

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CO'S AND PO'S MAPPING JNTUA-R15 REGULATION

INDEX

List of all courses offered by the institution for the regulation R15, JNTUA

| S.No | Course Code | Course Name | Year & Sem |
|------|----------------|--|------------|
| 1 | 15A52101 | Functional English | |
| 2 | 15A54101 | Mathematics – I | |
| 3 | 15A05101 | Computer Programming | |
| 4 | 15A51101 | Engineering Chemistry | LICom |
| 5 | 15A01101 | Environmental Studies | I-I Sem |
| 6 | 15A52102 | English Language Communication Skills | |
| 7 | 15A51102 | Engineering Chemistry Lab | |
| 8 | 15A05102 | Computer Programming Lab | |
| | | | |
| 9 | 15A54201 | Mathematics – II | |
| 10 | 15A52201 | English for Professional Communication | |
| 11 | 15A04201 | Network Analysis | |
| 12 | 15A56101 | Engineering Physics | I II Com |
| 13 | 15A03101 | Engineering Drawing | I-II Sem |
| 14 | 15A04202 | Network Analysis Lab | |
| 15 | 15A56102 | Engineering Physics Lab | |
| 16 | 15A99201 | Engineering and IT Workshop | |

I B.Tech, I Sem ECE Cos and pos mapping (R15-JNTUA)

| | | | (App | roved by | AICTE | , Affiliat | ed to JN | ГUA. An | ISO 90 | 01: 2015 | Certified | Institutio | n. | |
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| AMIREDDY SUB | SARAMI REDDY | T | | | | | | | | | S.R. Nellon | re, A.P.) CIEN(| CES | |
| Engineering | S COLLEGE Excellence | | | | | | | | | | | POs & | | 5 |
| Through In | novation | | SEM: | I-I | | | R | eg: R | 15 | | AY: | 2017-2 | 2018 | |
| Course | Code: | Course | e Name | : FUN | CTI | ONAL | | 0 | | | L | T | Р | (|
| 15A5 | 52101 | Prereq | uisite:l | NONE | | | | | | | 3 | 1 | - | |
| | - | | | | | | | | | | | | 1 | |
| | | | | COU | RSE C | OUTCO | OMES | (COs) | | | | | | |
| CO No. | COURS | SE OUT | ГСОМ | E | | | | | | | | | | |
| 2101.1 | Acquire and inte | - | | - | - | - | | | | - | | | | 8, |
| 2101.2 | Develop | oral co | mmun | icatio | n skill | s in E | nglish | to spe | ak flu | ently i | n varic | ous aca | demic | an |
| | social | situatior | ns. (BT | CL3) | | | | | | | | | | |
| 2101.3 | Identify | deviant | use of | Engli | sh bot | h in sp | oken | and wi | itten | forms, | and im | prove a | aware | nes |
| | of its in | n scienc | e and t | echno | ology. | (BTL | 2) | | | | | | | |
| | | | | | | | | | | | | | | |
| 2101.4 | Understa | and the i | mport | ance c | of read | ling fo | r life, | and ca | reer a | nd the | reby de | evelop a | an inte | eres |
| 2101.4 | | and the i t. (BTL2 | | ance c | of read | ling fo | r life, a | and ca | reer a | nd the | reby de | evelop a | an inte | eres |
| 2101.4 2101.5 | | t. (BTL) | 2) | | | 0 | | | | | • | evelop a | an inte | eres |
| 2101.5 | for i | t. (BTL) | 2) ndame | ntal sl | cills re | equire | d for c | ritical | think | ing. (I | 3TL2) | | | |
| 2101.5 Mapping | for i | t. (BTL) | 2) ndame | ntal sl | cills re | equire | d for c | ritical | think | ing. (I | 3TL2) | | s (PSC | |
| 2101.5 | for i | t. (BTL) | 2) ndame | ntal sl | cills re | equire m Out | d for c | ritical | think | ing. (I | 3TL2) | | s (PSC | Ds) SO |
| 2101.5 Mapping | for i Demons g of Course | t. (BTL: strate fun Outcome | 2) ndame | ntal sl | kills re Progra | equire m Out PO | d for c | ritical (POs) d | think & Prog | ing. (H <mark>ram S</mark> J | 3TL2) | Jutcome | s (PSC | Ds) SO |
| 2101.5 Mapping COs 2101.1 | for i Demons g of Course 1 | t. (BTL: strate fun Outcome 2 | 2) ndame es (COs | ntal sl) with 2 | cills re Progra | equired am Out PO 6 | d for c | ritical (POs) & | think & Prog 9 | ing. (F ram Sp 10 | 3TL2) pecific (11 2 | Dutcome 12 3 | s (PSC | Ds) SO |
| 2101.5 Mapping COs 2101.1 2101.2 | for i Demons g of Course 1 - | t. (BTL) strate fur Outcome 2 - | 2) ndame es (COs 3 - | ntal sl) with 4 - | xills ro Progra 5 - | equired am Out PO 6 - | d for c comes 7 - | ritical (POs) d 8 - | think & Prog 9 3 2 | ing. (F ram Sp 10 3 3 | 3TL2) pecific (11 2 2 | 12 3 3 | s (PSC | Ds) SO |
| 2101.5 Mapping COs | for i Demons of Course 1 | t. (BTL) strate fun Outcome 2 - - | 2) ndame es (COs 3 - | ntal sl) with 4 | xills ro Progra 5 - | equire m Out PO 6 - | d for c comes 7 - - | ritical (POs) d 8 - | think k Prog 9 3 2 3 | ing. (F ram Sp 10 3 3 3 | 3TL2) pecific (11 2 2 2 | 12 3 3 3 | s (PSC | Ds) SO |
| 2101.5 Mapping COs 2101.1 2101.2 2101.3 | for i Demons of Course 1 | t. (BTL) strate fun Outcome 2 - - - | 2) ndame es (COs 3 - - | ntal sl) with 4 | cills re Progra 5 - - | equired am Out PO 6 - - | d for c comes 7 - - | ritical (POs) d 8 - - - | think & Prog 9 3 2 | ing. (F ram Sp 10 3 3 | 3TL2) pecific (11 2 2 | 12 3 3 | s (PSC | Ds) |

