT Logical Design of IoT, IoT Enabled Technologies like Wireless Sensor Networks, Cloud Computing. Big data analytics, Communication protocols, Embedded Systems, IoT Levels & Deployment Templates, Domain Specific IoTs Home, Cities, Environment, Energy systems, Logistics, Agriculture, Health & Lifestyle.

Unit II: Hours: 7

10T & M2M. Introduction, M2M, Difference between IoT and M2M, SDN and NFV for IoT, Software defined networks, network function virtualization, IoT Systems Management, Simple Network Management Protocol (SNMP), Limitations of SNMP, Network Operator Requirements, NETCONF, YANG, IoT Systems Management with NETCONF-YANG, NETOPEER.

Unit III: Hours: 7

to T Platforms Design Methodology, Case Study on to T System for Weather Monitoring, Motivation for Using Python, IoT Systems - Logical Design using Python Jirstalling Python, Python Data Types & Data Structures, Control Flow, Functions, Modules, Packages, File Handling I, Date/Time Operations, Classes, Python Packages of Interest for IoT

Unit IV: (Hours: 7) toT Physical Devices & Endpoints, Raspberry Pi, About the Board, Linux on Raspberry Pi, Raspberry Pi Interfaces senal, SPL, (2C, Programming Raspberry Pi with Python, Controlling LED with Raspberry Pi, Interfacing Light Seasor with Raspberry Pi, Other IoT Devices, pcDuino, BeagleBose Black, Cultiebuard.

Unit V: Hours: 7

foT Physical Servers & Cloud Offerings, Introduction to Cloud Storage Models & Communication APIs , WAMP -Autofahn for IoT , Xively Cloud for IoT , Python Web Application Framework - Django , Designing a RESTful Web API , Amazon Web Services for ,SkyNet IoT Messaging Platform.

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2021 - PART TWO - 473

Unit VI: Hours: 7

Case Studies Illustrating IoT Design, Introduction, Home Automation: Smart Lighting, Home Intrusion detection, Cases Smart parking, Environment: Weather Monitoring System, Weather reporting Bot, Air pollution monitoring, Forest fire detection, Agriculture: Smart Irrigation, Productivity Applications: IoT printer.

Text Book: Arshdeep Bahgn, Vijay Madisoni, "Internet of Things – A hands-on approach", Universities Press, ISBN 0: 0996025510, 13: 978-0996025515.

Reference Books:

1. Fundamentals of Python, K.A. Lambert and B.L. Juneja, Cengage Learning, 2012.

 David Hanes, IoT Fundamentals: Networking Technologies, Protocols, and Use Cases for the Internet of Things, Cisco Press, ISBN-13: 978-1-58714-456-1, ISBN-10: 1-58714-456-5, 2017

 Jan Holler, Visios Tsiatsis, Catherine Mulligan, Stefan Avesand, Stanutis Karnouskos, David Boyle, "From Machine-to-Machine to the Internet of Things: Introduction to a New Age of Intelligence", 1st Edition, Academic Press, 2014



SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2022 - PART TWO - 779

5FT05 / 5KSO5 Open Elective -I (i) DATA STRUCURES & ALGORITHMS [L-3,T-0,C-3] Course Objectives

1. To understand the Data Structures and its memory representations

To perform different operations on Data Structures such as insertion, deletion, searching and traversing.

3. To understand various data searching and sorting methods with its complexity.

4. To introduce various sorting and searching techniques for representation of the data in the real world Course Outcomes (Expected Outcome): On completion of the course, the students will be able to-

Describe basics of Data Structures and algorithms.

2. Explain Data Structures array and link list.

Ellustrate with example stack and queues operations.

Examine the binary tree traversal methods.

Construct Graph and shortest path algorithm in graph.

Inspect various sorting and searching techniques

Unit I. Introduction to algorithms and Data Structures: Introduction, Algorithms, Asymtotic Notation, Introduction to Data Structures, Types of Data Structures, Data Structure Operations

Unit H. Arrays: introduction, Types of Arrays, Representation of One-Dimensional Array in Memory, Array Traversal, Insertion and Deletion, Sorting and Searching, Representation of Multi-Dimensional Array in memory, Realizing matrices using Two-Dimensional Arrays, Matrix Operations, Linked List: Introduction, Linked List -Basic Concept, Types of Linked List.

Unit III. Stacks: Introduction to Stacks, Stack Operations, Queues: Introduction, Queues-Basic Concept, Queue Operations, Basics of Circular Queues and Priority Queues.

Unit IV: Trees: Introduction, basic concept, Binary Tree, Binary Tree Representation, Binary Tree Traversal, Binnry Search Tree, Tree Variants.

Unit V: Graphs: Introduction, Basic Concept, Graph Terminology, Graph Implementation, Shortest Path Algorithm, Graph Traversal.

Unit VI: Sorting and Searching: Introduction, Sorting Techniques, Selection Sort, Intention Sort, Bubble Sort, Quick Sort, Mergie Sort, Bucket Sort, Searching Techniques; Linear Search, Binary Search, Hashing. Text Book: E. Balagurunay, "Data Structures using C", McGraw Hill Education, 2018. Reference Books:

Seymour Lipschutz, "Data Structures with C", Schaum's Outline Series.
 Forouzas, Gilberg, "Data Structures and algorithms", CENGAGE Learning.

 Reema Thareja, "Data Structures using C", Oxford University Press, 2011. Arpita Gopal, "Magnifying Data Structures", PHI (EEE), 2010.

Ellis Horowitz and Sartaj Scham, "Fundamentals of Data Structures", CBS Publications.



5fT05 / 5KSO5 Open Elective -1 (ii) COMPUTATIONAL BIOLOGY [L-3,T-0,C-3]

Course Pre-requisite:

Course Objectives: Throughout the course, students will be expected to demonstrate their understanding of Computational Biology by being able to do each of the following:

1. To familiarize the students with most basic and useful algorithms for sequence analysis

2. To aware the students with basic file formats

3. To transform the basic molecular data for interpreting their patterns for various analysis

To compare genomes of different species, gene finding, and gene regulation.

Course Outcomes (Espected Outcome): On completion of the course, the students will be able to:

 Understand what types of biological questions can be investigated using computers, and what limitation. computational methods impose on the understanding of biology.

2. To know the properties of DNA, RNA, and proteins, the relationships among these molecules.

3. To know how to convert a biological question into a computational problem that can be solved using computers.

4 To know how to read and understand solutions to computational problems, which will be formalized as a series of tasks (an algorithm).

5. To know how implement the algorithms by writing computer programs.

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2022 - PART TWO - 780

Unit I: Cellular and Malecular Biology Fundamentals: The structure of DNA & RNA, Gene Structure and control, Tree of Life and evolution, Primary & Secondary Structure of Protein, Implications for Bioinformatics Protein fold to form compact structures. Dealing with Databases: Structure of databases, Types of databases, Data Quality.

Unit II: Sequence Alignments: Principles of sequence alignments, scoring alignments, substitution matrices, Inserting gaps, Types of Alignments, Searching Databases, Searching with Nucleic Acid or protein sequences, Protein Sequences Motifs or Patterns, Searching using Motifs and patterns, Patterns & protein function. (Hours: 6) Unit III: Pair wise Sequence Alignments & Databose Searching: Substitution Matrices and scoring, Dynamic Programming Algorithms, Indexing Techniques & Algorithmic approximations, Alignments score significance, aligning complete genome sequences. (Hours: 6)

Unit IV: Patterns Profiles and Multiple Alignments: Profile & sequence logos, Profile Hidden Markov Models, Aligning Profiles, Multiple Securnce Alignment by Gradual Sequence Addition, Sequence Pattern Discovery. (Hours: 6)

Unit V. Revealing Genome Features: Preliminary examination of Genome Sequence, Gene Predictions, Splice site Detection, Prediction of Promoter Regions, Confirming Predictions, Genome Annotation, Large Genome Comparisons (Hours 6)

Unit VI: Gose Detection and Gesome Association: Detection of Functional RNA Molecules using Decision Trees, Algorithms for Gene Detection in Prokaryotea, Features used in Eukaryotic Gene Detection, Predicting Eukaryotic Gene Signals, Predicting Exon / Intron Structure, Beyond the Prediction of Individual Genes. (Hours:6) Text Books:

 Understanding Bio-informatics., Marketa Zvelbil and Jeremy O. Baum, Garland Sceincem Taylor & Francis Group, LLC

Bioinformatics: Principles and Applications, Bal, H. P. (2005). Tata McGraw-Hill.

Reference Books:

1. Bioinformatics Algorithms - Design and Implementation in Python, Miguel Rocha & Pedro Ferreira, Academic Press, Elsevier Inc.

2. Bioinformatics Algorithms: An Active Learning Approach, Edition 2, Volume 1. Phillip Compeau & Pavel Pevzner.

3. Bioinformatics computing, Bergeron, B. P. (2003), Prentice Hall Professional.

Bioinformatics Technologies, Chen, Y. P. P. (Ed.). (2005). Springer.

5. Bioinformatics for dummies, Claverie, J. M., & Notredame, C. (2011), John Wiley & Sons.

6. Fundamental Concepts of Bioinformatics, Dan. E. Krane, & Raymer, M. L. (2003), Pearson Edu. International. Additional Resources:

1. Bioinformatic Methods I, conducted by University of Toronto, https://www.Coursera.org/course/bioinfo methods 1

Bioinformatics algorithms (Part-I), conducted by University of California San Diego.

http://www.coursers.org/course/bioinformatics 3. Bioinformatics: introduction and methods conducted by Peking University,

https://www/coursera.org/course/pkubionfo 4. http://www.nebi.nlm.nih.gov/education/tuturials/

5. http://www.ncbi.nlm.nih.gov/books/NBK143764/

Bioinformatics: introduction and method, conducted by Peking University.

https://www.coursers.org/course/pkubioinfo

7. Bioinfinmatics: Life sciences on your computer, conducted by Johns Hopkins. University https://www.coursera.org/course/pkubioinfo

8. Emergence of life, conducted by University of Illinois Urbana-Champaign campus.

https://www.coursers.org/course/emergenceoffide

Genes and the human condition (from behaviour to biotechnology), conducted by University of Maryland. https://www.coarsera.org/coarse/genes.

10. Introduction to biology - the secret of life, conducted by Massachusetts Institute of Technology https://www.eds.org/course/mits-7-00x-introduction-biology-secret-1768

11. Origins - formation of the universe, solar system, earth and life, conduted by University of Copenhagen. https://www.coursera.org/course/origins

12. Preparation for introductory biology; DNA to organisms, conducted by University of California https://www.courseru.org/course/introbilogy.



5KS07 COMPILER DESIGN - Lab [P-2, C-1]

Course Prerequisite: Basic knowledge of C Programming, Data Structures, Theory of Computation.

Course Objectives: Throughout the course, students will be expected to demonstrate their understanding of Compiler Design by being able to do each of the following:

Know the basic components of a Compiler.

- To implement Lexical Analyzer using Lex tool and Syntax Analyzer using Yuac Tool.
- To implement various parsing methods.
- · To implement code optimization techniques .

Course Outcomes (Expected Outcome):

On completion of the course, the students will be able to

- 1. Identify the fundamentals of compiler and its phases.
- 2. Use the powerful compiler generation tools such as Lex and Yacc.
- 3. Write a lexical scanner, either from scratch or using Lex.
- 4. Develop program for solving parser problems.
- 5. Examine the various optimization techniques.

List of Experiments: This is the sample list of Experiments; minimum 12 experiments are to be performed covering the entire syllabus. At least two experiments should be beyond syllabi based on learning of syllabi (Apply) List of Experiments based on Syllabus: (Maximum 20)

- Design a lexical analyzer for given language and the lexical analyzer should ignore redundant spaces, tabs
 and new lines. It should also ignore comments. Although the syntax specification states that identifiers can
 be arbitrarily long, you may restrict the length to some reasonable value. Simulate the same in C language.
- 2. Write a C program to identify whether a given line is a comment or not.
- 3. Implement a C program to check parenthesis of regular expression is balanced or not.
- Implement a C program to construct NFA from regular expression.
- Implement a C program to simulate Deterministic Finite Automation (DFA) for a string which ending with 'a', 'a*b+', 'abb'.
- 6. Write a C program to construct of DFA from NFA.
- 7. Implement a Lex program to verify the parenthesis of a given expression is balanced.
- 8. Implement a Lex program to recognize the token like Digit, Identifier & Delimiter.
- 9. Implement the Lexical Analyzer using JLex, flex or other lexical analyzer generating tools.
- Implement a Lex program to a valid arithmetic expression and to recognize the identifier and operators present.
- 11. Implement a Lex program to count words, characters, lines, vowels and consonants from given input.
- 12. Implement a Lex program to check given number is positive negative or zero.
- 13. Implement a Lex program to generate string which is ending with zeros.
- 14. Implement LEX and Yacc tool to implement desk calculator.
- Write a C program for constructing of SLR persing.
- Write a C program for constructing of LL (1) pursing.
 Write a C program for constructing of LALR parsing.
- 18. Write a C program for constructing recursive descent parsing.
- Write a C program to implement Program semantic rules to calculate the expression that takes an expression with digits, + and * and computes the value.
- 20. Write a C program for Tokenizing the file which reads a source code in C/C++ from an unformatted file and extract various types of tokens from it
- 21. Write functions to find FIRST and FOLLOW of all the variables / given grammar.
- 22. Implement a Shift Reduce Parser for the following productions.
- 23. E → E+E/E*E/a/b
- 24. Implement a symbol table containing functions create(), modify(), search(), display() and delete().
- Implement three address Code for the input a=b*c.
- 26. Implement Recursive Decent Parser for the productions.

List of Experiments beyond Syllabus: (Maximum 05)

- Convert the BNF rules into Yacc form and write code to generate Abstract Syntax Tree.
- 2. Write a C program to generate machine code from abstract syntax tree generated by the parser.
- Write a Lex program to find out total number of vowels, and consonants from the given input string.
- 4. Implementation of Finite State machines DFA, NFAs.
- 5. Computation of Leading & Trailing Sets.

Text Book: Alfred V. Aho, Monica S. Lam, Ravi Sethi, Jeffrey D. Ullman Compilers: "Principles, Techniques and Tools", Pearson Education, Second Edition.

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2021 - PART TWO - 479

Reference Books:

- Doug Brown, John Levine, and Tony Mason, "Lex & Yace", O'Reilly & Associates, Inc., Second Edition.
- 2. Andrew Appel, "Modern Compiler Implementation in C", Cambridge University press.
- 3. K.C. Louden "Compiler Construction Principles and Practice" India Edition, CENGAGE.
- 4. Dick Grane, Kees van Reeuwijk, Henri E. Bal, Ceriel J.H. Jacobs and Koen Langendoen,
- "Modern Compiler Design", Second Edition, John Wiley & Sons Publication.
- Keith Cooper and Linda Torczon, "Engineering: A Compiler", Second Edition, Morgan Kaufmann Publication.



SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2021 - PART TWO - 480

5KS08 EMERGING TECHNOLOGY LAB I

5KS08 Emerging Technology Lab 1 is based on 5KS04 Professional Elective-I. Tentative FOSS Tools &

Technology for Practical's are as follows: Al : IBM Watson, Microsoft Cognitive Toolkit , TensorFlow, Apache SystemML, Caffe, OpenNN, Torch,

DS: R. Python, Cassandra, Apache Hadoop,

IoT : Arduino, DeviceHive, Kaz, Home Assistant

Cyber Security: Kuli Linux, OpenVPN, NMAP, Metasploit Framework

5KS08 DATA SCIENCE AND STATISTICS - LAB [P-2, C-1]

Course Prerequisite: Basic knowledge of Mathematics

Course Objectives: Throughout the course, students will be expected to demonstrate their understanding of Data Science and Statistics by being able to do each of the following:

- Demonstrate knowledge of statistical data analysis techniques utilized in business decision making.
- Apply principles of Data Science to the analysis of business problems.

Apply the learned concepts for the skillful data management,

Course Outcomes (Expected Outcome): On completion of the course, the students will be able to

Demonstrate proficiency with statistical analysis of data.

- Build skills in transformation and merging of data for use in analytic tools.
- 3. Perform linear and multiple linear regression analysis.
- Develop the ability to build and assess data-based models.

Evuluate outcomes and make decisions based on data.

List of Experiments: This is the sample list of Experiments, minimum 12 experiments are to be performed covering the entire syllabus. At least two experiments should be beyond syllabi based on learning of syllabi (Apply)

List of Experiments based on Syllabus:

Introduction to R:

[1] To learn and implement the Basic Commands and Graphics in R

[2] To perform Indexing and Loading Data

Linear Regression:

[3] To learn different Libraries in R and To perform Simple Linear Regression and Multiple Linear Regression

[4] To learn Interaction Terms and to perform Non-linear Transformations of the Predictors

[5] To learn and evaluate Qualitative Predictors

[6] To learn to Write Functions

Logistic Regression, LDA, QDA, and KNN

[7] To perform Logistic Regression

[8] To perform Linear Discriminant Analysis

[9] To perform Quadratic Discriminant Analysis

[10] To implement K-Nearest Neighbors technique

[11] To use Caravan Insurance Data for LR, LDA, QDA, and KNN

Cross-Validation and the Bootstrap

[12] To learn and perform The Validation Set Approach

[13] To learn and perform Leave-One-Out Cross-Validation

[14] To learn and perform k-Fold Cross-Validation

[15] To learn and perform The Bootstrap

Subset Selection Methods

[16] To learn and perform Best Subset Selection

[17] To learn and perform Forward and Backward Stepwise Selection

[18] To learn to Choose Among Models Using the Validation Set Approach and Cross-Validation

Ridge Regression and the Lasso

[19] To learn and perform Ridge Regression

[20] To learn and perform The Lasso

PCR and PLS Regression

[21] To learn and perform Principal Components Regression

[22] To learn and perform Partial Least Squares

Non-linear Modeling

[23] To learn and perform Polynomial Regression and Step Functions

[24] To learn and perform Splines

[25] To learn and perform GAMs.

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE - 2021 - PART TWO - 481

Decision Trees

[26] To learn and perform Fitting Classification Trees

[27] To learn and perform Fitting Regression Trees

[28] To learn and implement Bagging and Random Forests

[29] To learn and perform Boosting

Support Vector Machines

- [30] To learn und perform Support Vector Classifier
- [31] To learn and perform Support Vector Machine
- [32] To learn and perform ROC Curves
- [33] To learn and perform SVM with Multiple Classes





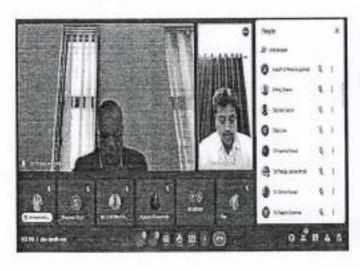
Shri Shivaji Education Society, Amravati's College of Engineering & Technology, Akola Department of Computer Science & Engineering

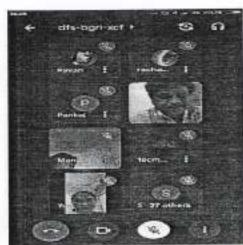
Report on Feedback/Involvement of students in syllabus framing

As per the notification no SGBAU/6-D/BOS/A- 56 /2020 dated 30 /07/2020 and SGBAU/6-D/BOS/A- 79 /2021 dated 26/07/2021 received from S.G.B.A University for the preparation of the syllabus of B.E (Comp Sci & Engg/ Comp Engg) as per AICTE Model a session was arranged by the Head of Dept CSE with teaching faculties of the dept with the agenda to make teachers and students aware of the syllabus framing (Choice based credit system) as per AICTE model for the session 2020-2021. A feedback from Teachers and some students from the CSE dept of 2nd, 3rd, 4th year at the end of semester 2019-2020 was taken consisting of the points as given in feedback form attached with the report. The feedback and suggestions received from the teachers and students was thoroughly analyzed by analysis committee and was submitted to the S.G.B.A University CSE BOS members.

On 25th Sep 2021 an online workshop on "NEW CURRICULUM (2021-22) FOR COMPUTER SCIENCE AND ENGG, COMPUTER ENGINERRING" for Computer Science Engineering and Computer Engineering faculties and students in S.G.B Amravati University was arranged. It covered the discussions on selection choices given to students about elective subjects according to their interest in four different tracks in third year B.E syllabus. Head of CSE, C.O.E & T Akola & S.G.B.A.U-CSE-BOS member Dr S.L.Satarkar explain the need of new curriculum and IOT track while other S.G.B.A.U CSE BOS members explain the other tracks on elective subjects.

Some of the glimpses from workshop are given below









Vision Buildhana Educational & Welfare Society's

Pankaj Laddhad Institute of Technology and Management Studies, Buldhana

Wester the tellar at Carrier 49-140300000 Frail D (April 2400000 London)

An Online Workshop on

"New Curriculum 2021-2022"

for Computer Science & Engineering and Computer Engineering Faculties & Students in Sant Gadge Baba Amravati University, Amravati,

Organized by

Department of Computer Science and Engineering, PLITMS, Buldhana

| THE W | | The second second | ptemebr 20112 | C COLLEGE |
|---------------|---------------------------------------|---------------------------|---|--|
| Date | Time & Duration | Resource Person & Name | Resource Person affiliation | Topics |
| Castley. | 11.00-11.05 am | | University Song | |
| | 11.05 am - 11.20 am (15 Minutes) | No. S. M. Counting | Canvener of Workshop, Haad of Computer Science & Engineering Department, Paritial Landillad Institute of Technology & Management Studies, Yelgaon, Bul dans. | Introduction of Workshop |
| | 11.20 am = 11.50am (30 Minutes) | 2 | Charman, Board of Studies, (Computer Science & Engineering, Computer Engineering) SGRAU, Americal. Professor and Head of Department of Computer Science and Engg. FRIVIT & R. Bachera. | New Curriculum and Honors Degree |
| 2000 | 11.55am - 12.10 pm (30 Minutes) | 8 | Member, Baard of Studies, (Computer Science & Eng., Computer Engl SGRAU, Amraudt: Professor, Department of Computer Science and Eng., PRINCEAM, Badners. | Tisch 1: "Artificial Intelligence" |
| (Nation long) | 12.20 pm - 12.50 pm (30 Minutes) | 3 | Professor, Department of Computer Science and Enga. PRINCEAM, Badnera. | Track 2 "Data Science" |
| | 17,50 pm - Ct 10 pm (30 M rufes) | 2 | Mercher, Board of Studies, (Computer Science & Engs, Computer Engs) SURAL), Amsterdo, Insad, Department of Comp Stilland Engs, College of Engs, & Technology, Alcoa | Track 2 "Tracement of Things" |
| | 61.30pm - 01.50 pm (30 Minutes) | 4 | Member, Baard of Studies, (Computer Science & Engs, Computer Engs) SCRAU, Amounts, Principal, PLITMS, Buildhana | TetA 1 = "Cyber Security" |
| | (11.56 pm; - 60.00 pm (10 Minutes) | 9 | Coordinator of Workshop, Computer Science & Engineering Department, Pankaj Loddhad Institute of Technology & Management Studies, Yelgaon, Buddasa | Surveyor Warkshoo & Vote o Thanks |
| 5 118 | 02.00 pm = 02.10 pm | BROOM STATESCOOLS | 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - | Question and Acres |









| Sr No | Name of Faculty | Name of Institute |
|-------|-------------------------------------|--|
| -10 | Dr Kishor H Walse | Asuradha Engg College Chikhii |
| 2. | Prof. Mogha Ashok Patif | Anuradha Engg College Chikhili |
| 3. | Prof. Mira Keshav Sader | Anuradha Engg College Chikhii |
| 4. | Prot. Ohraj Gargadhar Vyawahara | Anuradha Engg Cotage Crishs |
| 5. | Prof. Shalesh Tushram Khardare | Babasahob Nak Gollege Of Engg ,Pused |
| 6. | Prof. Swaprii A Bobade | College Of Engineering And Technology Akola |
| 7. | Prof. Kathene Sweped Okta | College Of Engineering And Technology Akole |
| 8. | Prof. Sharwari Swepnii Diet | College Of Engineering And Technology Akota |
| 9. | Dr. Sandeep Ajabrae Awathar | College Of Engineering And Technology Akels |
| 10. | Or Rachana Saodip Jaiowsi | College Of Engineering And Technology Akola |
| 11. | Pmf Viay Ramkuber Trigathi | College Of Engineering And Technology Akola |
| 12. | Prof. Rashmi Abhylt Taley | College Of Engineering And Technology Akola |
| 13. | Prof. Rohini Umakant Deshrocks | College Of Engineering And Technology Akola |
| 14. | Prof. Shushan Baburao Pophale | College Of Engineering And Technology Akolii |
| 15. | Prof. Mangeshkumar Shivram Shegosar | College Of Engineering And Technology Akola |
| 16 | Prof. Kalyani Preshant Barabde | Cuitege Of Engineering And Technology Akola |
| 17. | Or Protinakar Lakmunian Ramteke | Hanuman Vyayam Prasarak Mandal College Of Engg Amravati |
| 18. | Prof. Pravin Deorso Kaware | Hanuman Vyoyam Prasarak Mandal College Of Engg Amravali |
| 19. | Prof. Ashi: Manielal Jacowa | Hanuman Vyayam Prasarak Mandal College Of Engg Amravati |
| 10. | Prof. Sachin Ashok Murab | Jagdambha Cotege Of Engineering: Yayatmai |
| 21, | Prof. Ritesh Vilasiaa Doshmekh | Jagdantiha College Of Engineering , Yavatmal |
| 22 | Prof. Ram Kumer Kanni Singh Solaski | Jagdambha College Of Engineering : Yavatmai |
| 29. | Fred Parag Digambarran Triaktere | Jagdambha Cullege Of Engineering Yavarmai |
| 14: | Prof. Ratul Mahadeerae Rast | Jagdarobha College Of Engineering Vavatmal |
| 25. | Prof RUPALI SADASHIV SAWANT | Jagdambha College Of Engineering Yavatmat |
| 16: | Dr. Avinash P Jachao | Jawaharial Darda Institute Of Engineering And Technology, Yavatma |
| 17. | Prof. Addys Prakash Baloshi | Jawahariai Danta Institute Of Engineering And Technology, Yavalma |
| 28. | Prof. Visibley Predigrap Sewalker | Jawaharlai Garda Institute Of Engineering And Technology, Yavatma |
| 29. | Prof. Sushant Panjabras Shirbhate | Jawahartal Danda Institute Of Engineering And Technology, Yavetina |
| 30. | Prof. Nivedka Warrannao Wasankar | Jawahanai Danda Institute Of Engineering And Technology Yavatma |
| 31. | Prof. Mont Kirtkent Popet | Jawahanal Dards Imitute Of Engineering And Technology , Yavatina |
| 32. | Prof. Sejai Namah Chhattani | Jawaharial Darda Institute Of Engineering And Technology , Yavetma |
| 33. | Prof. Sagar Rajendia Deshinukii | Main Cohege Of Engg And Technology Shegaon |
| 34: | Prof. Ankita Prabhakar Wankhada | Mauri College Of Engg And Technology Shegain |
| 35. | Prof. Nirag Nirmalkumar Kasilwai | Mauli College Of Engg And Technology Shegaon |
| 36. | Dr Pyssanna Mohan Hasabnis | Maisi College Of Engg And Fechnology Shegaon |
| - | Prof. Girlsh Ashakreo Bashmukhe | Mauli College Of Engg And Technology Shegann |
| 38. | Dr. Ajay Bashkaram Gadiena | Pr Pote College Of Engineering Ammivati |
| 39. | Prof. Komal Daburao Bliwe | Pr Pole College Of Engineering Amrevati |
| 40. | Prof. Krutika Kiranchard Chhajed | PR Pois College Of Engineering Arms/etil |
| 41. | Prof. Gaun Rajesh Tayade | Pr Pote College Of Engineering Amravati |
| 42. | Prof. Zeeshan Itnesam Khan | Pr Pole College Of Engineering Amravati |

Dr S.L.Satarkar

(HOD, CSE)





Shri Shivaji Education Society, Amravati's College of Engineering & Technology, Akola Department of Computer Science & Engineering

Analysis on Feedback/Involvement of students in syllabus framing

As per the feedback received from the students of 2nd, 3rd and 4th year CSE on syllabus framing at the end of the semester in the session 2019-20 following are the points observed.

- 1. More weightage should be given to practical's.
- 2. Syllabus should be timely modified as per current trends..
- To generate interest in the subject area some electronics based and theoretical subject shall be reduced.
- 4. Miniprojects, internship should be included in the syllabus.
- 5. Industry oriented languages should be included in the syllabus.
- 6. Provision for subject selection choices should be there as per subject interest.
- 7. Technical and Professional courses should be included as practical's in the syllabus.
- Skill based study is needed.
- Suggestions to increase project/seminars hours.
- There should be availability of interdisciplinary courses.
- More opportunity should be there for developing skills.
- Textbooks by Indian authors shall be prescribed as foreign author's textbooks are not easily available.
- Weightage should be given to international certifications.

Above points in the feedback obtained from students are analyzed by the Analysis committee and is submitted to the SGBA University CSE BOS members for further study and actions.

Dr S.L.Satarkar

(HOD, CSE)

Copy to -

- Dr G.S.Bamnote , chairman, SGBAU BOS, CSE
- 2. Dr S.L.Satarkar, SGBAU BOS member, CSE
- 3. Dr P.M.Jawandia, SGBAU BOS member, CSE
- Dr S.S.Agrawal, SGBAU BOS member, CSE



College of Engineering and Technology, Akola Department of Computer Science and Engineering

Feedback/Involvement of Teachers in Syllabus framing

| | 2019-2020 |
|------|--|
| 1. | Name of Teacher: Mes Rackana S. Tais Dal |
| 2. | Comfortability of Syllabus contents |
| a) | syllabus has good balance between theory and applications |
| b) | syllabus is suitable to the programme: |
| | students are taught subjects or concepts that are |
| c) | The syllabus generates interest in subject area: |
| | The syllabus is found to be ineffective or not contrine The corrientum gives some for intention is as strongly as necessary |
| d) | the currentum gives scope for internship/training/research: |
| 7798 | The custiculum gives no scope for intership I + earning. |
| e) | syllabus is need based: |
| | He need to restrict the curitulum according to need Aims and objectives of the syllabi are well defined and clear: |
| f) | Programme syllabi has sufficient number of prescribed books and reference latest developers: |
| | yes, enough number of prescribed booler & reference |
| 3. | Availability of Interdisciplinary courses: |
| | To increase employability interdisciplinary courses need to |
| | Opportunity for developing skills: OCON porated |
| | Ac 75% attendance is mandatay students do not |
| 5. | Provision for sufficient choices: get apportunity for developing skills. |
| - | There is need to introduce specialization streams in |
| 6. (| General observations: CSE 50 that students with valevant skills can great job offers with better proceeds at the syllabus is higher salary packages. |
| 7. 1 | Relevance for employability: |
| | To make engineering graduates employable we also |
| - | need to design the curriculum as per the industry. |

requirements.

College of Engineering and Technology, Akola Department of Computer Science and Engineering

Feedback/Involvement of Teachers in Syllabus framing

| . N | ame of Teacher: Dr. 2-3. Agraval |
|-----|--|
| | omfortability of Syllabus contents |
|) s | villabus has good balance between theory and applications |
|) s | yllabus is suitable to the programme : |
| Τ (| he syllabus generates interest in subject area: Yes with fruction! |
|) 1 | he curriculum gives scope for internship/training/research: |
|) | syllabus is need based: Yes but It should be improved |
|) | Aims and objectives of the syllabi are well defined and clear: |
| | Programme syllabi has sufficient number of prescribed books and reference books: |
| | Availability of Interdisciplinary courses: |
| 1. | Opportunity for developing skills: |
| 5. | Provision for sufficient choices: |
| 6. | General observations: |
| 7. | Relevance for employability: |

Department of Computer Science and Engineering

Feedback/Involvement of Teachers in Syllabus framing

| in . | Name of Teacher: Swappil A. Bobode |
|------|--|
| | Comfortability of Syllabus contents |
|) | Syllabus has good balance between theory and applications Processed to eight age must increase. |
|) | syllabus is suitable to the programme : |
| Y | The syllabus generates interest in subject area: |
| , | The curriculum gives scope for internship/training/research: |
|) | yes but need to improve. |
| | Aims and objectives of the syllabi are well defined and clear: |
| | Programme syllabi has sufficient number of prescribed books and reference books: |
| | Availability of Interdisciplinary courses: Yes through Free elective subject. |
| | Opportunity for developing skills: Tes through practical 4 training schools. |
| 0.00 | Provision for sufficient choices: Yes need to add objective subjects |
| | General observations: Brackscal hours need to increase. |
| | Relevance for employability: Yes, through later technologies. |



Department of Computer Science and Engineering

Feedback/Involvement of Teachers in Syllabus framing

| | 2019-2020 |
|----|---|
| 1. | Name of Teacher: Ind VR Trupallia |
| 2. | Comfortability of Syllabus contents |
| n) | syllabus has good balance between theory and applications Yes Syllabus has good balance between theory and application will have is suitable to the programme: |
| ы | syllabus is suitable to the programme : |
| 70 | Syllabus is suitable to the programme: Yes Syllabus is suitable to the programme with modified Tech |
| c) | The cultablic dependents interest in subject area. |
| , | Yes Syllabor generates interest in respective subject wir |
| d) | |
| | Syllabus is need based: |
| e) | syllabus is need based: |
| | Yes syllabus in found to be need based |
| f) | Aims and objectives of the syllabi are well defined and clear: |
| | Yes Ains and objectives of Love Syllabus are clearly |
| f) | Programme syllabilities sufficient number of prescribed books and reference books: |
| | Yes programme Syllabi his Sufficient number of books |
| 3. | Availability of Interdisciplinary courses: |
| | Ver in the form of the |
| 4. | Opportunity for developing skills: |
| | Durely for eg in the fields of electronics and I'l |
| 5. | Provision for sufficient choices: |
| | Yes They are provision for Student available to make |
| 6. | General Observations: Charcel Seneral Observation has been found effective |
| 7. | Relevance for employability: |
| | It is benefical in terms of employ willy |
| | 1 0 |



Department of Computer Science and Engineering

Feedback/Involvement of Teachers in Syllabus framing

2019-2020 1. Name of Teacher: 2. Comfortability of Syllabus contents a) syllabus has good balance between theory and applications b) syllabus is suitable to the programme : with advancetech. Mabus c) The syllabus generates interest in subject area: d) The curriculum gives scope for internship/training/research: e) syllabus is need based; f) Aims and objectives of the syllabi are well defined and clear: len mentoy f) Programme syllabi has sufficient number of prescribed books and reference books: Availability of Interdisciplinary courses: 4. Opportunity for developing skills: 5. Provision for sufficient choices: 6. General observations: 7. Relevance for employability:



College of Engineering and Technology, Akola Department of Computer Science and Engineering

Feedback/Involvement of Teachers in Syllabus framing

| | 2019-2020 |
|------|---|
| 1. | Name of Teacher: Bof. K.P. Baxabde |
| 2, | Comfortability of Syllabus contents |
| a) | syllabus has good balance between theory and applications |
| | In some subjects. |
| b) | syllabus is suitable to the programme : |
| c) | As C.S. E bounch the number of electronic subjections more than sufficient the syllabus generates interest in subject area: |
| | Yes, it generates |
| d) | The curriculum gives scope for internship/training/research: |
| 55.5 | For negeonch & interpoship on training basics & syllabus is need based: Be in syllabus, |
| e) | |
| f) | According to the need of computer industry the Aims and objectives of the syllabi are well defined and clear: charles. |
| | Yeo, objectives are clear |
| f) | Programme syllabi has sufficient number of prescribed books and reference books: |
| 3. | Yes most of the subjects has only the syllability of Interdisciplinary courses: theory & hands on practice. |
| | It must be improved those should be options |
| 4. | Opportunity for developing skills: For students to choose |
| | More hours shold give get allot to Practical |
| 5. | Provision for sufficient choices: |
| | More choose should available for students. |
| 6. | General observations: |
| | Advance cources are needed. |
| 7. | Relevance for employability: |
| | Latest programming languages should be stored |

Department of Computer Science and Engineering

Feedback/Involvement of Teachers in Syllabus framing

| 1. | Name of Teacher: Prof. R.M. Khandar |
|----|--|
| 2. | Comfortability of Syllabus contents |
| a) | yes, Application land can be improved. |
| b) | syllabus is suitable to the programme : |
| | yes, but med more improvement |
| c) | The syllabus generates interest in subject area: |
| | some subjects must be "included in syllabus |
| d) | The curriculum gives scope for internship/training/research: |
| | Miniprojects for some subjects can be included |
| e) | syllabus is need based: |
| | Samowhat. |
| f) | Aims and objectives of the syllabi are well defined and clear: |
| | Tes |
| f) | Programme syllabi has sufficient number of prescribed books and reference books: |
| | yes syllalous has sufficient books |
| 2 | Availability of Interdisciplinary courses: |
| ٥. | Availability of interdisciplinary courses. |
| 4 | Opportunity for developing skills: |
| | Handken practice (more practical exemted) bulyed Provision for sufficient choices: |
| 5, | Provision for sufficient choices: |
| | yes. |
| 6. | General observations: |
| | Some subjects are only theoretical based & not |
| 7. | Relevance for employability: |
| | Recent technology related based |
| | Subjects can be included. |
| | |
| | 12 (40) (3) |

College of Engineering and Technology, Akola Department of Computer Science and Engineering

Feedback/Involvement of Teachers in Syllabus framing

| 1. | Name of Teacher: Prof. K. S. Gilda |
|----|--|
| 2. | Comfortability of Syllabus contents |
| a) | syllabus has good balance between theory and applications |
| b) | syllabus is suitable to the programme: It is suitable but need improvement. |
| c) | The syllabus generates interest in subject area: |
| | Some subjects, such as DAA, OS, AZ are very interesti |
| d) | The curriculum gives scope for internship/training/research: miniprojects & internship should be included in syllabus is need based: |
| e) | syllabus is need based: |
| f) | Aims and objectives of the syllabi are well defined and clear: |
| f) | Programme syllabi has sufficient number of prescribed books and reference books: |
| | yes |
| 3. | Availability of Interdisciplinary courses: |
| 4. | Opportunity for developing skills: more practical oriented subjects are required. |
| 5. | Provision for sufficient choices: |
| | yes |
| 6. | Some subjects (FSDP, CRM) are very theoretical. |
| 7. | Relevance for employability: TFF |
| | recent long must be included in syllabus. |

Department of Computer Science and Engineering

Feedback/Involvement of Teachers in Syllabus framing

| 1. | Name of Teacher: Pull S.S. Dixit. |
|----|---|
| 2. | Comfortability of Syllabus contents |
| a) | yes, its good but need more feehnical sub. |
| b) | syllabus is suitable to the programme: fco, it is suitable |
| e) | The syllabus generates interest in subject area: Yes but practical our needed |
| d) | The curriculum gives scope for internship/training/research: Technical course should be needed for placement |
| e) | No need for electronic subjects |
| f) | Aims and objectives of the syllabi are well defined and clear: Jes, there is no need of ellobration |
| f) | Programme syllabi has sufficient number of prescribed books and reference books: Need more books if possible need findian author book |
| 3. | Availability of Interdisciplinary courses: More aption should be given |
| 4. | Opportunity for developing skills: Need much more skill development program |
| 5. | Provision for sufficient choices: for development purpose need more technical subjects |
| 6. | Beojed & seminar elot should be increased |
| 7. | Relevance for employability: |
| | |



Department of Computer Science and Engineering

Feedback/Involvement of Teachers in Syllabus framing

| 1. | Name of Teacher: Nutan Raut |
|-----|--|
| 2. | Comfortability of Syllabus contents |
| a) | yes, but some subjects need to be changed. |
| b) | |
| | Yes, need some more technical contents. |
| c) | The syllabus generates interest in subject area: |
| | It's useful for job reiented. |
| d) | The curriculum gives scope for internship/training/research: |
| | Some technical subjects will help in this. |
| e) | syllabus is need based: |
| | Some subjects need based of another subjects. |
| f) | Aims and objectives of the syllabi are well defined and clear: |
| | Yes, syllabus is well defined but need updates. |
| f) | Programme syllabi has sufficient number of prescribed books and reference books: |
| | These are some online books also to be included |
| 3. | Availability of Interdisciplinary courses: |
| | Yes. |
| 4. | Opportunity for developing skills: |
| | Subjects like programming language developes. |
| 5. | Description for an Officiant deviation XII |
| | Need more elective subjects for letest tech. |
| 6. | |
| =20 | Company tequites more latest flanguages, so can be included |
| 7. | Relevance for employability: |
| | Some soft skill & developing is subjects are can |
| | 2000 |
| | |

College of Engineering and Technology, Akola Department of Computer Science and Engineering

Feedback/Involvement of Teachers in Syllabus framing

| 1. | Name of Teacher: Pref- V. Y. Land. |
|-----|--|
| 2. | Comfortability of Syllabus contents |
| a) | syllabus has good balance between theory and applications No word of Some Practical Program. |
| b) | syllabus is suitable to the programme: Need Juliabus with achieve course |
| c) | The syllabus generates interest in subject area: At Some Oxtent Syllabus is howing interest area. |
| d) | The curriculum gives scope for internship/training/research: No - Much more training Program must be conclude |
| e) | syllabus is need based: yes. The Program which we howing good outcomes |
| f) | |
| f) | Programme syllabi has sufficient number of prescribed books and reference Stutlents. |
| 5ul | Availability of Interdisciplinary courses: need of Indian author for its example of Indian author for its for the contract of the Indian authorized in the Indian authorized |
| 3, | Nolcled more OE Subject for Tersonality dwelfanest. |
| 4. | Opportunity for developing skills: Cocleins or Language class should be given to the old |
| 5. | Provision for sufficient choices? |
| 6. | General observations: all subject course should have a good outcomes and it Relevance for employability: can be applied for amployement |
| 7. | Relevance for employability: can be applied for amployement Personalty development class should be given to a Mudents & codeing related |
| | |

College of Engineering and Technology, Akola Department of Computer Science and Engineering

Feedback/Involvement of Teachers in Syllabus framing

| 1. Name of Teacher: Prof R. A. Toley |
|--|
| 2. Comfortability of Syllabus contents |
| a) syllabus has good balance between theory and applications Some subjects should be practical oriented |
| b) syllabus is suitable to the programme : |
| syllabus should be continuously updated |
| c) The syllabus generates interest in subject area: |
| subjects should be more reveloint to technic |
| d) The curriculum gives scope for internship/training/research: |
| Some industry training courses should be |
| e) syllabus is need based: |
| Timely undate in syllabus would make it |
| f) Aims and objectives of the syllabi are well defined and clear: |
| |
| yes to some extent |
| f) Programme syllabi has sufficient number of prescribed books and reference books: |
| sufficient books are available |
| Availability of Interdisciplinary courses: |
| STATE OF THE PROPERTY OF THE P |
| No they should be available |
| 4. Opportunity for developing skills: |
| Training courses for skill development 5 Provision for sufficient choices: should be there |
| 3. Horiston for Sufficient Charles. |
| subsject choices should be given |
| 6. General observations : |
| |
| 7. Relevance for employability: |
| recent teends courses if available would give more chance to employability |
| recent records courses in our many |

Department of computer science and Engineering

Feed back/Involvement of students in Syllabus framing 2019-2020

| 1. Name of student: Kirti Chauhan |
|--|
| 2. Year: Second years |
| • |
| 3. Comfortability of Syllabus contents |
| a) syllabus has good balance between theory and applications rnor practical based syllabus is expected. |
| b) syllabus is suitable to the programme: |
| 70 |
| c) The syllabus ger prates interest in subject area: |
| yes, but it will be more inferested if preaction |
| d) The curriculum gives scope for internship/training/research: |
| for placement focus must be on technical & practical landwings |
| e) syllabus is need based: |
| yes, expecting cultern't technology bared syllar |
| Aims and objectives of the syllabi are well defined and clear: |
| Ma. |
| |
| g) Programme syllabi has sufficient number of prescribed books and reference books: We required more Indian cuthous books. |
| |
| 4. Availability of Interlisciplinary courses: Specialtration of course is needed. |
| 5. Opportunity for de loping skills: |
| 6. Provision for sufficient choices: |
| 6. Provision for sufficient choices: 1004 options are expected and meded for subject |
| 7. General observations : |
| 7. General observations: Project 4 serninar timing must be in weared to |
| To the same of the |

Department of computer science and Engineering

Feedback Inv vement of students in Syllabus framing

| I. Name | of student: Anajali Jogi |
|----------|--|
| Z. Year: | second year |
| | abus has good balance between theory and applications |
| 32 (5) | comewhat . |
| 0.000 | llabus is suitable to the programme : |
| | ne syllabus ger rates interest in subject area: |
| | Some logic board subjects are interesting. |
| | niniprojects internship should be included in |
| f) A | Industry oriented languages should be included in Syllabus. |
| - (| nore efforts required to design syllaber |
| g) Pi | ogramme syllabi has sufficient number of prescribed books and reference books: |
| 4. Avai | lability of Inter lisciplinary courses: |
| 5. Oppo | ortunity for developing skills: ore practical oriented subjects required. |
| 6. Prov | ision for sufficient choices: Tholces canbe included. |
| 7 Can | eral observations: 24thon, PHP, app development should be included |
| | in syllabus. |

Department of computer science and Engineering

Feedback/Involvement of students in Syllabus framing

| 1. Name of student: Shreyash chandak 2. Year: Second year 3. Comfortability of S labus contents a) syllabus has good balance between theory and applications Very good kut in Some Cosses b) syllabus is suitable to the programme: Jes Jagree c) The syllabus generates interest in subject area: Except Theoretical Subject d) The curriculum gives scope for internship/training/research: to Some extent | |
|--|------|
| a) syllabus has good balance between theory and applications Very good but in Some Cosses b) syllabus is suitable to the programme: The syllabus generates interest in subject area: Except Theoretical Subject d) The curriculum gives scope for internship/training/research: | |
| a) syllabus has good balance between theory and applications Very good but in Some Cosses b) syllabus is suitable to the programme: The syllabus generates interest in subject area: Except Theoretical Subject d) The curriculum gives scope for internship/training/research: | |
| b) syllabus is suitable to the programme: Jes Jagree c) The syllabus generates interest in subject area: Except Theoretical Subject d) The curriculum gives scope for internship/training/research: | |
| c) The syllabus generates interest in subject area: Except Theoretical Subject d) The curriculum gives scope for internship/training/research: | |
| c) The syllabus generates interest in subject area: Except Theoretical Subject d) The curriculum gives scope for internship/training/research: | |
| c) The syllabus generates interest in subject area: Except Theoretical Subject d) The curriculum gives scope for internship/training/research: | |
| d) The curriculum gives scope for internship/training/research: | |
| d) The curriculum gives scope for internship/training/research: | |
| | |
| | |
| | |
| e) syllabus is need b used: | |
| syllabus shall be upgraded threly. | |
| f) Aims and objectives of the syllabi are well defined and clear: | |
| yes | |
| g) Programme syllabi has sufficient number of prescribed books and reference books: | 4 |
| Foreign Author books are not la | acil |
| 4. Ávailability of Interdisciplinary courses: | |
| yes | - |
| 5. Opportunity for developing skills: | |
| Market undate courses | |
| 6. Provision for suffic int choices: | |
| yes. | |
| 7. General observations: | |

Department of computer science and Engineering

Feedback/Involvement of students in Syllabus framing

| Name of student: Harshau Bisen |
|---|
| Year: Second year |
| |
| Comfortability of S labus contents |
| syllabus has good valance between theory and applications Syllabus must be practical Oriented. |
| b) syllabus is suitable to the programme: |
| Byes, Can be modified |
| c) The syllabus generates interest in subject area: |
| . Yes, some subjects are unnecessary. |
| d) The curriculum gives scope for internship/training/research: |
| No some feaching hours must be reduce. |
| e) syllabus is need based: |
| modification is required. |
| f) Aims and object ves of the syllabi are well defined and clear: |
| yes. |
| g) Programme syllabi has sufficient number of prescribed books and reference books: |
| Availability of Interdisciplinary courses: |
| Opportunity for developing skills: Need to be 1009 rove. |
| Provision for sufficient choices: |
| those options need to provide. |
| General observations: |

Department of computer science and Engineering

Involvement of students in Syllabus framing

| | ne of student: Janhavi Pharmik |
|----------|--|
| Yea | r. 2nd year |
| | |
| Con | nfortability of Syllabus contents |
| a) es | Illabur has good balance between the control on 15 out |
| N | Allabus has good balance between theory and applications 28. Lut some subjects should have more practice |
| D | The state of the s |
| b) : | syllabus is suitable to the programme : |
| | |
| c) | The syllabus generates interest in subject area: |
| | the Actual |
| - | Pes . |
| d) T | The curriculum gives scope for internship/training/research; |
| c | It some extent, but more advanced subjects |
| | Lind by implied in |
| c) s | yllabus is need based: |
| 0 | Yes |
| 0 6 | |
| | tims and objectives of the syllabi are well defined and clear: |
| 1 | 03. |
| g) P | rogramme syllabi has sufficient number of prescribed books and reference books: |
| | |
| 7 | fer, can be included more of foreign author |
| Avai | lability of Interdisciplinary courses: |
| 40 | 5 |
| Sppo | ortunity for developing skills: |
| | |
| rov | ision for sufficient choices: |
| | sices should be provided as per subject inter |
| | eral observations : |
| J. Wille | |
| | |

Department of computer science and Engineering

Feedback Involvement of students in Syllabus framing 2019 - 2020

| 1. Name of student: Komal Bahakar |
|--|
| 2. Year: Second Year |
| 3. Comfortability of Sy labus contents |
| a) syllabus has good valance between theory and applications • No, application bassed syllabus is needed. |
| b) syllabus is suitan e to the programme : |
| yes, but few updations needed, |
| c) The syllabus generates interest in subject area: |
| yes, still few advancement is required |
| d) The curriculum gives scope for internship/training/research: |
| e) syllabus is need based: |
| new invented technology is regulated. f) Aims and objectives of the syllabil are well defined and clear: |
| g) Programme syll in has sufficient number of prescribed books and reference books: |
| - Ars |
| Availability of Interdisciplinary courses: |
| 5. Opportunity for developing skills: |
| conduction of personally development workshop |
| 6. Provision for sufficient choices: |
| 7. General observations: |
| Ten changes are required |

Department of computer science and Engineering

Feedback / Involvement of students in Syllabus framing 2019 - 2020

| 1. Name of student: Fakshi Dalvi 2. Year: Second year |
|--|
| 2. Year: Second Year |
| |
| 3. Comfortability of Syllabus contents |
| a) syllabus has good balance between theory and applications |
| we found some inballing in both |
| b) syllabus is suitable to the programme : |
| ter basic programme, nat project level. |
| c) The syllabus generates interest in subject area: |
| yes it gives idea (innovative) |
| d) The curriculum gives scope for internship/training/research: |
| |
| yes, by conduction of technical waskshops. |
| e) syllabus is need based: |
| yes, well defined in most of the cases. |
| Aims and objectives of the syllabi are well defined and clear: |
| yes well alephned |
| g) Programme syll i has sufficient number of prescribed books and reference books: |
| |
| · yes, suppresent study books |
| 4. Availability of Interdisciplinary courses: |
| elective subject of other department taken |
| E. Opportunity for developing skills: |
| - freedom to join internship & attent workshop |
| 6. Provision for sufficient choices: |
| yes. |
| 7. General observations : |
| satisficity |
| |

Colle : e of Engineering and Technology, Akola Department of computer science and Engineering

Involvement of students in Syllabus framing

| 1. Name of student: ESHU Pandit |
|--|
| 2. Year: Second Year . |
| * * |
| 3. Comfortability of Syllabus contents |
| a) syllabus has good valance between theory and applications Por few subject's need improvement. |
| b) syllabus is suitale e to the programme: |
| Yes, But Electronics subject can be valued. |
| c) The syllabus generates interest in subject area; |
| Yes, Subject's based on programming. |
| d) The curriculum gives scope for internship/training/research: |
| Yes, |
| c) syllabus is need based: |
| "Hes, but some subject's are not needed. |
| |
| f) Aims and objectives of the syllabi are well defined and clear: |
| g) Programme syll in has sufficient number of prescribed books and reference books: |
| Yes |
| 4. Availability of Interdisciplinary courses: fore-cleative subject is there. |
| 5. Opportunity for developing skills: |
| Technical skills can be improved. |
| a real for a Challest challest |
| Need to be involved to the syllabor. |
| The state of the s |
| 1 dest dechnologies must be alled. |

College of Engineering and Technology, Akola Department of computer science and Engineering Involvement of students in Syllabus framing

| Comfortability of Syllabus contents a) syllabus has good balance between theory and applications tope. Laleigh have to the programme: Yes. b) syllabus is suital et of the programme: Yes. c) The syllabus ge, rates interest in subject area: Trending technologies must be there. d) The curriculum gives scope for internship/training/research: No. e) syllabus is need based: Few subject need to remove f) Aims and objectives of the syllabi are well defined and clear: Yes. g) Programme syll, it has sufficient number of prescribed books and reference books: Yes. 4. Availability of Internisciplinary courses: Through force elective subject. 5. Opportunity for developing skills: Frovision for sufficient choices: Not availabile. 7. General observations: Fractical many be extended subject needs to | | Tame of student: Volith Ingale |
|--|----|--|
| a) syllabus has good balance between theory and applications the leightage must be an gradicals. b) syllabus is suital c to the programme: Yes. c) The syllabus ge rates interest in subject area: Trending technologies must be there. d) The curriculum gives scope for internship/training/research: No. e) syllabus is need based: Few subject need to remove f) Aims and objectives of the syllabi are well defined and clear: Yes. g) Programme syll, it has sufficient number of prescribed books and reference books: Yes. Availability of Interdisciplinary courses: Through force elective subject. Opportunity for developing skills: Provision for sufficient choices: Not available. General observations: Practical rates be extented subject needs to | 7 | rear: Second Year |
| b) syllabus is suital e to the programme: Yes. c) The syllabus ge, rates interest in subject area: Trending I celebrologies must be There. d) The curriculum gives scope for internship/training/research: No. e) syllabus is need based: Few subject need to remove f) Aims and objectives of the syllabi are well defined and clear: Yes. g) Programme sylla is has sufficient number of prescribed books and reference books: Yes. Availability of Internisciplinary courses: Through Force elective subject. Opportunity for developing skills: Provision for sufficient choices: Not available. General observations: Fractical many be extented subject reeds to | (| Comfortability of Syllabus contents |
| b) syllabus is suital to to the programme: Nes. The syllabus generates interest in subject area: Trending dechnologies must be there. d) The curriculum gives scope for internship/training/research: No. e) syllabus is need based: Few subject need to remove f) Aims and objectives of the syllabi are well defined and clear: Yes. g) Programme syllabi has sufficient number of prescribed books and reference books: Yes. Availability of Internship/training/research: Through force elective subject. Opportunity for developing skills: Provision for sufficient choices: Not availabile. General observations: Fractical remains be extended subject needs to | a) | syllabus has good balance between theory and applications |
| Trending I celebrated in subject area: Trending I celebrated in subject area: The ding I celebrated in myst be I bere. d) The curriculum gives scope for internship/training/research: The . e) syllabus is need based: Few subject need to remove f) Aims and objectives of the syllabi are well defined and clear: Yes- g) Programme sylla is has sufficient number of prescribed books and reference books: Yes. Availability of Internisciplinary courses: Through Force elective subject. 6. Opportunity for developing skills: Frovision for sufficient choices: Not available. General observations: Fractical many be oriented subject needs to | | syllabus is suitale e to the programme : |
| Trending technologies must be there. d) The curriculum gives scope for internship/training/research: No. e) syllabus is need based: Few subject need to remove f) Aims and objectives of the syllabi are well defined and clear: Yes- g) Programme syll; is has sufficient number of prescribed books and reference books: Yes. Availability of Internisciplinary courses: Through force elective subject. 6. Opportunity for developing skills: Provision for sufficient choices: Not available. General observations: Provision for sufficient choices: Not available. | - | |
| d) The curriculum gives scope for internship/training/research: No. e) syllabus is need based: Few subject need to remove f) Aims and objectives of the syllabi are well defined and clear: Yes- g) Programme syllani has sufficient number of prescribed books and reference books: Yes. Availability of Internisciplinary courses: Through Force elective subject. 6. Opportunity for developing skills: Provision for sufficient choices: Not available. General observations: Practical many be oriented subject needs to | | |
| e) syllabus is need based: Few subject need to remove 1) Aims and objectives of the syllabi are well defined and clear: Yes- g) Programme syllani has sufficient number of prescribed books and reference books: Yes. Availability of Interdisciplinary courses: Through Force elective subject. Opportunity for developing skills: Provision for sufficient choices: Not available. General observations: Practical made be externed subject needs to | - | |
| Aims and objectives of the syllabi are well defined and clear: Yes- g) Programme syll; it has sufficient number of prescribed books and reference books: Yes. Availability of Interdisciplinary courses: Through free elective subject. Opportunity for developing skills: Provision for sufficient choices: Not available. General observations: Practical remains be extented subject needs to | | 710. |
| yes. g) Programme syll; it has sufficient number of prescribed books and reference books: Yes. Availability of Interdisciplinary courses: Through foce elective subject. Opportunity for developing skills: Provision for sufficient choices: Not available. General observations: Practical remains be oriented subject needs to | | Few subject need to remove |
| Availability of Interdisciplinary courses: Through foce elective subject. Deportunity for developing skills: Provision for sufficient choices: Not available. General observations: Practical many be oriental subject needs to | | * |
| Through free elective subject. 5. Opportunity for developing skills: 5. Provision for sufficient choices: Not available. 7. General observations: Practical many be extented subject needs to | | |
| 5. Opportunity for developing skills: 5. Provision for sufficient choices: Not available. 7. General observations: Practical research be extented subject needs to | | |
| Mot available. That available. Fractical med be oriental subject needs to | j. | |
| Practical many be extented subject needs to | 5. | The second of th |
| The state of the s | 7. | Congret observations |

Department of computer science and Engineering

| t of students in Syllabus framing |
|-----------------------------------|
| 2019-20 |
| |

| 2017-20 |
|--|
| 1. Name of student: Rokit Panjwams |
| 2. Year: Third year |
| 3. Comfortability of Syllabus contents |
| a) syllabus has good balance between theory and applications Nes, T think applications's count should be more. |
| b) syllabus is suitable to the programme: |
| b) syllabus is suitable to the programme: Focus should be on technical lonowledge most than theory. |
| c) The syllabus ger mates interest in subject area: |
| yes. |
| d) The curriculum ves scope for internship/training/research: |
| more placements are expected. |
| e) syllabus is need based: |
| yu. |
| b |
| A service of the serv |
| Tu. |
| g) Programme syllabi has sufficient number of prescribed books and reference books: |
| Books of forgrem authors are not available. |
| A Maritability of Interdisciplinary courses: |
| In O.E. other programe (computer) based subjects |
| 5 Oppostunity for devictoring skills: |
| Mill development program all needed. |
| |
| 6. Provision for sufficient choices: mort options are engrected. |
| 7. General observations: Skill based study is needed from second |
| year. |

Department of computer science and Engineering

Feedback/Involvement of students in Syllabus framing 2019-20

| . Name of student: Gauray. Bunde | |
|--|--------------|
| Year: 3rd Year. | |
| 3. Comfortability of Syllabus contents | |
| | |
| a) syllabus has good balance between theory and applications Yes, but need more practical subjects | |
| b) syllabus is suitable to the programme: | 1 |
| No need more technical knowledge. | |
| c) The syllabus generates interest in subject area: | |
| Jes, syllabus is good | |
| * · · · · · · · · · · · · · · · · · · · | |
| d) The curriculum gives scope for internship/training/research: | |
| es. | |
| e) syllabus is need based: | |
| Not for some subjects | |
| the state of the s | |
| Acceptable and the second of t | |
| Tes . | |
| g) Programme syll in has sufficient number of prescribed books and reference books: | |
| Need tudion author books. | 0 |
| | |
| 4. Availability of Interdisciplinary courses: More option should be given | |
| | |
| 5. Opportunity for developing skills: | etions |
| Jake training course, be often to feet to | 公司基础的 |
| 6. Provision for sufficient choices: | 1 |
| 6. Provision for sufficient Hoices: 108 development purpose more | E A |
| | 10 |
| Seminars must be increased and mini projects perovide | iects |
| au su | 1 |

Department of computer science and Engineering

Feedback/Involvement of students in Syllabus framing

| t condition |
|--|
| 1. Name of student: Aarti Chaudhari |
| 2. Year: 3rd Year. |
| 3. Comfortability of Syllabus contents |
| a) syllabus has good balance between theory and applications Yes, through subject should be reduced and add practical oriented b) syllabus is suitable to the programme: |
| It is good, but tuhnical is added then better. |
| c) The syllabus generates interest in subject area: |
| . Jes, some subjects are very important of intrested for future |
| d) The curriculum ves scope for internship/training/research: |
| ges, good for training, internship e) syllabus is need based: |
| Some subjects are not related to CSE. |
| f) Aims and objectives of the syllabi are well defined and clear: |
| Jes. it very clear and well defined. |
| g) Programme syllabi has sufficient number of prescribed books and reference books: |
| Need more brook of Indian authors for easy understanding |
| 4. Availability of Interdisciplinary courses: Some extra option should better. |
| 5. Opportunity for de loping skills: Jake new challenge final learning opportunities in work |
| Need much for progress. |
| 7. General observations: Servingers should be given for all and projects too for better technical knowledge. |
| better technical knowled. |

Department of computer science and Engineering

Feedback Inversement of students in Syllabus framing

| , , , , |
|---|
| 1. Name of student: Meinal Talmkar |
| 1. Name of student: Meinal Jahnkar 2. Year: Third year |
| 3. Comfortability of Syllabus contents |
| a) syllabus has good balance between theory and applications language like facta hearing while studying Java thought by included b) syllabus is suitable to the programme: |
| c) The syllabus ger prates interest in subject area: |
| c) The syllabus generates interest in subject area: |
| subject like CN, EDC, ADIC should be met how lengthy syllabore. |
| d) The curriculum gives scope for internship/training/research: |
| yes |
| e) syllabus is need based: |
| bracticals more than theory must be inplanted |
| f) Aims and objectives of the syllabi are well defined and clear: |
| yes they are well define |
| g) Programme syllabi has sufficient number of prescribed books and reference books: |
| 4. Availability of Interdisciplinary courses: |
| 5. Opportunity for developing skills: Personality development courses should |
| 6. Provision for sufficient choices: |
| 7. General observations : |

Department of computer science and Engineering

Feedback/Involvement of students in Syllabus framing

| | Name of student: Wikhil warge |
|-----|--|
| | Vame of student: Wikhil warge Year: Third year |
| | The state of the s |
| . (| Comfortability of Syllabus contents |
| a) | syllabus has good balance between theory and applications |
| 1 | b) syllabus is suitable to the programme : |
| | yes ! |
| | The syllabus ger crates interest in subject area: |
| | some of the Electronics subject should be seed |
| | d) The curriculum gives scope for interpship/training/research: |
| | Some of the technical courses should be inclu |
| | to the transfer of the said. |
| | (a) syllabus is need based. Complanguages latest in market should be included to Aims and objectives of the syllabi are well defined and clear: |
| | 413 |
| | g) Programme syll: ii has sufficient number of prescribed books and reference books: |
| | Books language for some subject is difficult to |
| 4. | Availability of Into disciplinary courses: |
| | exelection choice for interdiciplinary course |
| 5. | Opportunity for developing skills: |
| - | NA STATE OF THE PARTY OF THE PA |
| 6 | Provision for sufficient choices: |
| IJ. | subject delection choice should be given |
| 4 | General observations: |
| 1. | subject in hogram should be more |
| | sharticaly approached. |

Department of computer science and Engineering

Feed back/Involvement of students in Syllabus framing 2029-2020

| Name | f student: Priyal Mankar | |
|-----------------------|--|---------|
| Year | f student: Priyal Manker Third year | |
| | 5-00 mm - 100 mm - 10 | |
| Comfo | tability of Syllabus contents | |
| a) syll | ous has good balance between theory and applications | |
| b) sy | abus is suitable to the programme : | |
| | yes | |
| | syllabus generates interest in subject area: | |
| 3.75 8 0.7.275 | yes | |
| an mi | curriculum ε ves scope for internship/training/research: | |
| d) 11 | | |
| - | Yes | |
| e) sy | abus is need ased: | |
| <u>, ii</u> | yes but should be more industrial related | |
| f) A | ns and objectives of the syllabi are well defined and clear: | |
| | Ves | |
| (r) Pr | gramme syllabi has sufficient number of prescribed books and reference books | : |
| 64 | | |
| | Yes | |
| . Avai | bility of Interdisciplinary courses: | |
| - | Yes. | |
| o, Oppo | tunity for developing skills: | ER |
| | tion for suffic, int choices: | AKO |
| . Prov | Yes | E. |
| | | |
| 7. Gen | More industrial approch should be there | -101-43 |

Department of computer science and Engineering

Feed back Involvement of students in Syllabus framing 2019 - 2020

| 1. Name | of student: Shrusti Hanymante |
|-------------------------|--|
| 2. Year:_ | Third year |
| | |
| Comfo | ortability of Syllabus contents |
| a) sylla | abus has good balance between theory and applications |
| b) sy | llabus is suitale e to the programme : |
| | 108 |
| | ne syllabus generates interest in subject area: |
| 5 | ome subjects are too theoretical to leave. |
| d) Th | e curriculum gives scope for internship/training/research: |
| | niniproject is required in 3rd year syllabous. |
| e) syl | llabus is need based: |
| | somewhat |
| O A | ims and objectives of the syllabi are well defined and clear: |
| 1000 | yes but improvement needed. |
| g) Pr | ogramme syll in has sufficient number of prescribed books and reference books: |
| 4. Avail | lability of Inter lisciplinary courses: |
| | ortunity for developing skills: A suminary Pore focus on practicals 1 is needed. |
| | ision for sufficient choices: |
| | hoices are needed. |
| | eral observations : |
| _0 | pen gource, industry oriented lang onust be |

Department of computer science and Engineering

Feedback / Involvement of students in Syllabus framing 2019-2020

| 1. Name of student: Kalifani Janokak |
|--|
| 2. Year: Third year |
| V |
| 3. Comfortability of Syllabus contents |
| a) syllabus has good balance between theory and applications rnose practical subjects should include |
| DOMESTIC CONTROL OF THE PROPERTY OF THE PROPER |
| yes, we can have more programming subject |
| c) The syllabus generates interest in subject area: |
| · yes |
| d) The curriculum ¿ ves scope for internship/training/research: |
| As, there are technical subjects, it helps. |
| e) syllabus is need based: |
| In some subjects, like EDC. |
| f) Aims and objectives of the syllabi are well defined and clear: |
| Yes. |
| g) Programme syllabi has sufficient number of prescribed books and reference books: |
| Yes, we have all subjects broks available |
| 4. Availability of Interdisciplinary courses: |
| |
| 5. Opportunity for developing skills: Exteg cutticulign subjects help in that |
| 6. Provision for sufficient choices: We need options for selecting subjects. |
| 7. General observations: |
| |
| |
| The state of the s |

Department of computer science and Engineering

Feed back/Involvement of students in Syllabus framing 2019 - 20

| 1. No | ame of student: A heafa Musk | an | |
|-------|---|----------------------------------|------------|
| 2. Ye | -10 : 1 / Va L | | |
| 2. 10 | - Greath great | | |
| 3. Co | omfortability of Syllabus contents | | |
| | syllabus has good balance between theory and ap | plications Rocy rasm | |
| b) | syllabus is suitable to the programme: | at a a company | |
| ٠, | The syllabus generates interest in subject area: | ftwork Ingnieum | 9 |
| c) | Red | | |
| -D | The curriculum ves scope for internship/training | ng/research: | - William |
| (a) | Placement Regarding Jech | nical course shoul | dle giver |
| e) |) syllabus is need based: | | |
| | yes | | |
| 0 | Aims and objectives of the syllabi are well defin | ned and clear: | |
| | ries | | - |
| g | () Programme syllabi has sufficient number of pre | scribed books and reference book | :s: |
| | Books Provided of Forgil | in author are o | est ownled |
| 4. A | Availability of Inter lisciplinary courses: | · allint | |
| | OE 2 PE need more oft | | |
| 1 | Opportunity for de loping skills: [kill dwelopment Progre | am wie needed | <i>]</i> . |
| 6. P | Provision for suffice int choices: | given for subje | ect |
| 7. (| General observations: | 2 11 0 | ditt. |
| | General observations: Thaning & Placement Taken | Hogreem should | |
| | Talker 1" | | |

Department of computer science and Engineering

Feedback Involvement of students in Syllabus framing 2019 - 2020

| 1. | Name of student: Aish | warya Cho | audhary | |
|----|------------------------------|-------------------------|---------------------------|----------------|
| 2. | Year: Thiy | d year | 1 | |
| | • | | | |
| 3. | Comfortability of Syllabu | s contents | | |
| a |) syllabus has good balan | nce between theory as | nd applications | |
| | b) syllabus is suitable to | the programme: | | |
| | yes i_ | | | |
| | c) The syllabus germate | | | |
| | 103 | | | |
| | d) The curriculum gives | scope for internship/t | raining/research: | |
| | Yes | | | |
| | e) syllabus is need based: | | | |
| | | | | |
| | Yes | edd move ea | | |
| | f) Aims and objectives of | of the syllabi are well | defined and clear: | |
| | Yes | | | |
| | g) Programme sylle si ha | s sufficient number o | f prescribed books and re | ference books: |
| | yes | | | |
| 4. | Availability of Intel liscip | plinary courses: | | |
| | Yes | | | |
| 5. | Opportunity for developi | ng skills: | | |
| | Yes | | | |
| 6. | Provision for sufficient of | hoices: | | |
| | Yes | | | |
| 7, | General observations : | • | 34 | A CONTRACTOR |
| | | | | 198637 |

Department of computer science and Engineering

| C - 160 10 /1000 | vement of students in Syllabus framing |
|------------------|--|
| HE GODA CACT | 2019-2020 |

| 1. Name of student: Saylee Bodade |
|--|
| 1. Name of student: Saylee Bodade 2. Year: Final year |
| |
| 3. Comfortability of Syllabus contents |
| a) syllabus has good balance between theory and applications Muze Practical them theory should be there |
| b) syllabus is suitable to the programme: |
| Yes. |
| c) The syllabus generates interest in subject area: |
| yes. |
| d) The curriculum i ves scope for internship/training/research: |
| e) syllabus is need based: Yes. 1 Aims and objectives of the syllabi are well defined and clear: |
| Yes. |
| g) Programme syllabi has sufficient number of prescribed books and reference books: Needs Some Books. |
| |
| 4. Availability of Inter disciplinary courses: √es - |
| 5. Opportunity for developing skills: Yes. |
| 6. Provision for sufficient choices: 'Yes. Lot muce Choice Should be these, |
| 7. General observations: Technical and Instituted courses |

Department of computer science and Engineering

Feedback/Involvement of students in Syllabus framing

| 1. 1 | Name of student: Rashni Bondre |
|------|---|
| 2. ' | Vame of student: Rashmi Bondre Year: Final year |
| | |
| 3. (| Comfortability of Sy labus contents |
| a) | yes but Same Subject Should have more pearlical Aproch |
| ŀ | syllabus is suitale e to the programme : |
| | Yes electronic Subject Should be Reduce. |
| (| The syllabus generates interest in subject area: |
| | programing Subject Should be there two make programs |
| 9 | d) The curriculum gives scope for internship/training/research: |
| | · Yes. |
| | e) syllabus is need based: |
| | yes. |
| | f) Aims and object res of the syllabi are well defined and clear: |
| | yes they are well define |
| | g) Programme syll in has sufficient number of prescribed books and reference books: |
| | yes. |
| 4. | Availability of Interdisciplinary courses: |
| | Choices Should is goiven to student. |
| P | Characteristic for developing eletter |
| | presonary development Courses Shalld |
| 6. | Provision for sufficient choices: Is "rudeded - |
| | yes. |
| 7. | General observations: |
| | yes. |

Department of computer science and Engineering

Feedback Inv. vement of students in Syllabus framing

| a) syllabus has good balance between theory and applications b) syllabus is suitable to the programme: Yel c) The syllabus ger rates interest in subject area: Yel d) The curriculum: ves scope for internship/training/research: Nave Includival expert should be unwanged e) syllabus is need based: Later language should be taught f) Aims and objectives of the syllabi are well defined and clear: Yel g) Programme syllabi has sufficient number of prescribed books and reference books: Nel Some Books Availability of Interdisciplinary courses: Yel Opportunity for de doping skills: Yel Provision for suffic ant choices: Has but more bhaire should be there | 2019-2020 |
|---|---|
| Comfortability of Syllabus contents a) syllabus has good balance between theory and applications b) syllabus is suitable to the programme: Yes c) The syllabus generates interest in subject area: Yes Int more Includinal capproch should d) The curriculum: ves scope for internship/training/research: More Includinal expert should be convaryed e) syllabus is need based: Later language should be taught f) Aims and objectives of the syllabi are well defined and clear: Yes g) Programme syllabi has sufficient number of prescribed books and reference books: Nel Some Books Availability of Interdisciplinary courses: Yes Opportunity for desoloping skills: Yes Provision for sufficent choices: Has but more bhaice should be there | Name of student: Rohini Vilhekar |
| Comfortability of Syllabus contents a) syllabus has good balance between theory and applications b) syllabus is suitable to the programme: Yes C) The syllabus ger, rates interest in subject area: Hes Just more Including capproch should d) The curriculum: ves scope for internship/training/research: Nave Including expert should be unwanged c) syllabus is need based: Tatus language should be taught f) Aims and objectives of the syllabi are well defined and clear: Yes g) Programme syllabi has sufficient number of prescribed books and reference books: Nel Some Books Availability of Inter-lisciplinary courses: Yes Opportunity for de: loping skills: Yes Provision for suffic: int choices: Has but more bhaire should be there | |
| a) syllabus has good balance between theory and applications b) syllabus is suitable to the programme: Yel c) The syllabus ger rates interest in subject area: Yel d) The curriculum: ves scope for internship/training/research: Nave Includival expert should be unwanged e) syllabus is need based: Later language should be taught f) Aims and objectives of the syllabi are well defined and clear: Yel g) Programme syllabi has sufficient number of prescribed books and reference books: Nel Some Books Availability of Interdisciplinary courses: Yel Opportunity for de doping skills: Yel Provision for suffic ant choices: Has but more bhaire should be there | |
| b) syllabus is suitable to the programme: Yes The syllabus generates interest in subject area: Jes, but more Includinal subprach should The curriculum: ves scope for internship/training/research: Mare Includinal expert should be varyanged e) syllabus is need based: Latist language should be taught f) Aims and objectives of the syllabi are well defined and clear: Yes g) Programme syllabi has sufficient number of prescribed books and reference books: Needs Some Books Availability of Interdisciplinary courses: Yes Opportunity for des loping skills: Yes Provision for suffice ant choices: Has but more Chaice Should be there | Comfortability of Syllabus contents |
| b) syllabus is suitable to the programme: Yes The syllabus generates interest in subject area: Jes, but more Includinal subprach should The curriculum: ves scope for internship/training/research: Mare Inclustrial expert should be unwanged e) syllabus is need based: Latist language should be taught f) Aims and objectives of the syllabi are well defined and clear: Yes g) Programme syllabi has sufficient number of prescribed books and reference books: Needs Some Books Availability of Interdisciplinary courses: Yes Opportunity for de doping skills: Yes Provision for suffic ant choices: Has but more bhaire should be there | a) syllabus has good balance between theory and applications |
| c) The syllabus ger erates interest in subject area: | |
| d) The curriculum: ves scope for internship/training/research: Mare Inclustrial expert should be usuranged e) syllabus is need based: Tatur language should be tought f) Aims and objectives of the syllabi are well defined and clear: Yes g) Programme syllabi has sufficient number of prescribed books and reference books: Nel Some Books Availability of Interdisciplinary courses: Yes Opportunity for de loping skills: Yes Provision for sufficent choices: Hus but more should be there | b) syllabus is suitable to the programme: |
| d) The curriculum: ves scope for internship/training/research: Mare Inclustrial expert should be rewarded e) syllabus is need based: Tatus language should be tought f) Aims and objectives of the syllabi are well defined and clear: Yes g) Programme syllabi has sufficient number of prescribed books and reference books: Nel Some Books Availability of Interdisciplinary courses: Yes Opportunity for de loping skills: Yes Provision for sufficent choices: Has but more should be there | · Yea |
| d) The curriculum: ves scope for internship/training/research: Mare Inclustral expert should be carranged e) syllabus is need based: Tatus language should be taught f) Aims and objectives of the syllabi are well defined and clear: Yes g) Programme syllabi has sufficient number of prescribed books and reference books: Nel Some Books Availability of Interdisciplinary courses: Yes Opportunity for de loping skills: Yes Provision for sufficent choices: Has but more bhaice should be there | c) The syllabus ger erates interest in subject area: |
| Mare Including expert should be converged c) syllabus is need based: . Latist language should be taught f) Aims and objectives of the syllabi are well defined and clear: ——————————————————————————————————— | |
| e) syllabus is need based: Latest language should be taught f) Aims and objectives of the syllabi are well defined and clear: Yes g) Programme syllabi has sufficient number of prescribed books and reference books: Nel Some Books Availability of Interdisciplinary courses: Yes Opportunity for de: loping skills: Yes Provision for suffic ant choices: Has but more should be there | d) The considering a very scope for internship/training/research: there |
| e) syllabus is need based: Later language Musuld le Laught f) Aims and objectives of the syllabi are well defined and clear: Yes g) Programme syllabi has sufficient number of prescribed books and reference books: Nel Some Books Availability of Interdisciplinary courses: Yes Opportunity for de loping skills: Yes Provision for sufficent choices: Has but more bhaice should be there | |
| Aims and objectives of the syllabi are well defined and clear: Yes g) Programme syllabi has sufficient number of prescribed books and reference books: Nel Some Books Availability of Interdisciplinary courses: Yes Opportunity for deal loping skills: Yes Provision for sufficient choices: Has but more bhaice should be there | -71 - 78 (Control of the Control of |
| f) Aims and objectives of the syllabi are well defined and clear: Yes g) Programme syllabi has sufficient number of prescribed books and reference books: Nel Some Books Availability of Interdisciplinary courses: Yes Opportunity for de loping skills: Yes Provision for sufficent choices: Has but more bhaice should be there | e) syllabus is need based: |
| g) Programme syllabi has sufficient number of prescribed books and reference books: Nel Some Books Availability of Interdisciplinary courses: Yes Opportunity for de doping skills: Yes Provision for sufficent choices: Has but more bhaice should be there | |
| Provision for sufficent choices: Provision for sufficent choices: Provision for sufficent choices: Provision for sufficent choices: Provision for sufficent choices: Provision for sufficent choices: Provision for sufficent choices: Provision for sufficent choices: Provision for sufficent choices: Provision for sufficent choices: Provision for sufficent choices: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books: Provision for sufficent number of prescribed books and reference books Provision for sufficent number of prescribed books | f) Aims and objectives of the syllabi are well defined and clear: |
| New Some Books Availability of Interdisciplinary courses: YES Opportunity for des doping skills: Yes Provision for sufficent choices: Hes but more should be there | yes |
| Availability of Interdisciplinary courses: YES Opportunity for de doping skills: Yes Provision for sufficent choices: HA but more bhaice should be there | g) Programme syllabi has sufficient number of prescribed books and reference books: |
| Opportunity for de loping skills: YES Provision for suffic ent choices: HA but more bhaice should be there | Needs Some Books |
| Opportunity for de loping skills: YES Provision for suffic ent choices: HA but more bhaice should be there | Availability of Interdisciplinary courses: |
| Provision for sufficent choices: Les but more bhaice should be there | |
| Provision for sufficent choices: | Opportunity for de loping skills: |
| Les but more Chaice should be there | _ yes |
| General observations: | . Provision for sufficent choices: |
| General observations: | yes but more bhaire snowed be there |
| " 1 O - t 1 May 1 of there | Man Practicals should be there |
| More Practicals should be there | More practicals spracted a way |

Department of computer science and Engineering

Feedback/Involvement of students in Syllabus framing

| 1. | Namo of student: (1940) i Wagh |
|------|--|
| | Year: Frned year |
| 3. | Comfortability of Sy labus contents |
| a | yes, we have but can be improved also. |
| - 10 | b) syllabus is suitable to the programme: Technical subjects can include. |
| | c) The syllabus generates interest in subject area: |
| | yes. |
| | d) The curriculum gives scope for internship/training/research; |
| | Yes, some subjects gives scope. |
| | e) syllabus is need pased: |
| | Yes, many subjects need based. |
| | f) Aims and objectives of the syllabi are well defined and clear: |
| | g) Programme syllabi has sufficient number of prescribed books and reference books: |
| 4. | Availability of Interdisciplinary courses: More open electives options can be included |
| 5. | Opportunity for developing skills: Yes, as soft skills, Professional othics. |
| 6. | Provision for suffice ant choices: |
| | Yes. |
| 7. | Projects hours can be included more. |

| Department of computer science and Engineering | |
|---|------|
| Feedback/Involvement of students in Syllabus framing | |
| 1. Name of student: Wilhil Jevankar | |
| 2. Year: Junal gray | |
| 3. Comfortability of Syllabus contents | |
| a) syllabus has good balance between theory and applications Mose Associated Them theory Should lie v | ther |
| b) syllabus is suitable to the programme: | |
| d) The curriculum ves scope for internship/training/research: Industry Internation Scope Should | 4D) |
| e) syllabus is need ised: | L D |
| f) Aims and objectives of the syllabi are well defined and clear: Aims and objectives of the syllabi are well defined and clear: Aims and objectives of the syllabi are well defined and clear: Aims and objectives of the syllabi are well defined and clear: Aims and objectives of the syllabi are well defined and clear: Aims and objectives of the syllabi are well defined and clear: Aims and objectives of the syllabi are well defined and clear: | te. |
| yle . | 1 |
| 4. Availability of Interdisciplinary courses: Yes should be there a | |
| 5. Opportunity for developing skills: | |
| 6. Provision for suffice ant choices: | |
| 7. General observations : | A. |

Department of computer science and Engineering

Feed back Involvement of students in Syllabus framing 2019-20

| Ü | Name of student: Minal Hatekar |
|----|---|
| 2. | Year: Final year |
| 3. | Comfortability of Sy labus contents |
| E | n) syllabus has good valance between theory and applications Move weightage is given to thear. |
| | b) syllabus is suitable to the programme: Syllabus is not effective in developing parters including Required for the industry. c) The syllabus generates interest in subject area: |
| | In order to gonerate interest sta syllabor needs modification. |
| | d) The curriculum gives scope for internship/training/research: The opportunity to join internship is missing. |
| | c) syllabus is need based: The syllabu is outdoted. |
| | Aims and objectives are coll defined but need modification |
| | g) Programme syllabi has sufficient number of prescribed books and reference books: |
| 4. | Availability of Interdisciplinary courses: |
| 5. | Opportunity for developing skills: 75-1- attendance is important. So they hardly get Provision for sufficient choices: apportunity for developing skills. |
| 6. | Provision for sufficient choices: opportunity for acretoping sizib. Specialized stream courses should be officed |
| 7. | General observations: CURRICULUM need improvements to make |
| | education system better. |

Department of computer science and Engineering

Feedback/Involvement of students in Syllabus framing

| 1. | Name of student: Sakshi Katyarmal. |
|----|---|
| 2. | Year: Final year |
| | |
| 3. | Comfortability of St. labus contents |
| |) syllabus has good balance between theory and applications |
| п | Little practical Exposure |
| | |
| | b) syllabus is suitable to the programme : |
| | It is not effective. |
| | c) The syllabus generates interest in subject area: |
| | Due to more weightage given to theory syllabus |
| | IT DOUTING |
| | d) The curriculum gives scope for internship/training/research: |
| | Intership opportunity required to be included in |
| | e) syllabus is need issed: |
| | is all and included which have no the |
| | in our timuse 100. |
| | f) Aims and objectives of the syllabi are well defined and clear: |
| | Heed improvements. |
| | g) Programme syllabi has sufficient number of prescribed books and reference books: |
| | Enough books are available. |
| | Erough Books wife available |
| 4. | Availability of Interdisciplinary courses: |
| | |
| 5. | Opportunity for developing skills: |
| | poor opportunity for aleveloping skills |
| 6. | Provision for sufficient choices: |
| | sufficient choices are not provided. |
| 7. | General observation: |
| | syllabus needed to be updated |
| | |

Department of computer science and Engineering

Feed back Involvement of students in Syllabus framing 2019-20

| 1. Name of student: Layatra yourstear | |
|--|------|
| 2. Year: Finoal year | |
| | |
| 3. Comfortability of S₁ labus contents | |
| a) syllabus has good valance between theory and applications yes But we mild more Program for Practical | |
| b) syllabus is suitable to the programme: | |
| yes But we need more technical Knowledge | |
| c) The syllabus generates interest in subject area: | |
| ger But Practical we needed for respective Suly | lcl |
| d) The curriculum gives scope for internship/training/research: | .1 |
| Jehnical course Should be needed for the Placemen | it |
| e) sullabus is need based: | |
| only Basic Knowledge Should be given in Electronic su | lya |
| f) Aims and objectives of the syllabi are well defined and clear: | |
| yes There is no need of allobration | |
| g) Programme syllabi has sufficient number of prescribed books and reference books: | 1 |
| · We need the Indian Author Bout as forgen author Bo | POR |
| 4. Availability of Interdisciplinary courses: | |
| more ofition should be given For OE | |
| 5 Opportunity for developing skills: | |
| and meed much more Skill development Program | r |
| 6. Provision for sufficient choices: More oftional Program Should be given for the dwelgen | |
| 7. General observations: | 1 |
| Project & Seminar Slots must be increased | 5-6 |
| | - 12 |

College of Engineering and Technology, Akola Department of computer science and Engineering

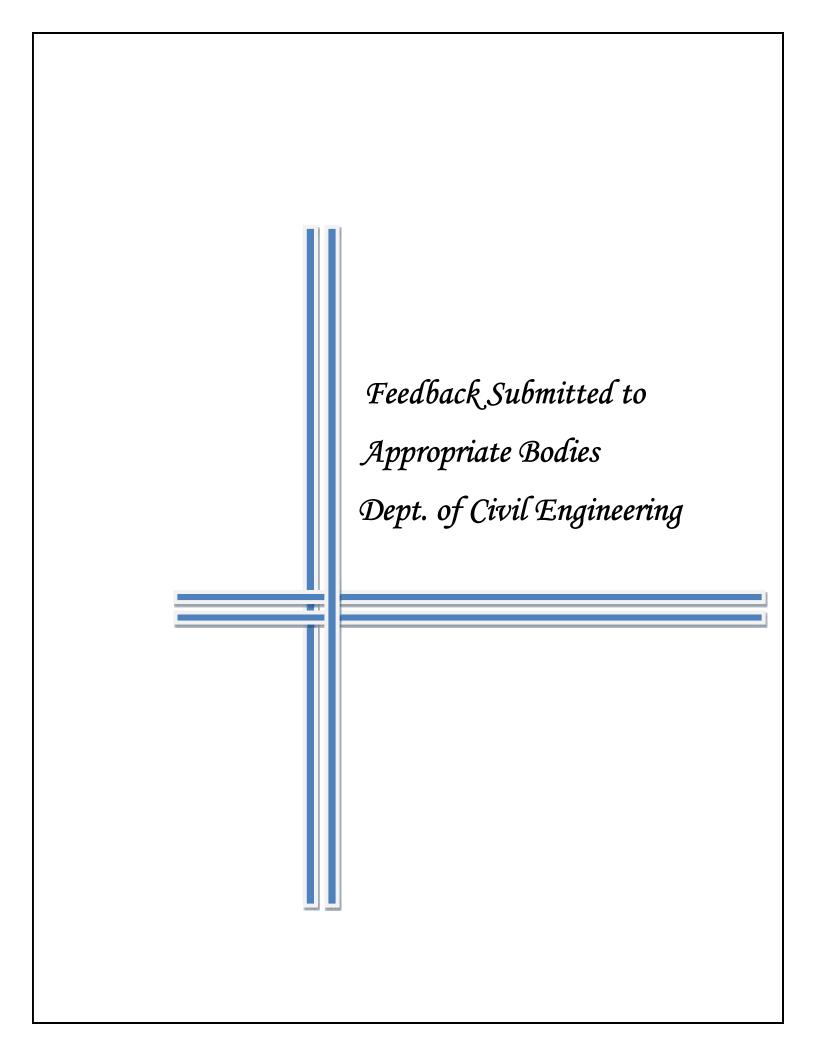
Inv vement of students in Syllabus framing

| 1. | Name of student: Shivani Bakal |
|-------|---|
| | Year: Final year |
| 3.775 | in the year |
| 3. | Comfortability of Syllabus contents |
| a |) syllabus has good balance between theory and applications |
| | b) syllabus is suitable to the programme : |
| | Yea |
| | c) The syllabus ger rates interest in subject area: |
| | At some point. But in some subject no track of the d) The curriculum ves scope for internship/training/research: |
| | only basic of programing are included, need some of syllabus is need based: |
| | n Aims and objectives of the syllabi are well defined and clear: Don't Hink So, need more defined for industries |
| | g) Programme syllabi has sufficient number of prescribed books and reference books: |
| | Yes It is having |
| 4. | Availability of Inter lisciplinary courses: |
| 5. | Opportunity for de sloping skills: Require seprente hows for practical skill developement |
| 6. | Provision for sufficient choices: There should be choices according to interest. |
| 7. | General observations : |
| | |

College of Engineering and Technology, Akola Department of computer science and Engineering

Involvement of students in Syllabus framing

| 1. Name of student: Haki dina Shinde | |
|--|-------|
| 2. Year: Final year | |
| | |
| 3. Comfortability of Sy labus contents | |
| a) syllabus has good ralance between theory and applications Should be more procedured oriented. | |
| b) syllabus is suitable to the programme: Yes - , but need some advance. | |
| c) The syllabus generates interest in subject area: | |
| d) The curriculum gives scope for internship/training/research: | |
| Advance programing in jour with study of other should be in syllabus. | pula |
| f) Aims and objectives of the syllabiliare well defined and clear: Not of some subjects | |
| g) Programme syll. in has sufficient number of prescribed books and reference books: | |
| 4. Availability of Interdisciplinary courses: | |
| 5. Opportunity for developing skills: Importent subject should have thanks from 5. 6. Provision for sufficient choices: Eth sem, which will help in skill developed. | phi g |
| 7. General observations: Need Inclining Sessions from third years | |



Shri Shivaji Education Society Amravati's

College of Engineering and Technology Akola

Department of Civil Engineering

In view of upgrading knowledge and to fetch present opportunities in the field of Engineering, the various agencies are taking high efforts for designing and developing appropriate updated curriculum.

Considering the Model Curriculum provided by the regulating body "All India Council of Technical Education- AICTE" and the timely directions given by the affiliated SGBA University.

Under the rules and regulations of SGBAU the Civil Engineering Board of Studies was formed in the Month of August 2019. Soon after it final formation, the several meetings were held in University for implementation and framing of New Model curriculum.

On 9/7/2019 the Meeting was held at SGBAU in which the universal scheme was finalized for B.E and M.E courses. The keen study was done by all respective BOS members and correspondingly the entire Branch associated faculties the data or suggestions were asked.

The valuable feedbacks from of all the stakeholders were taken and the representation from Industry expert was also included in all the meetings. On 22/7/2020, 07/07/2020 and 10/10/2020 the newly developed syllabus for II year was submitted.

The necessity of Skill development, more practical exposure, flexibility to elect professional and open elective subjects were given more consideration and thus the complete course semester wise was developed.

In the further meetings held at 12/10/2020 the curriculum for Master in Environmental Engineering was framed. The aspect of environmental pollution, measures to mitigate and exposure towards research approach are the key elements of the newly developed Syllabus.

In the further meetings held on 30/07/2021 & 09/09/2021 the progressive work for the development of curriculum was done, along with it the important changes that were bought for

students betterment was course development for Degree of Minor and Honors. The special weitage is given to MOOC's courses in which students can do MOOC's Courses & appear for exam and can earn the Credit points so as to achieve the degree of Minor and Honors. The proposal is under the process in SGBA University.

The further meetings held on 30/11/2021, 10/12/2021 were conducted with the motive of developing and finalizing Final years syllabus.

This tenure of 2018 to 2021 acted as the transition period which fruitfully bought several good developments in the curriculum of B.E and M.E Civil Courses. The Constant participation of faculties, industry representatives, students and alumni's while framing the new curriculum has given special importance for more Practical work, more professional electives, more interdisciplinary learning through Open elective & Internship.

Prof. R. M. Phuke
Head of Department
Civil Engineering Department

Sant Gadge Baba Amravati University, Amravati

Minutes of the On-line series of meetings of the Committee constituted by the Hon'ble Vice-Chancellor regarding preparation of the Schemes for the Institution of B.E.(Honors) and additional Minor degree to be implemented from the academic year 2021-22 held on 28/04/2021, 4/05/2021 and 10/05/2021 as under:

The following members were present for the meeting.

| Sr.No | Name of the member | Date of meeting | | |
|-------|--------------------------|-----------------|-----------|------------|
| | | | | |
| | | 28.04.2021 | 4.05.2021 | 10.05.2021 |
| 1 | Dr.G.R. Bamnote (C) | P | P | P |
| 2 | Dr.D.S.Ingole (M) | P | P | P |
| 3 | Dr.S.K. Deshmukh (M) | P | A | P |
| 4 | Dr.P.B.Patil (M) | P | P | P |
| 5 | Dr.P.V.Thorat (M) | P | A | P |
| 6 | Dr.M.Atique M.Junaid (M) | P | P | P |

At the outset of the meetings, Deputy Registrar (Acad.) welcomed the Chairperson and the members present for the meeting and requested the Chairperson to initiate the agenda of the meeting. The Chairperson also welcomed all the members present for the meetings of the Committee and thanked the Hon Vice Chancellor for giving opportunity to work for the cause on behalf of all the members of the committee.

Following items had been transacted in the meeting.

Item No. 1:

Proposals received from the Chairpersons Dr G.R.Bamnote & Dr D.S.Ingole regarding Institution of B.E.(Honors) degree and Additional Minor degree

The Committee considered and perused the proposals and related documents enclosed vide Page Nos A-7294 to A-7299 and unanimously resolved to recommend the institution of both the degrees to the authorities for implementation from session 2021-22 onwards for Third Year and 2022-23 onwards for Final year BE.

1. B. E. (Honors) 2. B.E. with Minor specialization

The committee decided to drop the third proposal of B.E. (Core Branch) with specialization in (emerging area), however, it may be considered in future on the recommendations of the respective board of studies.

Item No. 2:

Draft Schemes for Institution of B.E.(Honors) degree and Additional Minor degree

The committee refered the following documents for prepariong the draft schemes for recommendation to institution of B. E. (Honors) degree and B.E. with Minor specialization to the appropriate authorities:

- 1. AICTE Model Curriculum for Undergraduate degree courses in Engineering & Technology
- 2. AICTE Letter no. AICTE/AB/WR/EAT/2019-20 dt. 13.11.2019
- 3. DTE letter no. 2/NGC/Approval/2019/1528 dated 20.11 2019
- 4. AICTE Approval Process Hand book 2020-21, APH 2021-22 Chapter 7
- 1. <u>B.E. (Honors)</u>: A new academic degree B.E. (Honors) to be introduced in order to facilitate the students to choose additionally the specialized courses of their choice and build their competence in a specialized area. After successful completion of 164 credits in general, a student shall be eligible to get Under Graduate degree in Engineering. A student shall be eligible to get Under Graduate degree with Honours only, if he/she completes additional university recommended courses only (equivalent to 18 or more credits) through MOOCs.

B.E. (Honors) in **<Branch of Engineering>** with specialization in **<Emerging** *Area>*

Eg: B.E.(Honors) Civil Engineering with specialization in Sustainability Engineering

B.E.(Honors) Mechanical Engineering with specialization in Robotics

B.E.(Honors) Electrical Engineering with specialization in Electric Vehicles

B.E.(Honors) Electronics Engineering with specialization in Sensors Technology

B.E.(Honors) Computer Science & Engineering with specialization in AI & ML

B.E.(Honors) Chemical Engineering with specialization in Waste Technology

| | MOOCs chosen from NPTEL - SWAYAM | | | |
|----------|----------------------------------|--|------------|--|
| Camantan | (Identified and approved b | | | |
| Semester | corresponding to the Parent | like soft skill/ emotional | | |
| | Engineering Programme | Intelligence/Intellectual Property etc | Tr . 4 . 1 | |
| V | Maximum 2 courses in a | | Total | |
| VI | semester, total minimum 16 | Minimum 2 credits to earn during V | | |
| VII | credits to earn during V to VIII | to VIII semesters | | |
| VIII | semesters | | | |
| Total | | | 10 | |
| Minimum | 16 | 2 | 18 | |
| credits | | | | |

2. B.E. with Minor specialization: A new academic degree B.E. with minor specialization to be introduced with a view to enhance the employability skills and impart deep knowledge in emerging areas which are usually not being covered in respective Undergraduate Degree credit framework. The B.E. with Minor specialization Degree will carry minimum 18 credits in addition to the credits essential for obtaining the Under Graduate Degree in Major Discipline (i.e. 164 credits in general).

Minor specialization in Emerging/ Multidisciplinary Areas in Under Graduate Degree Courses may be allowed where a student of another Discipline shall take the minimum additional Credits of 18 or more and get a degree with minor of another discipline. Students, who are desirous of pursuing their special interest areas other than the chosen discipline of Engineering / Technology, may opt for additional courses in minor specialization groups other than their parent discipline.

B.E. in **<Parent Branch of Engineering>** with minor in **<Emerging Area from** another branch of Engineering> (refer page 98-99 APH 2021-22)

Eg: B.E.(Mechanical Engineering) with minor in Artificial Intelligence and Machine Learning

| Successfully completed Board of studies approved courses through MOOCs (chosen from NPTEL - SWAYAM) corresponding to the Engineering programme in which minor degree is sought | | |
|--|---|--|
| Core subjects | Emerging Areas subjects | TD 4 1 |
| | Manianana 2 annuaria a annuartan | Total |
| Minimum 8 credits to earn during V to VIII semesters | Minimum 10 credits to earn during | |
| | | |
| | v to viii semesters | |
| 8 | 10 | 18 |
| | MOOCs (chosen from NPTEL - Engineering programme in Core subjects Minimum 8 credits to earn during V to VIII semesters | MOOCs (chosen from NPTEL - SWAYAM) corresponding to the Engineering programme in which minor degree is sought Core subjects Emerging Areas subjects Maximum 2 courses in a semester, Minimum 10 credits to earn during V to VIII semesters V to VIII semesters |

Item No. 03:

Draft provisions regarding Institution of B.E.(Honors) degree and Additional Minor degree

The Committee discussed in detail on preparation of the draft provisions of the Course, eligibility criteria for registration, Registration Procedure, Additional Coursework and the award of the additional qualification for both the degrees and prepared the provisions as per Annexure-I.

Recommendation: It was decided to recommend to the appropriate authorities for institution of the degrees - **BE.** (**Honors**) and **B.E.** with minor specialization.

Confirmation of minutes:

The copy of the minutes of the On-line meetings was circulated to the members by email and consent for confirmation of minutes was sought and confirmed. The minutes were confirmed and submitted for recommendation to the appropriate authorities for institution of the degrees (**BE.(Honors)** and **B.E. with Minor specialization**).

Dr G.R.Bamnote (Chairman

Dr.D.S.Ingole Dr.S.K.Deshmukh Dr.P.B.Patil Dr.P.V.Thorat Dr.M.Atique M.Junaid

Provisions

Definition:

"Honors" means degree awarded by the University as a higher recognition awarded to a well performing UG student on earning the specific extra credits after satisfying the relevant Degree award conditions.

"Minor specialization" means degree awarded by the University as a higher recognition awarded to a well performing UG student on earning the specific extra credits of another discipline after satisfying the relevant Degree award conditions

"MOOCs": Massive Open Online Courses in a variety of disciplines available at both introductory and advanced levels, accessible from e-resources in India and abroad.

"NPTEL": "National Programme on Technology Enhanced Learning" is an Indian online learning platform for university-level science, technology, engineering, and mathematics subjects. It is funded by Ministry of Human Resource and Development, Government of India jointly developed by Indian Institutes of Technology and Indian Institute of Science.

"SWAYAM": "Study Webs of Active-Learning for Young Aspiring Minds" is an Indian Massive open online course (MOOC) platform, an initiative by Government of India under Digital India to give a coordinated stage and free entry to web courses, covering all advanced education, High School and skill sector courses.

Applicable to students admitted to (Third Year 2021-22) onwards

The student can opt for any one of the following:

- 1. B. E. (Honors) Programme
- 2. B.E. with Minor specialization

B. E. (Honors) degree

A. Eligibility Criteria for Registration

Every student of B.E. undergraduate programme of the University intending to register for the Honors qualification shall fulfil the following academic requirements:

- (a) Registration to 'Honors' qualification shall be done in the beginning of fifth semester.
- (b) The Registrants shall have obtained SGPA of not less than 7.5 in every semester in the first attempt only (without any history of arrears) till fourth semester.
- (c) The lateral entry diploma/B.Sc. students shall have obtained SGPA of 8.0 or more in III & IV semester in the first attempt only.
- (d) The lateral entry B.Sc. students shall have cleared all the applicable subjects of First Year in the first attempt only along with criteria b.

B. Registration Procedure

a) Any student meeting the eligibility criteria specified above and intending to register for the Honors qualification shall apply to the Principal of his/her college in the prescribed form

- (appendix-1) along with the prescribed application fees within 10 working days after notification by the University.
- b) The principal should submit the list of eligible students for registration to the University in the prescribed format (appendix-2).
- c) There shall be no limit on the intake of students for registration for the Honors qualification. All the applicants fulfilling the eligibility shall be free to register for the Honors qualification provided, he/she has not applied for registration for B.E. with Minor specialization.
- d) The college shall maintain the record and status of students registered.

C. Additional Coursework

- a) In addition to the courses prescribed by the University to be completed successfully in the remaining semesters, that is, fifth to eighth for the relevant degree award, each student registered for the Honors qualification shall have to take up the coursework as notified by the University from NPTEL SWAYAM within the minimum prescribed duration for the award of degree.
- b) The University shall announce the Board of studies approved list of MOOCs (chosen from NPTEL SWAYAM) corresponding to each engineering programme. (16 credits from corresponding Engineering programme and 2 or more credits from Soft Skill / Emotional Intelligence / Intellectual Property etc.). (appendix-3). The University shall have the freedom to review and approve additional online platforms from time to time.
- c) Students shall be permitted to drop the registered coursework/s and select alternative coursework/s in case they cannot appear for proctored examination/s or complete the examination as per (a)
- d) Students shall choose, online courses totalling to 18 or more credits from the bouquet of approved online courses as defined in (a-c).
- e) The students shall earn the credits by only appearing in person to the proctored examination conducted by NPTEL-SWAYAM. No autonomous/affiliated/conducted colleges under the University shall conduct examination and award credits in lieu of NPTEL-SWAYAM platform to accrue 18 or more credits for the award of Honors degree.
- f) The method of assessment shall be as per the NPTEL-SWAYAM online platform.
- g) The credit equivalence for online NPTEL-SWAYAM courses shall be determined based on the following table.

| On Line Course Duration | Assigned Credit |
|-------------------------|-----------------|
| 4 weeks | 2 |
| 8 weeks | 3 |
| 12 weeks | 4 |

D. Award of Honours Qualification

- a) All the students who successfully complete the online courses as prescribed under Additional Coursework and submit their certificates to the University through the Principal of their respective colleges (**appendix-4**) against the notification issued by the Director (Examination & Evaluation) in time before closure of eighth semester as per Academic calendar shall be eligible for the Honors qualification.
- b) The Principal of the college shall submit the list of students (**appendix-5**) who are eligible for the award of B.E. (Honors) degree along with the total credit earned by each

- student and the corresponding MOOC (NPTEL-SWAYAM) certificates to the University, programme wise together with the internal marks of 8^{th} semester.
- c) Those students who cannot/do not submit the certificates on or before the last date prescribed by the University shall not be considered for the award of Honors qualification, irrespective of the number of credits earned by them. However, they shall be awarded only B.E. Degree.
- d) The Honors qualification shall be suffixed to the respective degrees and shown in the Degree certificates as recognition of higher achievement by the student concerned.
- e) The CGPA earned by the students shall be only on the basis of students performance in the various semester level examinations conducted by the University/ Autonomous colleges, as the case may be.
- f) Students shall maintain a SGPA >=8.0 in all the semesters from V to VIII semesters in first attempt only, failing this the student shall discontinue the attempt to earn additional credits.
- g) Students not having a CGPA >=8.0 at the end of the programme shall not be eligible for the award of Honors even if they have satisfied the additional credits consideration prescribed for Honors degree.
- h) The Principals of respective colleges shall submit to the University the list of such students who fail to satisfy (f)- (g) from time to time.
- i) Additional credits earned through NPTEL-SWAYAM shall not be considered for CGPA of B.E. programme as well as rank declaration.
- j) All the students fulfilling conditions for Honours degree shall be entitled to receive their transcripts indicating both the achievements (BE and additional credits) of the student concerned.

B.E. with Minor specialization:

A. Eligibility Criteria for Registration

Students, who are desirous of pursuing their special interest areas other than the chosen discipline of Engineering / Technology, may opt for additional courses in minor specialization groups from another discipline other than their parent discipline. Such students shall select the stream of courses offered with pre – requisites by the respective Board of Studies and earn a Minor Specialization.

Every regular student of the University intending to register for the Minor specialization qualification shall fulfil the following academic requirements:

- (a) Registration to 'Minor specialization' qualification shall be done in the beginning of fifth semester.
- (b) The Registrants shall have obtained SGPA of not less than 7.5 in every semester in the first attempt only (without any history of arrears) till fourth semester.
- (c) The lateral entry diploma/BSc students shall have obtained SGPA of 8.0 or more in III & IV semester in the first attempt only.
- (d) The lateral entry B.Sc. students shall have cleared all the applicable subjects of First Year in the first attempt only along with criteria b.

B. Registration Procedure

- (a) Any student meeting the eligibility criteria specified above and intending to register for the Minor specialization qualification shall apply to the Principal of his/her college in the prescribed form (**appendix-1**) along with the prescribed application fees within 10 working days after notification by the University.
- (b) The principal should submit the list of eligible students for registration to the University in the prescribed format (appendix-2).
- (c) There shall be no limit on the intake of students for registration for the Minor specialization qualification.
- (d) All the applicants fulfilling the eligibility shall be free to register for the Minor specialization qualification provided, he/she has not applied for registration in B.E. (Honors) programme.
- (e) The college shall maintain the record and status of students registered.

C. Additional Coursework

- a) In addition to the courses prescribed by the University to be completed successfully in the remaining semesters, that is, fifth to eighth for the relevant degree award, each student registered for the Minor specialization qualification shall have to take up the coursework pertaining to branch other than his parent or relevant branch as notified by the University from NPTEL - SWAYAM within the minimum prescribed duration for the award of degree.
- b) The University shall announce the Board of studies approved list of MOOCs (chosen from NPTEL SWAYAM) corresponding to each engineering programme. (8 credits from Core subjects corresponding to the Engineering programme in which minor degree is sought and 10 or more credits from the Emerging Areas subjects corresponding to the

- Engineering programme in which minor degree is sought) (**appendix-3**) The University shall have the freedom to review and approve additional online platforms from time to time.
- c) Students shall be permitted to drop the registered coursework/s and select alternative coursework/s in case they cannot appear for proctored examination/s or complete the examination as per (a)
- d) Students shall choose, online courses totalling to 18 or more credits from the bouquet of approved online courses as defined in a and b.
- e) The students shall earn the credits by only appearing in person to the proctored examination conducted by NPTEL-SWAYAM. No autonomous/affiliated/conducted colleges under the University shall conduct examination and award Credits in lieu of NPTEL-SWAYAM platform to accrue 18 or more credits for the award of Minor specialization degree.
- f) The method of assessment shall be as per the NPTEL-SWAYAM online platform.
- g) The credit equivalence for online NPTEL-SWAYAM courses shall be determined based on the following table.

| On Line Course Duration | Assigned Credit |
|-------------------------|-----------------|
| 4 weeks | 2 |
| 8 weeks | 3 |
| 12 weeks | 4 |

D. Award of Minor specialization Qualification

- a) All the students who successfully complete the courses as prescribed under Additional Coursework and submit their certificates to the University through the Principal of their respective colleges (appendix-4) against the notification issued by the Director (Examination & Evaluation) in time before closure of eighth semester shall be eligible for the Minor specialization qualification.
- b) The Principal of the college shall submit the list of students (**appendix-5**) who are eligible for the award Degree with minor Specialization along with the total credit earned by each student and the corresponding credit score sheet copy to the University, programme wise together with the internal marks of 8^{th} semester.
- c) Those students who cannot/do not complete the specialization courses credit on or before the last date prescribed by the University shall not be considered for the award of Minor specialization qualification. However, they shall be awarded only B.E. Degree of parent discipline as per the prevailing norms.
- d) The Minor specialization qualification shall be suffixed to the respective degrees and shown in the Degree certificates as recognition of higher achievement by the student Concerned.
- (e) The CGPA earned by the students shall be only on the basis of students performance in the various semester level examinations conducted by the University/ Autonomous colleges, as the case may be.
- (f) Students shall maintain a SGPA >=8.0 in all the semesters from V to VIII semesters in first attempt only; failing this the student shall discontinue the attempt to earn additional credits.

- (g) Students not having a CGPA >=8.0 at the end of the programme shall not be eligible for the award of specialization even if they have satisfied the additional credits consideration prescribed for specialization degree.
- (h) The Principal of the respective college shall submit to the University the list of such students who fail to satisfy (f) (g) from time to time.
- (i) Additional credits earned for minor specialization from other discipline shall not be considered for CGPA of B.E. programme as well as rank declaration.
- (j) All the students fulfilling conditions for Minor specialization degree shall be entitled to receive their transcripts indicating both the achievements (BE and additional credits from another discipline) of the student concerned.

SANT GADGE BABA AMRAVATI UNIVERSITY AMRAVATI APPLICATION FOR THE REGISTRATION TO B.E. (HONORS) / B.E. with Minor Specialization PROGRAMME

| To, | | |
|--|-------------------------|--------------------------------|
| The Principal, | | |
| | | |
| | | |
| Respected Sir/Madam, | | |
| I, the undersigned, hereby apply for the | registration to | the |
| Programme | | |
| B.E. (Honors) in | | <branch of<="" th=""></branch> |
| Engineering> with specialization in | | < Emerging |
| Area> | | |
| OR | | |
| B.E. in | < Parent | Branch of |
| Engineering> with minor specialization in | | |
| Emerging Area> from | (another | branch) in |
| Engineering & Technology in the faculty of Science | e & Technology at the i | nstitute. |
| 1. Name in Full : | | (In Block Letter |
| Surname First Name | Middle Name | |
| 2. Name of Father / Husband : | | |
| 3. Name of Mother: | | |
| 4. Branch: | Class: III Ye | ar V Semester |
| 5. Enrolment No: | | |
| 6. Gender : Male / Female | | |
| 7. Address for Correspondence: | | |
| | | |
| Mobile No.: | | |
| E-mail ID: | | |

8. (A) Details of Previous Examinations: (enclose photocopies) Examination Year Subject/ Branch Percentage Remark CGPA/ SGPA of Marks XII/ Engineering Diploma I Sem BE II Sem BE III Sem BE IV Sem BE *The lateral entry B.Sc. students shall have cleared all the applicable subjects of First Year in the first attempt only. 9. Fees paid: Rs_____ receipt no /transaction no: _____ **DECLARATION** I, hereby declare that above information is true, correct and authentic. I am aware that I will be eligible to get Under Graduate degree with Honours/minor specialization only, if I successfully complete additional university recommended NPTEL-SWAYAM courses through MOOCS (Equivalent to 18 credits or more) within the minimum prescribed duration for the award of degree) and maintain a SGPA >=8.0 in all the semesters from V to VIII semesters in first attempt only without any grace marks and secure 8.0 or above CGPA. • It will be my responsibility to follow NPTEL-SWAYAM Site http://nptel.ac.in/ as per the NPTEL policy and norms for registration of courses. I will register for these courses through NPTEL directly as per the course offering in Odd/Even Semesters at NPTEL. • After successful completion of these MOOCS courses I shall, provide the successful completion NPTEL status/certificates to the University through the college of study only. Place: _____

Note: Attach the self-attested photo copies of the relevant documents.

Date:

(Signature & Name of the Applicant)

(Proforma for Submitting the list of students for registration) <u>List of Students applied for registration</u> (submit separate list programme wise/ specialization wise)

1. Name of the Institute/College:_____

| 2. | Depart | ment : | | | | | | | | | |
|---------------------------|---------|---------------|-------------|--------------|-------------|----------|--------------------|---------------------|--------|--|--|
| 3. | Honors | | | | | | (emergi | ng Area) | | | |
| / Minor specialization in | | | | from : | | | | | | | |
| | etailed | | | | | | • | | | | |
| | Sr | Name | Enroll | Parent | Honors | Emergi | Disciplin | Registr | Remark | | |
| | | of the | ment | Branch | OR | ng Area | efor | ation | | | |
| | | Student | No | | Minor | | Minor | fees | | | |
| | | | | | Special | | specializ | paid | | | |
| | | | | | ization | | ation (if | (rs) | | | |
| | | | | | | | applicable) | | | | |
| | 1 | | | | | | | | | | |
| | 2 | | | | | | | | | | |
| | 3 | | | | | | | | | | |
| We h | ave ver | ified the eli | igibility (| of the stude | ents and ar | e recomm | ended for re | gistration | | | |
| Date | e : | | | | | | Princ (Signatur | cipal e with Sea | 1) | | |

Board of studies approved list of NPTEL – SWAYAM programme

| Sessio | n: |
|--------|---|
| Board | of Studies in : Engineering |
| Facult | y of Science & Technology |
| Give s | eparate list in the proforma |
| 1. | List for B.E. Honors courses corresponding Engineering programme – emerging areas |
| 2. | List for B.E. Honors courses corresponding to other courses (Soft Skill / Emotional |
| | Intelligence / Intellectual Property etc.) |
| 3. | List for Minor Speciatization (core subjects) |
| 4 | List for Minor Speciatization (emerging areas) |

| Sr No | NPTEL Course Id | Course Name | SME Name | Institute | Course Duration in weeks | Credits | Starts on | Remark |
|----------|-----------------------|----------------|-------------|-----------|--------------------------------|---------|--------------|--------|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Proforma for submission of NPTEL Certificates

| T | T o, The Principal | 1 | | | | | | | |
|----------------------------|--|--|--------------------------|----------|----------------------|------------------------|-----------------------|--------------------------------------|-----------|
| | - | | | | _ | | | | |
| | Respected Sir/M I, the under ard of | | hereby s | submit n | ny NPTE | L-SWAYA! | M certifica | tes for | the |
| | B.E. (Hono | rs) i | in | | | | | _ <b1< th=""><th>ranch of</th></b1<> | ranch of |
| En | ngineering> wi | th specia | alization ii | n | | | < | Emergi | ing Area> |
| | OR | | | | | | | | |
| | B.E. in | | | | | | < Parent | t Bran | ch of |
| En | ngineering> v | | | | | | | | |
| | Emerging Are | | - | | | | | | |
| En | gineering & Te | chnolog | | | | | | - | , |
| 4. 5. 6. 7. 8. | Year of Admis Gender: Male Name of Fathe Name of Moth Branch: SGPA earned waited) NPTEL Certifi | / Female er / Husb er: in sen | and : | | | | | | (resul |
| r | Title as on NPTEL certificate | code (if any) | Date of NPTEL Exam | Score | Month and year | Duration (in weeks) | Credits earned | Dom ain cate gory | Remark |
| | | | | | | | | | |
| | | | | | | | | | |
| | Enclose cop | y of cert | ificates | | | | | | |
| Da | ite: | | | | | (5 | Studen signature & | |) |

List of students eligible for the award of Honors / Minor specialization degree (please send separate List)

| | 3. Hono | rs in: | : | zation i | | | | (emergin | ig Are | a) | |
|--------|-------------------------------|------------------------------|--|--|----------------------------|---------------------|-----------|---------------------------------------|---------------------------|----------------------------|------------|
| | S/ | Mino | speciali | zation i | n | | | from | an | other | discipline |
| | 4. NPTE | EL Cei | tificates: | | | | | | | | |
| S r | Name of the Stude nt | Enr oll me nt No | Semester : SGPA | Title as on NPTEL certific ate | Dom ain cate gory | Date of NPTE L Exam | Scor e | Duratio n (in weeks) of NPTE L course | Cre dits earn ed | Total Credits Earned | Rema rk |
| 1 | | | Sem I: SPGA Sem II Sem IV Sem V Sem VI Sem VII | 1.Title 2 3 4 5 6 7 8 | | | | | | - | |
| 2 | | | Sem I: Sem III Sem IV Sem V Sem VI Sem VII | 1. 2 3 4 5 6 7 8 | | | | | | - | |

Date: Principal (Signature with Seal)

अभियांत्रिकी व तंत्रशास्त्र अभ्यासक्रमांची समेकक्षता निश्चित करणे

महाराष्ट्र शासन

उच्च व तंत्र शिक्षण विभाग, शासन निर्णय क्रमांक संकिर्ण-२०१३/ (४५/१३)/तां.शि-२

> मंत्रालय विस्तार भवन, मुंबई ४०० ०३२ दिनांक : २३ मे, २०१४

संदर्भ:

- 9. अखिल भारतीय तंत्रशिक्षण परिषदेची अधिसूचना क्र. ३७-३/Legal/२०१०, दि. ५/३/२०१०
 - २. शासन अधिसुचना, उच्च व तंत्र शिक्षण विभाग क्रमांक से.प्र.नि.- २०१०/ (२६४/१०)/ तां.शि-२, दि. १० सप्टेंबर २०१२
 - 3. शासन निर्णय, उच्च व तंत्र शिक्षण विभाग क्रमांक संकिण-२०१३/ (४५/१३) /तां.शि-२,
 - ४. दिनांक ६/५/२०१३
 - ५. शासन निर्णय, उच्च व तंत्र शिक्षण विभाग क्रमांक संकिण-२०१३/ (४५/१३) दिनांक ९/७/२०१३
 - ६. शासन निर्णय, उच्च व तंत्र शिक्षण विभाग क्रमांक संकिर्ण-२०१३/ (४५/१३) दिनांक १९/७/२०१३
 - ७. संचालक, तंत्र शिक्षण, महाराष्ट्र राज्य यांचे पत्र क्र. ४अ/आस्था/२०१३/४५१, दि.१९/९/२०१३
 - ८. संचालक, तंत्र शिक्षण, महाराष्ट्र राज्य यांचे पत्र क. ४अ/आस्था/२०१४/१०९, दि.२४/२/२०१४
 - ९. संचालक, तंत्र शिक्षण, महाराष्ट्र राज्य यांचे पत्र क्र. ४अ/आस्था/२०१४/१८९, दि.१०/४/२०१४ १०.संचालक, तंत्र शिक्षण, महाराष्ट्र राज्य यांचे पत्र क्र. ४अ/आस्था/२०१४/२०४, दि.२२/४/२०१४

प्रस्तावना:

अखिल मारतीय तंत्रशिक्षण परिषदेच्या संदर्भ - 9 मधील अधिसूचनेन्वये या परिषदेच्या अखत्यारितील अभ्यासक्रम राबविणाऱ्या पदव्युत्तर पदवी, पदवी तथा पदविका स्तरावरील शैक्षणिक संस्थांत नियुक्त करावयाच्या शिक्षकीय पदांचे सुधारित सेवाशर्ती व या पदांचर नियुक्तीसाठी आयश्यक शैक्षणिक अर्हता तथा अनुभव निश्चित करण्यात आला आहे. सदर अधिसूचनेच्या अनुषंगाने शासकीय अभियांत्रिकी महाविद्यालय व तंत्रनिकेतने यांत कार्यरत शिक्षकीय पदांचे सेवाप्रवेश नियम संदर्भ - २ मधील अधिसूचनेन्वये सुधारित करण्यात आले आहेत. सदर अधिसूचनेनुसार शासकीय अभियांत्रिकी महाविद्यालये व तंत्रनिकेतने यांत कार्यरत शिक्षकीय पदांचर नियुक्तीसाठी अखिल भारतीय तंत्रशिक्षण परिषदेने ठरविल्याप्रमाणे शैक्षणिक अर्हता व अनुभव निर्धारित करण्यात आला आहे. अखिल भारतीय तंत्रशिक्षण परिषदेने तदर पदांचर नियुक्तीसाठी शैक्षणिक अर्हता निश्चित करण्यात संविद्य करताना संविद्य अभियांत्रिकी शाखेतील पदवी / पदव्युत्तर पदवी अथवा समकक्ष अर्हता असे नमूद केले असून Ph. D या अर्हतेशी समकक्ष अर्हता निर्धारित करण्याची कार्यपध्यतीही संदर्भ-9 मधील अधिसूचनेत नमूद केली आहे. सदर यांव विचारत घेता अभियांत्रिकी महाविद्यालये तथा तंत्रनिकेतनात शिक्षकीय पदांचर नियुक्तीसाठी

विविध अभियांत्रिकी शाखेतील समकक्षता राज्यात कार्यरत सर्व विद्यापीठांच्या सहमतीने निधारित करणे आवश्यक होते. यास्तव संदर्भ -२ मधील अधिसूचनेच्या पदवी स्तरावरील संस्थात नियुक्तीसंदर्भातील नियम -७ तथा पदविका संस्थातील नियुक्तीसंदर्भातील नियम-६ अन्वये विविध अभियांत्रिकी शाखेतील पदवी व पदव्युत्तर पदवी स्तरावरील समकक्षता निश्चित करण्याची बाब शासनाच्या विचाराधीन होती. त्यानुसार संदर्भाधिन क्रमांक ३ व ५ येथील अनुक्रमे शासन निर्णय, उच्च व तंत्र शिक्षण विभाग क्रमांक संकिर्ण-२०१३/(४५/१३)/तां.शि-२, दिनांक ६/५/२०१३ व दिनांक ११/७/२०१३ अन्वये अभियांत्रिकी अभ्यासक्रमांच्या विविध शाखांतर्गत व अभियांत्रिकी अभ्यासक्रमाशी निगडित इतर अभ्यासक्रमांची पदवी व पदव्युत्तर पदवी स्तरावरील समकक्षता निर्धारित करण्यात आली होती. तथापि शासनाच्या दि .६ मे , २०१३ रोजीच्या शासन निर्णयानुसार ठरविण्यात आलेल्या समकक्षतेनुसार अध्यापकीय पदांवर नियुक्तीसाठी लोकसेवा आयोगामार्फत जाहिरात देण्यात आली होती, सदर जाहिरातीनुसार समकक्षता नमृद नसल्यामुळे ज्या उमेदवारांना आयोगाकडे अर्ज करता आले नाहीत त्यांची निवेदने शासनास प्राप्त झाली होती. अभ्यासक्रमांच्या समकक्षतेबाबत अधिकाअधिक समावेशक निर्णय दि. ६ मे, २०१३ रोजीच्या शासन निर्णयानुसार जरी घेण्यात असला तरीही देशांतर्गत कार्यरत स्वायत्त संस्थांत व विदयापीठात दरवर्षी नवीन क्षेत्रातील व नवीन नावाने विविध विदयाशाखांचे अभ्यासक्रम सुरु होत आहेत. अशा परिस्थितीत ज्या विद्याशाखा दि. ६ मे , २०१३ रोजीच्या शासन निर्णयात नमूद नसतील त्या मूळ अभियांत्रिकी शाखेशी समकक्ष आहे किंवा कसे याबाबत तङ्गांच्या सहमतीने निर्णय घेणे घेण्याकरीता तसेच संदर्भाधिन शासन निर्णयात सहभागी नसलेल्या व वादादीत असलेल्या अहंतासंबंधात राज्यात कार्यरत सर्वं विद्यापीठांचे प्रतिनिधी व विषयतज्ञ यांचे अभिप्राय घेऊन सुधारीत अहवाल सादर करण्याच्या सूचना संवालकांना देण्यात आल्या होत्या. त्यानुसार संवालनाच्या स्तरावर अभियांत्रिकी महाविद्यालयातील विद्याशाखांची समकक्षता निश्चिती करण्याबाबत दि. ४/१२/२०१३ रोजी बैठक घेऊन विद्याशाखातील समकक्षता ठरविण्यात आली व सदर समकक्षता मान्यतेकरीता सर्व अकृषी विद्यापिठे व स्वायत संस्थांच्या सहमतीकरीता संचालकांनी पाठविली होती. राज्यातील विद्यापीठांनी व स्वायत्त संस्थांनी सुचविल्याप्रमाणे व त्यांनी दर्शविलेल्या सहमतीनुसार अभियांत्रिकी व तंत्रशास्त्र, तंत्रनिकेतन व औषधनिर्माणशास्त्र महाविद्यालयांत अध्यापकांच्या विविध पदावर नियुक्तीसाठी शैक्षणिक अर्हतेच्या समकक्षतेचा प्रस्ताव संचालक, तंत्र शिक्षण यांनी संदर्भ क्र. ७, ८ व ९ येथील अनुक्रमे दि. २४ फेब्रुवारी, २०१४, दिनांक १० एप्रिल,२०१४ व दिनांक २२ एप्रिल,२०१४ च्या पत्रानुसार शासनास सादर केला आहे. तसेच शैक्षणिक अर्हतेच्या समकक्षतेबाबत विसंगती निर्माण होक नये म्हणून संदर्भ क्र. ३ व ५ येथील अनुक्रमें दिनांक ६/५/२०१३ व दिनांक ११/७/२०१३ चे शासन निर्णय अधिक्रमीत करुन शासन स्तरावरुन निर्णय घेण्यात यावा असे संचालनालयाने कळविले आहे. त्यानुसार संदर्भ -२ मधील अधिसूचनेच्या पदवी स्तरावरील संस्थांत नियुक्तीसंदर्भातील नियम -७ तथा पदविका संस्थातील नियुक्तीसंदर्भातील नियम-६ अन्वये विविध अभियांत्रिकी शाखेतील पदवी व पदव्युत्तर पदवी स्तरावरील समकक्षता निश्चित करण्याची बाब शासनाच्या विचाराघीन होती.

शासन निर्णय:-

शैक्षणिक अर्हतेच्या समकक्षतेबाबत विसंगती निर्माण होऊ नये म्हणून या प्रकरणी निर्गमित करण्यात आलेले संदर्भ क. ३ व ५ येथील अनुक्रमे दिनांक ६/५/२०१३ व दिनांक १९/७/२०१३ चे शासन निर्णय अधिक्रमीत करण्यात येत आहे.

संवर्भ -२ मधील अधिसूचनेच्या पदवी स्तरावरील संस्थांत नियुक्तीसंदर्भातील नियम -७ तथा पदिका संस्थातील नियुक्तीसंदर्भातील नियम - ६ मधील तस्तुदीनुसार संदर्भ -७, ८ व १ मध्ये नमूद केलेल्या पत्रान्वये संचालक, तंत्रशिक्षण यांनी अभियांत्रिकी शाखांतर्गत समकक्षता निश्चित करण्यासाठी दिनांक ४/१२/२०१३ रोजी आयोजित केलेली बैठक, राज्यातील विद्यापीठांनी व स्वायत्त संस्थांनी सुचिवल्याप्रमाणे व त्यांनी दर्शविलेल्या सहमतीनुसार अभियांत्रिकी व तंत्रशाख, तंत्रनिकेतन व औषधिनर्माणशाख महाविद्यालयांत अध्यापकांच्या विविध पदावर नियुक्तीसाठी शैक्षणिक अर्हतेच्या समकक्षतेचा प्रस्ताव संचालनालयाने शासनास सादर केला आहे. सदर अहवाल विचारात घेऊन अभियांत्रिकी व तंत्रशाख, तंत्रनिकेतन व औषधिनर्माणशाख अभ्यासक्रमांच्या विविध शाखांतर्गत व अभियांत्रिकी अभ्यासक्रमाशी निगडित इतर अभ्यासक्रमांची पदवी व पदव्युक्तर पदवी स्तरावरील समकक्षता खालीलप्रमाणे निर्धारित करण्यात येत आहे.

| अ.क. | अभियांत्रिकी शाखा/ इतर अभ्यासकम | पदवी स्तरावरील समकक्षता | पदव्युत्तर पदवी स्तरावरील समकक्षत |
|------|------------------------------------|--|------------------------------------|
| (1) | .00 | (10) | (IV) |
| 9 | Civil Engineering | Civil Engineering | Structural Engineering |
| | | Civil and Water Management | OWI Engineering |
| | | Engineering | Geotech Engineering |
| | | Environmental Engineering | Transportation Engineering |
| | The World | Structural Engineering | Town and Country Planning |
| | | Construction Engineering / | Hydraulic Engineering |
| | | Technology | Remote sensing |
| | | | Environmental Engineering |
| | | | Water Management |
| | | | Water Resources & Environmental |
| | | | Engineering |
| | Ton The State of the | | Building Science & Technology |
| | | | Infrastructure Engineering & |
| | | | Construction Management |
| | | | Building Construction & Technology |
| | | | Structural Dynamics & Earthquake |
| | | A STATE OF THE PARTY OF THE PAR | Engineering |
| | | | Earthquake Engineering |
| | | | Water Resources Engineering |

A=254

शासन निर्णय क्रमांका संकिर्ण-२०१३/ (४५/१३)/तो.शि.न

| | | | Soil Engineering |
|---|--|------------------------|----------------------------------|
| | | | |
| | | | |
| 5 | Mechanical/Automobile | Mechanical Engineering | Mechanical |
| | Engineering | Automobile Engineering | Automobile |
| | | Production Engineering | CAD/CAM |
| | | Industrial Engineering | Aerospace |
| | | | Aeronautical |
| | | | M/C Design |
| | | | Heat Power Engineering |
| | | | Thermal Engineering |
| | | | Design Engineering |
| | | | Manufacturing |
| | | The second second | Computational Fluid Dynamics |
| | | | Mechatronics |
| | | | Mechanical Design Thermal Power |
| | | | Production Engineering |
| | The state of the s | | Manufacturing Engineering |
| | | | Robotics & Automation |
| | | | Metallurgy & Material Science |
| | | | Robotics |
| | | | Industrial Engineering |
| | THE STATE OF | *PTM -> | Product Lifecycle Management |
| 3 | Production Engineering/ | Production Engineering | Production |
| | Industrial Engineering | | CAD/CAM |
| | | Industrial Engineering | Thermal Engineering |
| | | Mechanical Engineering | Aerospace |
| | | Automobile Engineering | Manufacturing |
| | | | Aeronautical |
| | | | Industrial Engineering |
| | | | Product Life Cycle |
| | De la Contraction de la Contra | | Management |
| | | | (Mechanical/Production) |
| | 100 | | Computer Aided Engineering (CAE) |
| | | *PTM -> | Metallurgy & Material Science |

* Productions Technology & Management

शासन निर्णय क्रमांका संकिर्ण-२०५३/ (४५/५३)/ता क्रि-२

| A | Electronics Engineering | Electronics Engineering | Electronics |
|---|-------------------------|--------------------------------------|------------------------------------|
| | And Electronics & | Electronics & Telecommunication | VLSI & Embedded SYS |
| | Telecommunication | Digital Electronics | Digital System |
| | Engineering | Electronics & Communication | Signal Processing |
| | | Industrial Electronics | Communication Network |
| | | Communication Engineering | Microwave |
| | 910 | Electronics and Power Engineering | Power Electronics |
| | | Electronics Technology | Communication Engineering |
| | | Electronics & Communication | Electronics Design & Tech |
| | | Technology | Electronics & Telecom |
| | LA FERRE | | Digital Electronics |
| | | | Digital Communication |
| | | | Software System |
| | | | Electronic Instrumentation |
| | STATE OF THE PARTY OF | | VLSI Design |
| | | | Radio Frequency Design & |
| | | | Technology |
| | The state | 122 4 3 5 6 | Embedded System Technology |
| | | | Sensor System Technology |
| | | | Computer Technology |
| | | | Microwave & Millimetre Engineering |
| | | | Automotive Electronics |
| | | | Power Electronics & Drives |
| | | | Biomedical Engineering |
| | | | Wred & Wireless Communication |
| | The part of | | Electrical-Control System |
| | | | VLSI Design |
| | | | Electronics & Technology |
| 4 | Electrical Engineering | Electrical Engineering | Electrical Engineering |
| | | Electrical & Power | Power System |
| | | Electrical Electronics & Power | Electrical Communication |
| | | Power System Engineering | Power Electronics |
| | | Electrical & Electronics Engineering | Power Electronics & Drives |
| | | Electronics & Power | Control System |
| | Calent Over | | System & Control |
| | S. Barth | | Electrical Machine Drives |
| | | | Electrical Power System |
| | SERVICE STATE | HTX EXCENSION IN | Instrumentation Engineering |
| | Section 1 | | Electrical Machines and Drives |

पृष्ठ १२ पेकी ५

शासन निर्णय कमांका संकिर्ण-२०१३/ (४५/ १३)/ता.शि.-२

| 6 | Computer Engineering / | Computer Science & Engineering | Computer Engineering |
|-----|--|--|------------------------------------|
| | Information Technology | The state of the s | Computer Science & Engineering |
| | | Computer Technology | |
| | | Information Technology | Computer Technology |
| | | Computer Science and | Information Technology |
| | THE COLUMN | Technology | Software Engineering |
| | | | Computer Network |
| | | Computer Solence and Information | Web Technology |
| | | Technology | Data Bases |
| | | | Information Security |
| | | | Cytier Security |
| | | | Computer & Information Technolog |
| | | THE THE STREET | Computer & Communication |
| | DEVISION OF | DESCRIPTION OF THE PARTY OF THE | Engineering |
| | THE REPORT OF | A PARTICIPATION OF THE PARTICI | Computer System Engineering |
| | | | Hardware Design |
| | TO WITH THE | AND THE PARTY OF | Sensor Network Engineering |
| | | | System Software Engineering |
| | SHALL TO SEE | | Computer & Communication |
| | STUTE LATER | | Advanced Programming Logic |
| | | | Artifical Integlience and Robotics |
| | | TO A SECURE LINE | Embedded System |
| | | | Computer Technology and |
| | | MI AS ENDESER | Application |
| | | | Computer Science & Technology |
| | printed the latest the | | Computer Science & Technology |
| | 100000000000000000000000000000000000000 | | Computer Network & Information |
| | | | Security |
| 23 | | | Electronics Engineering |
| | Salsy SEE THE | la l | Electronics & Telecommunication |
| | | Barrier March | Engineering |
| B | Instrumentation | Instrumentation Engineering | Instrumentation Engineering |
| | Engineering | Instrumentation & Control | Instrumentation & Control |
| 6 | | Control Engineering | Control Engineering |
| 1 | A THE REAL PROPERTY. | Bio Medical Engineering | Bio Medical Engineering |
| | Company of | Blo Electronics | Bio Electronics |
| 13 | CALL STREET | Electronic Instrumentation | Analytical Instrumentation |
| - 3 | | Bio Medical Instrumentation | Electronic Instrumentation |
| | | AND THE RESERVE OF THE PARTY OF | |
| 1 | | HIS STATE OF THE STATE OF | Bio Medical Instrumentation |
| | | | Electronics |

पृष्ठ १२ पेकी ह्

अस्ति मिर्णय क्रमांकः संविध्याँ-२०१३/ (४५/१३)/सां जिन्

| 6 | Metallurgy Engineering | Metallurgical Engineering Material Engineering Material Technology Material Science and Metallurgy | Metallurgical Engineering Material Engineering Material Technology Metal Coating Technology Mechanical Engineering Production Engineering Industrial Engineering Process Metallurgy Physical Metallurgy |
|----|--|---|---|
| 9 | Chemical Engineering / | Chemical Engineering | Powder Technology Minterial Science Chemical Engineering |
| | Chemical Technology | Chemical Technology Petrochemical Engineering Petroleum Engineering Petrochemical Technology Polymer 7ech | Chemical Technology Petrochemical Engineering Petrochemical Technology Environmental Engineering Environmental Science & Engineering |
| 90 | Bio-Medical Engineering | Bio-Medical Engineering Instrumentation Medical Electronics Bio-Medical Instrumentation | Bio-Medical Engineering Instrumentation Medical Electronics Bio-Medical Instrumentation |
| 99 | Food Technology | Food Technology Food Engineering & Technology | Food Technology Food Craft Engineering Food Engineering |
| 92 | Mining Engineering | Mining Engineering | Mining Engineering Mine Safety Engineering |
| 93 | Paint Engineering / Technology Oil Engineering | Paint Engineering Paint Technology Oil Engineering | Paint Engineering Oil Engineering Surface Coating |
| 18 | Paper Technology | Paper Technology & Pulp Technology Paper Technology | Paper Technology & Pulp Technology Paper Technology |
| 14 | Plastic Engineering | Plastic Engineering / Technology Plastic & Polymer Engineering Polymer Engineering / Technology | Plastic Engineering / Technology Plastic & Polymer Engineering Polymer Engineering/ Tech |

| 95 | Printing Engineering | Printing Engineering / Technology | Printing Engineering /Technology |
|-----|--|------------------------------------|------------------------------------|
| | /Technology | Printing Engineering & Graphics | Printing Engineering & Graphics |
| | | Printing & Packaging Technology | Packaging Technology |
| | | Printing Engineering & | Printing & Packaging Technology |
| | | Communication Tech | Printing Engineering & |
| | | | Communication Tech |
| 309 | Textile Engineering | Textile Engineering / Tech | Textile Engineering / Technology |
| | | Textile Plant Engineering | Textile Plant Engineering |
| | | Textile Chemistry | Textile Chemistry |
| | | Man Made Textile Tech | Man Made Textile Tech |
| | | Fashion Technology | Fashion Technology |
| | | Textile Engineering/Tech./ Textile | Textile Engineering / Tech / Plant |
| | 0 | Plant Engineering/Textile | Engineering / Textile Chemical/Man |
| | PHICH. | Chemical/Man Made Textile / | Made Textile/Textile Technology/ |
| | | Textile Technology/Fashion | Fashion Technology |
| | | Technology | Garment Technology |
| 96 | Sugar Technology | Sugar Technology | Sugar Technology |
| | SALE VALUE AND | Section (sectional) | Sugar Plant Engineering Chemical |
| | | | Plant Technology |
| | | | |
| 98 | Geological Engineering | Applied Geology | Applied Geology |
| | | Engineering Geology | Engineering Geology |
| | | Geology | Geology |
| Śū | MCA | Computer Science & Engineering | Computer Application |
| | The state of the s | Information Technology | Computer Science & Engineering |
| | ALTERNATION OF THE PARTY OF THE | | Computer Technology |
| | A PROPERTY OF | Computer Science & Technology | Information Technology |
| | | | Computer Science & Technology |
| 29 | Aerospace / | Aerospace / Aeronautical | Aerospace / Aeronautical |
| | Aeronautical | Engineering | Engineering |
| | Engineering | | |
| 25 | Bio-Technology | Bio-Technology | Bio-Technology |
| | The state of the s | Chemical Engineering | Chemical Engineering |
| | ALL SHAPE | Chemical Technology | Chemical Technology |
| 53 | Marine Engineering | Marine Engineering | Marine Engineering |
| | 11/25/14 | | Mechanical Engineering |
| | | PERMIT | Melding Technology |
| 58 | Packaging Technology | Packaging Technology | Packaging Technology |
| | | Mechanical Engineering | Printing Technology |

शासन निर्णय कमाकः संकिर्ण-२०१३/ (४५/१३)/ता.कि.-२

| | | Printing and Packing Technology | |
|----|--|--|---|
| 29 | Refrigeration And Air Conditioning | Mechanical Engineering Thermal Power Engineering Thermal Engineering | Refrigeration And Air Conditioning Thermal Power Engineering |
| ₹६ | Leather Technology | Leather Technology | Leather Technology |
| 78 | Textiles Chemistry / Manmade Textiles Technology | Textiles Chemistry Or Manmade Textiles Technology | Chemical Engineering Or any Brand of Chemical Technology |
| 20 | Surface Coating Technology | Chemical Engineering Or any Branch of Chemical Technology Surface Coating Technology | Surface Coating Technology Chemical Engineering / Technology Metallurgy/Powder Metallurgy |
| ₹९ | Polymer Engineering Or Polymer Technology Or Polymer Engineering and Technology | Chemical Engineering Chemical Technology Polymer Technology/ Engineering | Polymer Engineering Or Polymer Technology Or Polymer Engineering and Technology Or Osemical Technology |
| 30 | Chemistry | Onemistry Organic Chemistry Inorganic Chemistry Physical Chemistry Analytical Chemistry Applied Chemistry Polymer Chemistry Drug Chemistry Pharmaceuticals Chemistry pesticides & Agro Chemistry | Chemistry Organic Chemistry Inorganic Chemistry Physical Chemistry Analytical Chemistry Applied Chemistry Polymer Chemistry Drug Chemistry Pharmaceuticals Chemistry pesticides & Agro Chemistry Mechanical Chemistry |
| 39 | Mathematics | Mathematics Computational Mathematics Applied Mathematics General Mathematics Mathematics & Statistic | Mathematics Computational Mathematics Applied Mathematics General mathematics Statistics |
| 32 | Physics | Applied Physics Theoretical Physics Modern Physics Physics | Applied Physics Theoretical Physics Modern Physics Solid State Physics |

पृथ्य १२ पेकी ९

| 33 | Geology Or Geo | Contain | |
|-----|---|----------------------------------|---------------------------------------|
| ** | Chemistry | Geology | Geology |
| 38 | Синтадогу | Applied Geology | Applied Geology |
| | 100000000000000000000000000000000000000 | Engineering Geology | Engineering Geology |
| | | Geo Informatics | Geo Informatics |
| | English or | | Geo Chemistry |
| | Communication Skills | English Literature Functional | English |
| | CONTRACTICATION SIGNE | English | English Literature |
| | | English | Functional English |
| 34 | Hotel Management & | Hotel Management and Catering | Hotel Management and Caterin |
| | Catering Technology | Technology | Technology, Hospitality Managemen |
| | | | Minagement Or 2 year Pos |
| | | | Graduate Diploma in above field. |
| 35 | Dress Designing & | Dress Designing and Garment | Master's degree in Dress Designing |
| | Garment Manufacturing | Manufacturing or Apparel | and Garment Manufacturing of |
| | December 19 | Manufacturing and Design or | Apparel Manufacturing and Design of |
| | | Garment Manufacturing or Fashion | Garment Manufacturing or Fashion |
| | | Technology | Technology or 2 year Post Graduate |
| | | | Diploma in above field. |
| 319 | Travel & Tourism | Travel and Tourism | Travel and Tourism |
| | MUSE NE | Hospitality Management Hotel | Hospitality Management, Food and |
| | | management and Catering | Oraft or Post Graduate Diploma at |
| | | technology | least 2 year duration in above filed. |
| 34 | Pharmacy | Pharmacy | Pharmacy |
| | Walter Health | | In any specialisation |
| 39 | Pharmaceutics | Pharmacy | Pharmaceutics Bio Pharmaceutics |
| | | | Pharmaceutics Technology |
| | | | Industrial Pharmacy |
| Ro. | Pharmaceutical | Pharmacy | Pharmaceutical Chemistry Medicinal |
| | Chemistry | | Chemistry |
| | | | Medicinal and Natural Products |
| | | | Pharmaceutical Medicinal Chemistry |
| 89 | Pharmacology | Phamacy | Pharmacology |
| | 1500000 | | Pharmacy Practice |
| | | | Clinical Pharmacology |
| | | | Clinical Pharmacy |
| 2 | Pharmacognosy | | |

पृथ्व १२ पैकी १०

| | | | Pharmacognosy and Photochemistry Medicinal Natural Product |
|----|-------------------------|----------|--|
| A3 | Pharmaceutical Analysis | Phamacy | Pharmaceutical Analysis Quality Assurance Quality Assurance Technology |
| 88 | Pharmacy Practice | Pharmacy | Pharmacy Practice Clinical Pharmacy Pharmacology |

राज्यांतर्गत कार्यरत व्यावसायिक अभ्यासक्रमातील पदवी व पदविका स्तरावरील संस्थात नियुक्त्या करताना उपरोक्तप्रमाणे समकक्षता विचारात घेऊन नियुक्त्या करण्यात यांच्या.

सदर शासन निर्णय राज्यांतर्गत कार्यरत सर्व विद्यापीठांच्या सहमतीने निर्गमित करण्यात येत आहे.

सदर शासन निर्णय महाराष्ट्र शासनाच्या www.maharashtra.gov.in या संकेतस्थळावर उपलब्ध करण्यात आला असून त्याचा संकेताक २०१४०५२६१७९१२२४६०८असा आहे. हा आदेश डिजीटल स्वाक्षरीने साक्षांकित करुन काढण्यात येत आहे.

महाराष्ट्राचे राज्यपाल यांच्या आदेशानुसार व नावाने.

AVHAD PRAKASH B

Digitally signed by AVHAC PRAKACH B.
DN: c=81, d=Govt Of Maharachtra;
ou=HIGHER AND TECHNICAL
EDUCATION DIPARTMENT
pistalCode=400031, in-Minerathra;
Un=AVHAC PRAKACH B.
Dote: 2014/03.27 17/0440 = 95307

(प्रकाश आव्हाड)

कार्यासन अधिकारी, महाराष्ट्र शासन

प्रति,

- १. मा. राज्यपाल तथा कुलपती यांचे प्रधान सचिव, राजभवन, मलबार हिल, मुंबई
- २. मा. मुख्यमंत्री / उपमुख्यमंत्री यांचे प्रधान सचिव ,मंत्रालय, मुंबई.
- 3. मा. मंत्री, उच्च व तंत्र शिक्षण यांचे खाजगी सचिव, मंत्रालय, मुंबई.
- ४. मा. राज्यमंत्री, उच्च व तंत्र शिक्षण यांचे खाजगी सचिव, मंत्रालय, मुंबई.
- ५. प्रधान सचिव, उच्च व तंत्र शिक्षण, मंत्रालय, मुंबई.
- ६. सचिव, विद्यापीठ अनुदान आयोग, नवी दिल्ली.
- ७. सचिव, महाराष्ट्र विधानमंडळ सचिवालय, मुंबई
- ८. संचालक, अखिल भारतीय तंत्र शिक्षा परिषद, नवी दिल्ली

- ९. सचिव, महाराष्ट्र लोकसेवा आयोग, मुंबई
- १०.संचालक, तंत्र शिक्षण, महाराष्ट्र राज्य, मुंबई
- ११. कुलसचिव, सर्व विद्यापीठे
- १२.संचालक, इन्स्टिट्यूट ऑफ केमिकल टेक्नॉलॉजी, मुंबई,
- १३.संचालक, वीरमाता जिजाबाई टेक्निकल इन्स्टिट्यूट, माटुंगा, मुंबई,
- १४. संचालक, अभियांत्रिकी महाविद्यालय, पुणे,
- १५. संचालक, श्री. गुरुगोविंदसिंग अभियांत्रिकी महाविद्यालय, नांदेड
- १६. सर्व विभागीय सहसंचालक, तंत्रशिक्षण
- १७.प्राचार्य, सर्व शासकीय अभियांत्रिकी महाविद्यालये/ तंत्र निकेतने
- १८. प्राचार्य, सर्व शासन अनुदानित अभियांत्रिकी महाविद्यालये/ तंत्रनिकेतने
- १९. सचिव, महाराष्ट्र राज्य तंत्र शिक्षण मंडळ, मुंबई
- २०.महालेखापाल (लेखा व अनुज्ञेयता) महाराष्ट्र १/२, मुंबई/नागपूर
- २१.महालेखापाल (लेखापरीक्षा) महाराष्ट्र १/२, मुंबई / नागपूर
- २२.अधिदान व लेखा अधिकारी मुंबई/ निवासी लेखा परीक्षा अधिकारी
- २३. उच्च व तंत्रशिक्षण विभागातील सर्व कार्यासने
- २४.महासंचालक, माहिती व जनसंपर्क मंत्रालय, मुंबई
- २५.निवड नस्ती तांशि-२

Sant Gadge Baha Amravati University, Amravati

Minutes of the On-line series of meetings of the Committee constituted by the Hon'ble Vice-Chancellor regarding preparation of the Schemes for the Institution of B.F. (Honors) and additional Minor degree to be implemented from the academic year 2021-22 held on 28/04/2021, 4/05/2021 and 10/05/2021 as under a

The following members were present for the meeting.

| Sr.No | Name of the member | Date of meeting | | | |
|-------|----------------------------|-----------------|-----------|------------|--|
| | | 28.04.2021 | 4:05:2021 | 10.05.2021 | |
| 1 | Dr.G.R. Bammote (C) | l, | P | P | |
| 2 | Dr.D.S.Ingolc (M) | P | P | P | |
| 3 | Dr.S.K. Deshimikli (M) | P | A | P | |
| 4 | Dr.P.B.Patil (M) | P | P | P | |
| 5 | Dr.P.V Thorat (M) | p | ٨ | p | |
| 6 | Dr.M. Anque M. Junaid. (M) | P | P | P | |

At the outset of the meetings, Deputy Registrar (Acad.) welcomed the Charpetson and the members present for the meeting and requested the Charperson to initiate the agenda of the meeting. The Charperson also welcomed all the members present for the meetings of the Committee and thanked the Hon Vice Chancellor for giving opportunity to work for the cause on behalf of all the members of the committee.

Following stems had been transacted in the meeting.

Item No. 1 :

Proposals received from the Chairpersons Dr G.R.Bamnote & Dr D.S.Ingole regarding Institution of B.E.(Honors) degree and Additional Minor degree

The Committee considered and perused the proposals and related documents enclosed vide Page Nos A 7294 to A-7299 and unanimously resolved to recommend the institution of both the degrees to the authorities for implementation from session 2021-72 on wards for Third Year and 2022-23 onwards for Final year BE.

L. B. F. (Honours) 2. B.E. with Minor specialization

The committee decided to drop the third proposal of B.F. (Core Branch) with specialization in remerging area), however, it may be considered in future on the recommendations of the respective board of studies.

Item No. 2:

Draft Schemes for Institution of B.F. (Honors) degree and Additional Minor degree

The committee refered the following documents for prepariong the draft schemes for recommendation to institution of B. F. (Honors) degree and B.E. with Minor specialization to the appropriate authorities:

- 1. AICTE Model Curriculum for Undergraduate degree courses in Engineering & Technology.
- 2. AICTE Lester no. AICTE/AB/WR/FAT/2019-20 dt. 13.11/2019
- DTE letter no. 2/NGC/Approval/2019/1528 datest 20.11/2019.
- 4. AICTE Approval Process Hand book 2020-21, APIE 2021-22. Chapter 7.
- 1. B.F. (Honors): A new academic degree B.F. (Honors) to be introduced in order to facilitate the students to choose additionally the specialized courses of their choice and build their competence in a specialized area. After successful completion of 164 credits in general, a student shall be eligible to get Under Graduate degree in Engineering. A student shall be eligible to get Under Graduate degree with Honours only, if he/she completes additional university recommended courses only (equivalent to 18 or more credits) through MOOCs.

B.E. (Honors) in <Branch of Engineering> with specialization in <Emerging Area>

1

Eg: B.E.(Honors) Civil Engineering with specialization in Sustainability Engineering

B.E.(Honors) Mechanical Engineering with specialization in Robotics

B.E.(Honors) Electrical Engineering with specialization in Electric Vehicles

B.E. (Honors) Electronics Engineering with specialization in Sensors Technology

B.E. (Honors) Computer Science & Engineering with specialization in Al & MI.

B.E.(Honors) Chemical Engineering with specialization in Waste Technology

| Semester | Successfully completed Board MODCs (chosen for | of studies approved courses through om NPTEL - SWAYAM) | |
|--------------------|--|--|-------|
| | Engineering Programme | like soft skill/ emotional Intelligence/Intellectual Property etc | |
| V | | The state of the s | Total |
| VI | Maximum 2 courses in a semester, total minimum 16 | 1 | |
| VII | credits to earn in last four | Minimum 2 credits to earn during the last four semesters | |
| VIII | semesters | the sast tour semesters | |
| Total | | | |
| Minimum credits | 16 | 2 | 18 |

2. B.F. with Minor specialization: A new academic degree B.F. with minor specialization to be introduced with a view to enhance the employability skills and impart deep knowledge in emerging areas which are usually not being covered in Undergraduate Degree credit framework. B.F. with Minor specialization Degree will carry 18 to 20 credits in addition to the credits essential for obtaining the Under Graduate Degree in Major Discipline (i.e. 164 credits in general).

Minor specialization in Emerging/ Multidisciplinary Areas in Under Graduate Degree Courses may be allowed where a student of another Department shall take the minimum additional Credits of 18 or more and get a degree with minor of another Department Students, who are desirous of pursuing their special interest areas other than the chosen discipline of Engineering / Technology, may opt for additional courses in minor specialization groups other than their parent department

B.E. in <Parent Branch of Engineering> with minor in <Emerging Area from another branch of Engineering> (refer page 98-99-4PH 2021-22)

Eg. B.E. (Mechanical Engineering) with minor in Artificial Intelligence and Machine Learning

| Semester | MOOCs (chosen from NPTEL - Engineering programme in | f studies approved courses through SWAYAM) corresponding to the which minor degree is sought | |
|-----------------------------|--|--|-------|
| W. | Core subjects | Emerging Areas subjects | Testa |
| VI VII VIII | Minimum 8 credits to carn in last four semesters | Maximum 2 courses in a semester, Minimum 10 credits to earn during the last four semesters | |
| Total Minimum credits | 8 | 10 | 18 |

Item No. 03:

Draft provisions regarding Institution of B.E.(Honors) degree and Additional Minor degree

The Committee discussed in detail on preparation of the draft provisions of the Course, eligibility criteria for registration, Registration Procedure. Additional Coursework and the award of the additional qualification for both the degrees and prepared the provisions as per Annexure-L

Recommendation: It was decided to recommend to the appropriate authorities for institution of the degrees - BE. (Honors) and B.E. with minor specialization.

Confirmation of minutes:

The copy of the minutes of the On-line meetings was circulated to the members by email and consent for confirmation of minutes was sought and confirmed. The minutes were confirmed and submitted for recommendation to the appropriate authorities for institution of the degrees (BE.(Honors) and B.E. with Minor specialization)

Dv G R Barmote (Charman)

Dr.D.S.Ingole Dr.S.K.Deshmikli Dr.P.B.Patil Dr.P.V.Thorat Dr.M.Atique M.Junaid

Provisions

Definition:

"Honors" means degree awarded by the University as a higher recognition awarded to a well performing UG student on earning the specific extra credits after satisfying the relevant Degree award conditions.

"Minor specialization" means degree awarded by the University as a higher recognition awarded to a well performing UG student on earning the specific extra credits of another department after satisfying the relevant Degree award conditions

"MOOCs": Massive Open Online Courses in a variety of disciplines available at both introductory and advanced levels, accessible from e-resources in India and abroad.

"NPTEL": "National Programme on Technology Enhanced Learning" is an Indian online learning platform for university-level science, technology, engineering, and mathematics subjects. It is funded by Ministry of Human Resource and Development, Government of India jointly developed by Indian Institutes of Technology and Indian Institute of Science.

"SWAYAM": "Study Webs of Active-Learning for Young Aspiring Minds" is an Indian Massive open online course (MOOC) platform, an initiative by Government of India under Digital India to give a coordinated stage and free entry to web courses, covering all advanced education, High School and skill sector courses

Applicable to students admitted to (Third Year 2021-22) onwards

The student can opt for any one of the following:

- I. B. E. (Honors) Programme
- 2. B.E. with Minor specialization

B. E. (Honors) degree

A. Eligibility Criteria for Registration

Every student of B.E. undergraduate programme of the University intending to register for the Honors qualification shall fulfil the following academic requirements:

(a) Registration to 'Honors' qualification shall be done in the beginning of fifth semester.

(b) The Registrants shall have obtained SGPA of not less than 7.5 in every semester in the first attempt only (without any history of arrears) till fourth semester.

(c) The lateral entry diploma/B.Sc. students shall have obtained SGPA of 8.0 or more in HI & IV semester in the first attempt only.

(d) The lateral entry B.Sc. students shall have cleared all the applicable subjects of First Year in the first attempt only along with criteria b.

B. Registration Procedure

a) Any student meeting the eligibility criteria specified above and intending to register for the Honors qualification shall apply to the Principal of his/her college in the prescribed form

(appendix-1) along with the prescribed application fees within 10 working days after notification by the University.

b) The principal should submit the list of eligible students for registration to the University in

the prescribed format (appendix-2).

c) There shall be no limit on the intake of students for registration for the Honors qualification. All the applicants fulfilling the eligibility shall be free to register for the Honors qualification provided, he/she has not applied for registration for B.E. with Minor specialization.

d) The college shall maintain the record and status of students registered.

C. Additional Coursework

- a) In addition to the courses prescribed by the University to be completed successfully in the remaining semesters, that is, fifth to eighth for the relevant degree award, each student registered for the Honors qualification shall have to take up the coursework as notified by the University from NPTEL - SWAYAM within the minimum prescribed duration for the award of degree.
- b) The University shall announce the Board of studies approved list of MOOCs (chosen from NPTFL SWAYAM) corresponding to each engineering programme. (16 credits from corresponding Engineering programme and 2 or more credits from Soft Skill / Emotional Intelligence / Intellectual Property etc.). (appendix-3). The University shall have the freedom to review and approve additional online platforms from time to time.
- c) Students shall be permitted to drop the registered coursework/s and select alternative coursework/s in case they cannot appear for proctored examination/s or complete the examination as per (a)
- d) Students shall choose, online courses totalling to 18 or more credits from the bouquet of approved online courses as defined in (n-c)
- e) The students shall earn the credits by only appearing in person to the proclored examination conducted by NPTEL-SWAYAM. No autonomous/affiliated/conducted colleges under the University shall conduct examination and award credits in lieu of NPTEL-SWAYAM platform to accrue 18 or more credits for the award of Honors degree.

The method of assessment shall be as per the NPTEL-SWAYAM online platform.

 g) The credit equivalence for online NPTF1-SWAYAM courses shall be determined based on the following table.

| On Line Course Duration | Assigned Credit |
|-------------------------|-----------------|
| 4 weeks | 2 |
| 8 weeks | 3 |
| 12 weeks | 4 |

D. Award of Honours Qualification

a) All the students who successfully complete the online courses as prescribed under Additional Coursework and submit their certificates to the University through the Principal of their respective colleges (appendix-4) against the notification issued by the Director (Examination & Evaluation) in time before closure of eighth semester as per Academic calendar shall be eligible for the Honors qualification.

b) The Principal of the college shall submit the list of students (appendix-5) who are cligible for the award of B.F. (Honors) degree along with the total credit carned by each.

student and the corresponding MOOC (NPTEL-SWAYAM) certificates to the University, programme wise together with the internal marks of 8th semester.

- c) Those students who cannot/do not submit the certificates on or before the last date prescribed by the University shall not be considered for the award of Honors qualification, irrespective of the number of credits earned by them. However, they shall be awarded only B.E. Degree.
- d) The Honors qualification shall be suffixed to the respective degrees and shown in the Degree certificates as recognition of higher achievement by the student concerned.
- e) The CGPA carned by the students shall be only on the basis of students performance in the various semester level examinations conducted by the University/ Autonomous colleges, as the case may be.
- f) Students shall maintain a SGPA > 8.0 in all the semesters from V to VIII semesters in first attempt only, failing this the student shall discontinue the attempt to earn additional credits.
- g) Students not having a CGPA > 8.0 at the end of the programme shall not be eligible for the award of Honors even if they have satisfied the additional credits consideration prescribed for Honors degree.
- h) The Principals of respective colleges shall submit to the University the list of such students who fail to satisfy (f)- (g) from time to time.
- Additional credits earned through NPTEL-SWAYAM shall not be considered for CGPA of B.E. programme as well as rank declaration.
- j) All the students fulfilling conditions for Honours degree shall be entitled to receive their transcripts indicating both the achievements (BE and additional credits) of the student concerned.

B.E. with Minor specialization:

A. Eligibility Criteria for Registration

Students, who are desirous of pursuing their special interest areas other than the chosen discipline of Engineering / Technology, may opt for additional courses in minor specialization groups offered by a department other than their parent department. Such students shall select the stream of courses offered with pre—requisites by the respective Board of Studies and earn a Minor Specialization.

Every regular student of the University intending to register for the Minor specialization qualification shall fulfil the following academic requirements:

- (a) Registration to 'Minor specialization' qualification shall be done in the beginning of fifth semester.
- (b) The Registrants shall have obtained SGPA of not less than 7.5 in every semester in the first attempt only (without any history of arrears) till fourth semester.
- (c) The lateral entry diploma/BSc students shall have obtained SGPA of 8.0 or more in 111 & IV semester in the first attempt only.
- (d) The lateral entry B.Sc. students shall have cleared all the applicable subjects of First Year in the first attempt only along with criteria b.

B. Registration Procedure

- (a) Any student meeting the eligibility criteria specified above and intending to register for the Minor specialization qualification shall apply to the Principal of his/her college in the prescribed form (appendix-1) along with the prescribed application fees within 10 working days after notification by the University.
- (b) The principal should submit the list of eligible students for registration to the University in the prescribed format (appendix-2).
- (c) There shall be no limit on the intake of students for registration for the Minor specialization qualification.
- (d) All the applicants fulfilling the eligibility shall be free to register for the Minor specialization qualification provided, be/she has not applied for registration in B.F. (Honors) programme.
- (e) The college shall maintain the record and status of students registered.

C. Additional Coursework

- a) In addition to the courses prescribed by the University to be completed successfully in the remaining semesters, that is, fifth to eighth for the relevant degree award, each student registered for the Minor specialization qualification shall have to take up the coursework pertaining to branch other than his parent or relevant branch as notified by the University from NPTFL - SWAYAM within the minimum prescribed duration for the award of degree.
- b) The University shall announce the Board of studies approved list of MOOCs (chosen from NPTEL - SWAYAM) corresponding to each engineering programme. (8 credits from Core subjects corresponding to the Engineering programme in which minor degree is sought and 10 or more credits from the Emerging Areas subjects corresponding to the

Engineering programme in which minor degree is sought) (appendix-3) The University shall have the freedom to review and approve additional online platforms from time to time.

- e) Students shall be permitted to drop the registered coursework/s and select alternative coursework/s in case they cannot appear for proctored examination/s or complete the examination as per (a)
- d) Students shall choose, online courses totalling to 18 or more credits from the bouquet of approved online courses as defined in a and b.
- e) The students shall earn the credits by only appearing in person to the proctored examination conducted by NPTEL-SWAYAM. No autonomous/affiliated/conducted colleges under the University shall conduct examination and award Credits in lieu of NPTEL-SWAYAM platform to accrue 18 or more credits for the award of Minor specialization degree.
- f) The method of assessment shall be as per the NPTEL-SWAYAM online platform.
- g) The credit equivalence for online NPTEL-SWAYAM courses shall be determined based on the following table.

| On Line Course Duration | Assigned Credit |
|-------------------------|-----------------|
| 4 weeks | 2 |
| 8 weeks | 3 |
| 12 weeks | 4 |

D. Award of Minor specialization Qualification

- a) All the students who successfully complete the courses as prescribed under Additional Coursework and submit their certificates to the University through the Principal of their respective colleges (appendix-4) against the notification issued by the Director (Examination & Evaluation) in time before closure of eighth semester shall be eligible for the Minor specialization qualification.
- b) The Principal of the college shall submit the list of students (appendix-5) who are eligible for the award Degree with minor Specialization along with the total credit earned by each student and the corresponding credit score sheet copy to the University, programme wise together with the internal marks of 8th semester.
- c) Those students who cannot do not complete the specialization courses credit on or before the last date prescribed by the University shall not be considered for the award of Minor specialization qualification. However, they shall be awarded only B.E. Degree of parent department as per the prevailing norms.
- d) The Minor specialization qualification shall be suffixed to the respective degrees and shown in the Degree certificates as recognition of higher achievement by the student Concerned.
- (e) The CGPA carned by the students shall be only on the basis of students performance in the various semester level examinations conducted by the University/ Autonomous colleges, as the case may be.
- (f) Students shall maintain a SGPA > 8.0 in all the semesters from V to VIII semesters in first attempt only; failing this the student shall discontinue the attempt to earn additional credits.

- (g) Students not having a CGPA > 8.0 at the end of the programme shall not be eligible for the award of specialization even if they have satisfied the additional credits consideration prescribed for specialization degree.
- (h) The Principal of the respective college shall submit to the University the list of such students who fail to satisfy (f) - (g) from time to time.
- Additional credits earned for minor specialization from other department shall not be considered for CGPA of B.E. programme as well as rank declaration.
- (j) All the students fulfilling conditions for Minor specialization degree shall be entitled to receive their transcripts indicating both the achievements (BF and additional credits from another department) of the student concerned.

Appendix-1

SANT GADGE BABA AMRAVATI UNIVERSITY AMRAVATI APPLICATION FOR THE REGISTRATION TO B.E. (HONORS) / B.E. with Minor Specialization PROGRAMME

| The Principal, Respected Sir/Madam, L. the undersigned, hereby apply for the registration to the Programme B.E. (Honors) in | To. | |
|--|--|------------------------------------|
| L the undersigned, hereby apply for the registration to the Programme B.E. (Honors) in | | |
| Labe undersigned, hereby apply for the registration to the Programme B.E. (Honors) in | | |
| L the undersigned, hereby apply for the registration to the Programme B.E. (Honors) in | | |
| I. the undersigned, hereby apply for the registration to the Programme B.E. (Honors) in | Respected Sir/Madam | |
| Programme B.F. (Honors) in | | |
| B.E. (Honors) in Sengineering with specialization in Semerging Area OR B.E. in Sengineering with minor specialization in Sengineering Area from Sengineering Area from Sengineering Area from Sengineering & Technology in the faculty of Science & Technology at the institute. 1. Name in Full Summing Make Name 2. Name of Father / Husband Sengineering & Science & Technology at the institute. 3. Name of Mother Sengineering Make Name 4. Branch Sengineering Make Female 5. Enrolment No; 6. Gender: Male / Female 7. Address for Correspondence: | ACTION OF THE PERSON OF THE PE | he registration to the |
| Engineering> with specialization in Areu> OR B.E. in | Programme | |
| OR B.E. in < Parent Branch of Engineering> with minor specialization in (another branch) in Engineering & Technology in the faculty of Science & Technology at the institute. 1. Name in Full | | Stranch of |
| OR B.E. in < Parent Branch of Engineering> with minor specialization in | | <emerging< td=""></emerging<> |
| B.E. in < Parent Branch of Engineering> with minor specialization in (another branch) in Engineering & Technology in the faculty of Science & Technology at the institute. 1. Name in Full : | | |
| Engineering> with minor specialization in Emerging Area- from (another branch) in Engineering & Technology in the faculty of Science & Technology at the institute. 1. Name in Full : (In Hinek Letter Survey) Name of Father / Husband : Survey) Name of Mother. 4. Branch : (Class : III Year V Semester Servey) Semester Servey) Name of Mother Class : III Year V Semester Servey) Name of Mother No. 5. Enrolment No. Class : III Year V Semester Servey) Name of Mother No. 6. Gender : Male / Female Name of Mother No. 7. Address for Correspondence No. | |
| Emerging Area from (another branch) in Engineering & Technology in the faculty of Science & Technology at the institute. 1. Name in Full : Ite Minek Letter Statement Manage Mana | | Parent Branch of |
| Ingineering & Technology in the faculty of Science & Technology at the institute. I. Name in Full : | PARTY NAMED OF THE PARTY OF THE | |
| 1. Name in Full Storming From Name Models Name 2. Name of Fother / Husband : 3. Name of Mother: 4. Branch : Class : III Year V Semester 5. Enrolment No: 6. Gender : Male / Female 7. Address for Correspondence : | Service Control of the Control of th | |
| Name of Fother / Husband : Name of Mother: Ulass : III Year V Semester Enrolment No; Gender : Male / Female Address for Correspondence | | ice & Technology at the institute. |
| 2. Name of Father / Husband : 3. Name of Mother: 4. Branch : Class : III Year V Semester 5. Enrolment No: 6. Gender : Male / Female 7. Address for Correspondence : | | Models Name |
| 3. Name of Mother. 4. Branch: Class: III Year V Semester 5. Enrolment No. 6. Gender: Male / Female 7. Address for Correspondence Mobile No. | | |
| 4. Branch: Class: III Year V Semester 5. Enrolment No: 6. Gender: Male / Female 7. Address for Correspondence: Mobile No. | | |
| 5. Enrolment No: 6. Gender : Male / Female 7. Address for Correspondence Mobile No. | 3 Name of Makes | |
| 6. Gender : Male / Female 7. Address for Correspondence Mobile No. | Name of Mother; | |
| 7. Address for Correspondence : Mobile No. | | Class: III Year V Semester |
| Mobile No. | 4. Branch : | Class: III Year V Semester |
| Mobile No. | 4. Branch : 5. Enrolment No: | Class: III Year V Semester |
| | 4. Branch: 5. Enrolment No: 6. Gender: Male / Female | Class: III Year V Semester |
| | 4. Branch: 5. Enrolment No: 6. Gender: Male / Female | Class: III Year V Semester |
| | 4. Branch: 5. Enrolment No: 6. Gender: Male / Female 7. Address for Correspondence: | Class: III Year V Semester |

8. (A) Details of Previous Examinations : (enclose photocopies)

| Examination | Year | Subject/ Branch | Percentage of Marks | CGPA/SGPA | Remark |
|--------------------------------|------|-----------------|------------------------|-----------|--------|
| XII/ Engineering Diploma | | | | | |
| I Sem BE | | | | | |
| II Sem BE | | | | | |
| III Sem BE | | | | | |
| IV Sem BE | | | | | |

[&]quot;The lateral entry B.Sc. students shall have cleared all the applicable subjects of First Year in the first attempt only

| 9. Fees paid: Rs receipt no /transaction no : | |
|---|--|
|---|--|

DECLARATION

I hereby declare that above information is true, correct and authentic. I am aware that

- I will be eligible to get Under Graduate degree with Honours/minor specialization only, if I successfully complete additional university recommended NPTEL-SWAYAM courses through MOOCS (Equivalent to 18 credits or more) within the minimum prescribed duration for the award of degree) and maintain a SGPA > 8.0 in all the semesters from V to VIII semesters in first attempt only without any grace marks and secure 8.0 or above CGPA
- It will be my responsibility to follow NPTEL-SWAYAM. Site http://mptel.ac.in/ ax per the NPTEL policy and norms for registration of courses. I will register for these courses through NPTEL directly as per the course offering in Odd/Even Semesters at NPTEL.
- After successful completion of these MOOCS courses I shall, provide the successful completion NPTEL status/certificates to the University through the college of study only.

| Place: | |
|--------|-------------------------------------|
| Date: | (Signature & Name of the Applicant) |

Note: Attach the self-attested photo copies of the relevant documents.

Appendix-2

(Proforma for Submitting the list of students for registration)

List of Students applied for registration
(submit separate list programme wise/ specialization wise)

| T, | Name of the Institute/Colley | ge: | | |
|----|------------------------------|-----|-----------------|--------|
| 2. | Department: | | | |
| 3. | Honors in : | | (emerging Area) | |
| L | Minor specialization | in | from another | branch |

Detailed list

| Sr | LIGHTAN CAPPAINT | Enroll ment No | Parent Branch | Honors OR Minor Special ization | Emergi ng Area | Branch for Minor specializ ation | Registr ation fees paid (rs) | Remark |
|--------|------------------|----------------------|------------------|---|-------------------|--|--|--------|
| 1. 2 3 | | | | | | | | |

We have verified the eligibility of the students and are recommended for registration

| Date: | Principal |
|-------|---------------------|
| | (Signature with Sea |

Appendix-3

Board of studies approved list of NPTEL - SWAYAM programme

| Sessio | on : | |
|--------|----------------------------------|--|
| Board | of Studies in : | Engineering |
| Facul | ty of Science & Technology | |
| | separate list in the proforma | |
| 1. | List for B.E. Honors courses a | corresponding Engineering programme emerging areas. |
| 2. | List for B.E. Honors courses of | corresponding to other courses (Soft Skill / Emotional |
| | Intelligence / Intellectual Prop | perty etc.) |
| 3. | List for Minor Speciatization | (core subjects) |
| 4. | List for Minor Speciatization | (emerging areas) |

| Sr No | NPTEL. Course Id | Course Name | SME. Name | Institute | Course Duration in weeks | Credits | Starts | Remark |
|----------|------------------------|----------------|--------------|-----------|--------------------------------|---------|--------|--------|
| | | | | | | | | |

Proforma for submission of NPTEL Certificates

| | To, The Principa | 1. | | | | | | |
|----------|---|----------------------|---|----------|---------|-------------------|----------------------------------|----------|
| | Respected Sir/N I, the und | | hereby | submit n | ny NPTE | L-SWAYAM cert | ificates for | the |
| | B.E. (Hono | rs) | in _ | | | | <b< th=""><th>ranch of</th></b<> | ranch of |
| Ei | ngincering> wi | 5000000 | | ri . | | | | ing Area |
| | OR | ************ | 0.0121010101000000000000000000000000000 | | | | | |
| | B.E. in | | | | | < P ₂ | rent Bran | ale of |
| E | ngineering> | with m | inor spe | cializat | ion in | - 11 | rem Bran | cn or |
| | merging Ar | | om | | | tana | ther brane | h) in |
| | | | | aliv of | Soumon | Technology at the | | art. ar- |
| 4. | Year of Admis Gender Male Name of Fathe Name of Moth Branch : | / Female r / Husb | | | | | | |
| 7. | SGPA carned | in sen | resters V- | | VI | VIII | VIII : | tresul |
| 7. 8. | SGPA carned waited) NPTEL Certifi | | nesters V: | | VI | VIII | VIII: | (resul |

Student (signature & Name)

Date:

List of students eligible for the award of Honors / Minor specialization degree (please send separate List)

1. Name of the Institute/College:

2. Department:

| | 1 | Minor | | zation | | | | (emergn | | | |
|----|-------------------------------|---------------------------------------|--------------------------|---|----------------------------|---------------------------------|--------|--|--------------|---------|-------|
| | | · · · · · · · · · · · · · · · · · · · | special | zation | in. | | | troi | 10 | another | brane |
| | 4. NPTI | EL Ce | rtificates: | | | | | | | | |
| ST | Name of the Stude nt | | Semester : SGPA | Title as on NPTE 1. certifi cate | Doma in catego ty | Date of NPTF L Exam | Scor e | Duratio n (in weeks) of NPTE L | dits carn | | Rema |
| 1 | | | Sem I. SPGA Sem II | 1. Title | | | | course | | | |
| | | | Sen III Sen IV | 3 4 | | | | | | | |
| | | | Sem V | 5 | | | | | | | |
| | | | Sem VII | 6 7 | | | | | | | |
| 4 | | | | 8 | | | | US . | | | |
| 2 | 1000 | | Sem I: Sem II | 1 2 | | | | | | | |
| 1 | 3 | | Sem III Sem IV | 3 4 | | | | | | | |
| | - | | Sem V | 5 | | | | | | | |
| 1 | | | Sem VII | 6 7 8 | | | | | | | 3 |
| 1 | No. of Street | | 17/10 | | | | | | 15 | | 1000 |

Principal (Signature with Scal)

Enclosed the copies of NPTEL certificates as above

Date:

| _ | Sant Gadge Baba Amravati University | The state of the s |
|----------|--|--|
| | Table of reference for B.E. with Henors in C | |
| | MOOCs chosen from NPTEL | |
| Semester | (Identified and approved by respecti | ve Board of studies) |
| | corresponding to the Parera Engineering Programme | like soft skill/emotional Intelligence/Intellectual Property etc |
| V | | |
| VI | Maximum 2 courses in a semester, total minimum 16 | |
| VII | credits to earn during V to VIII | |
| VIII | | |
| Credits | 16 | 2 |
| | Total Minimum Credit Require | ed is 16 + 02 = 18 |
| В. | E (Honors) Civil Engineering with Specialization in | Infrastructure Engineering |
| Sr. No. | Courses | Duration |
| 1 | Geotechnical Engineering Laboratory | 4 Weeks |
| 2 | Advanced Foundation Engineering | 12 Weeks |
| 3 | Advanced Soil Mechanics | 12 Weeks |
| 4 | Environmental Geomechanics | 12 Weeks |
| 5 | Foundation Engineering | 12 Weeks |
| 6 | Geology and Soil Mechanics | 12 Weeks |
| 7 | Geosynthetics and Reinforced Soil Structures | 12 Weeks |
| 8 | Geotechnical Engineering - 1 | 12 Weeks |
| .9 | Geotechnical Engineering II Foundation Engineering | 12 Weeks |
| 10 | Ground Improvement | 12 Weeks |
| 11 | Soil Mechanics/Geotechnical Engineering I | 12 Weeks |
| 12 | Introduction to Multimodal Urban Transportation Syst | 12 Weeks |
| 13 | Mechanical Characterization of Bituminous Materials | 12 Weeks |
| 14 | Rock Mechanics and Tunneling | 12 Weeks |
| 15 | Sustainable Transportation Systems | 12 Weeks |
| 16 | Rock Engineering | 12 Weeks |
| 17 | Geomorphology | 12 Weeks |
| 18 | Soil Structure Interaction | 12 Weeks |
| 20 | Construction Methods and Equipment management Natural Hazards | 8 Weeks |
| 21 | Introduciton to Civil Engineering Profession | 8 Weeks |
| 22 | Geographic Information Systems | 8 Weeks 12 Weeks |
| 23 | Digital Land Surveying and Mapping | 8 Weeks |
| 24 | Hydraulic Engineering | |
| 25 | River Engineering | 12 Weeks |
| 26 | Remote Sensing and GPS | 8 Weeks |
| 27 | Reinforced Concrete Road Bridges | 8 Weeks |
| 28 | Photogeology in Terrain Evaluation Part I and II | 4 Weeks |
| 29 | Mairganence and Repair of Concrete Structres | 8 Weeks 12 Weeks |
| 30 | Urban Transportation Systems Planning | 12 Weeks |

DA. S. H. Deshmuth

Sant Gadge Baba Amravati University , Amravati

| B.E. | (Honors) Civil Engineering with Specialization in Environment | tal Engineering |
|---------|---|-----------------|
| Sr. No. | Courses | Duration |
| 1 | Remote Sensing of Leaf Area Index and Primary Productivity | 4 Weeks |
| 2 | Global Navigation Satellite Systems And Applications | 4 Weeks |
| 3 | Electronic waste Management - Issues & Challenges | 4 Weeks |
| 4 | Plastic Waste Management | 8 Weeks |
| 5 | Natural Hazards | 8 Weeks |
| 6 | River Engineering | 8 Weeks |
| 7 | Safety in Cosntruction | 8 Weeks |
| - 8 | Introduction to Civil Engineering Profession | 8 Weeks |
| 9 | Digital Land Surveying and Mapping | 8 Weeks |
| 10 | Architectural Cosnervation and Historic Preservation | 8 Weeks |
| 11 | Remote Sensing and GIS | 8 Weeks |
| 12 | EarthScieces for Civil Engineering Part I and II | 8 Weeks |
| 13 | Applied Environmental Microbiology | 12 Weeks |
| 14 | Environmental Chemistry | 12 Weeks |
| 15 | Environmental Chemistry and Microbiology | 12 Weeks |
| 16 | Environmental Geomechanics | 12 Weeks |
| 17 | Environmental Remediation of Contaminated Sites | 12 Weeks |
| 18 | Integrated Waste Management for a Smart City | 12 Weeks |
| 19 | Municipal Solid Waste Management | 12 Weeks |
| 20 | Remote Sensing: Principles and Applications | 12 Weeks |
| 21 | Wastewater Treatment and Recycling | 12 Weeks |
| 22 | Water Economics and Governance | 12 Weeks |
| 23 | Water Supply Engineering | 12 Weeks |
| 24 | Geographic Information Systems | 12 Weeks |
| 25 | Water and waste water treatment | 12 Weeks |

Drs. K. Deshmubho,

Sant Gadge Baba Amravati University , Amravati

| Sr. No. | Courses | Duration |
|---------|---|----------|
| 1 | Scheduling Techniques in Projects | 4 Weeks |
| 2 | Construction methods and equipment management | 8 Weeks |
| 3 | Introduction to Accounting and Finance for Civil Engineers | 8 Weeks |
| 4 | Landscape Architecture and Site Planning - Basic Fundamentals | 8 Weeks |
| 5 | Principles of Construction Management | 8 Weeks |
| 6 | Project Planning & Control | 8 Weeks |
| 7 | Safety in Construction | 8 Weeks |
| 8 | Architectural Cosnervation and Historic Preservation | 8 Weeks |
| 9 | Basic construction materials | 12 Weeks |
| 10 | Optimization Method for Civil Engineering | 12 Weeks |
| 11 | Maintanence and Repair of Concrete Structres | 12 Weeks |
| 12 | Glass Processing Technology | 12 Weeks |
| 13 | Glass in buildings: Design and applications | 12 Weeks |

Dr.s. KrDeshmubbo.

Sant Gadge Baba Amravati University , Amravati

| B | E (Honors) Civil Engineering with Specialization in Structural Engi | neering Honors |
|---------|---|----------------|
| Sr. No. | Courses | Duration |
| 1 | Reinforced Concrete Road Bridges | 4 Weeks |
| 2 | Development and Applications of Special Concretes | 8 Weeks |
| 3 | Earthquake Resistant Design of Foundations | 8 Weeks |
| 14 | Matrix Method of Structural Analysis | 8 Weeks |
| 5 | Hydration , Pocosity and Strenght of Cementious Material | 8 Weeks |
| - 6 | Introduction to Civil Engineering Profession | 8 Weeks |
| 7 | Design Of Reinforced Concrete Structures | 12 Weeks |
| 8 | Design of steel structures | 12 Weeks |
| 9 | Dynamics of Structures | 12 Weeks |
| 10 | Finite Element Method and Computational Structural Dynamics | 12 Weeks |
| 11 | Maintenance and Repair of Concrete Structures | 12 Weeks |
| 12 | Mechanics Of Materials | 12 Weeks |
| 13 | Strategies for Sustainable Design | 12 Weeks |
| 14 | Structural Dynamics | 12 Weeks |
| 15 | Strength Of Materials | 12 Weeks |
| 16 | Structural Reliability | 12 Weeks |
| 17 | Rock Engineering | 12 Weeks |
| 18 | Strucutral Reiliability | 12 Weeks |
| 19 | Plattes and Shells | 12 Weeks |
| 20 | Introduciton to Engineering Seismology | 12 Weeks |
| 21 | Maintanence and Repair of Concrete Structres | 12 Weeks |
| 22 | Advance Foundation Engineering | 12 weeks |
| 23 | Theory of Elasticity | 12 Weeks |

De S. K. Deshmubh

Soft Skill/ Emotional intelligence/Intellectual Property etc - 2 Credits

| Sr. No. | Courses | Duration |
|---------|--|----------|
| 1: | Body language: Key to professional Success | 4 Weeks |
| 2 | Contemporary Architecture and Design | 4 Weeks |
| 3 | Decision-Making Under Uncertainty | 4 Weeks |
| 4 | Design, Technology and Innovation | 4 Weeks |
| 5 | Ecology and Environment | 4 Weeks |
| 6 | Developing Soft Skiths and Personality | 8 Weeks |
| 7 | Psychology of Exeryday | 4 Weeks |
| 8 | Effective Writing | 4 Weeks |

-DeAy

Drs. K. Dostmuth

| | | | CONTROL OF STREET | THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAM | |
|---------|--|--------------------|---------------------------|--|-----------|
| | Cire Subjects (A Credits) | | | Emerging Subjects (19 Creates) | |
| - | | ENVIRONME | ENVIRONMENTAL ENGINEERING | FRING | 1000000 |
| Sr. Na. | Control | Duration | Sr. No. | Coarses | Derates |
| 1 | Wastewater Treatment and Recycling | 12 Wisse | | Place Wate Management | # Weeks |
| ** | Water Supply Engineering | 12 Wheels | 1 | Natural Hazards | # Weeks |
| m | Water and waste water modified. | 11 Weeks | 3 | Environmental Remediation of Continuinated Sites | 12 Works |
| 7 | Minicpel Solid Wase Management | 12 Weeks | + | Incepanied Waste Management for a Smort City | 12 Works |
| 10 | Winter Supply Engineering | 12 Works | \$ | Remote Sensing Principles and Applications | 12 Weeks |
| 9 | Water and mater mater frozenses | 13 Weeks | 0 | Global Navigoron Sattlife Systems And Applications | 4 Weeks |
| | | | - | Environmental Geamethanics. | 12 Winds |
| 1 | B.E. in Parent Branch of | Engineering with m | inor in Constru | B.E. in Parent Branch of Engineering with minor in Construction Technology. Civil Engineering | |
| 2 | Scheduling Techniques in Projects | 4 Weeks | - | bynoduction to Accounting and Farance for Cevil Engineers | 8 Weeks |
| * | Commutation methods and equipment management | 8 Weeks | ** | Landscape Architecture and Size Planning - Wanz Fundamentals # Weeks | 8 Weeks |
| 4 | Immediation to Accounting and Finance for Civil Engineer | 8 Works | ń | Glass in heddings. Design and applications | 12 Weeks |
| | Safety in Construction | 8 Wooks | • | Arguingtural Conservation and Historic Preservation | 8 Wineiss |
| 5 | Bests construction materials | 12 Weeks | ** | Digital Land Surveying And Mapping (DLSRA) | 8 Weeks |
| 4 | Earth Sciences for Chill Engineering Part - 1 & a | 8 Weeks | 9 | Photogeology in Terrain Evaluation (Part 1 And 2) | N Weeks |
| | 8 8 | | | The second secon | 4 441 4 |

| 1 | | | |
|---------------------------------|--|---|-------|
| Semest | Successfully completed Board of studes approved sources transp. MOCCX (chosen from NPTEL - SWAYAM) corresponding to the Engineering programme in which manor degree is sought. | us fungh MOOCs (chosen ing programme in which mann | |
| | Care Salgects | Emerging Subjects | Total |
| , | | Maximum 2 courses in a | |
| 1/ | Manhouse Remarks to some desired U. to USH consustant | sensor, Minimum 10 codin | |
| W. | STREET, OF A SHIPP DIES OF STREET, STR | to each during V to VIII | |
| ALIII | | senetien | |
| Total Minums m credits | | Q. | 21 |

Dr. S.K. Deshmuth, Chairman , 803 - Over Engineering , Scialul.