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| | | | Ň | H-16, Ka | adanuth | ala, Bogo | ole Mand | lal, Kava | ali- 524 1 | 142, S.P.S | S.R. Nellor | e, A.P.) | | |
| | | | | | | | | | | | ND SC s with F | | | • |
| RAMIREDDY SUE ENGINEERIN | BARAMI REDDY IG COLLEGE | | JUKS | | ICU. | | | | | | | 2017-2 | | • |
| Engineering Through I | Excellence nnovation | S | EM: | I-I | | | R | eg: R | 15 | | A1. | 2017-2 | 2010 | |
| Course | Code: | Course | Name: | Math | emati | ics – I | | | | | L | Т | Р | C |
| 15A4 | 4101 | Prerequ | uisite: 1 | None | | | | | | | 3 | 1 | - | 3 |
| | | | | COUI | RSE O | OUTCO | OMES | (COs) |) | | | | | |
| CO No. | COURS | E OUT | COM | E | | | | | | | | | | |
| 4101.1 | Solve the | First, Sec | ond and | l Highe | r order | D.Es a | nd App | lication | ns of Fi | irst Ord | er D.E (H | BTL3) | | |
| 4101.2 | Attain the deflection | | - | | tions o | f L.D.I | Es like | Mecha | nical & | k Electi | rical Osc | illatory | circuit | s an |
| 4101.3 | Familiari | ze with | functio | ons of | severa | l varia | ables w | which i | s usef | ùl in C | Optimiza | tions. | (BTLI | L6) |
| 4101.4 | Determine | e importa | nt tools | of calc | ulus in | Higher | Dimen | sions (I | Multip | e Integ | rals) (BTL | L5) | | |
| 4101.5 | Become fa | imiliar wi | th the a | pplicat | ions of | vector | calculu | is to En | gineer | ing Prol | olems. (B | TL6) | | |
| | of Course | Outcome | es (COs |) with] | Progra | m Out | comes | (POs) | & Prog | gram S | pecific O | utcom | es (PSC |)s) |
| Mapping | , or course | | | | | РО | | | | | | | PS | 50 |
| | | | | | | 10 | | | | | г – т | | | |
| Mapping COs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| | | 2 2 | 3 2 | 4 | 5 | | | 8 | 9 | 10 - | - | 12 2 | - | |
| COs | 1 | | _ | • | 5 - - | | | 8 | 9 - - | 10 - - | 11 - - | | 2 | 2 |
| COs 4101.1 | 1 3 | 2 | 2 | 2 | 5 - - | | | - | - | - | 11 - - - | 2 | 2 | 2 |
| COs 4101.1 4101.2 | 1 3 3 | 2 | 2 | 2 | 5 - - - | | | - | - | - | 11 - - - - | 2 | 2 2 2 2 | 2 |
| COs 4101.1 4101.2 4101.3 | 1 3 3 2 | 2 2 3 | 2 2 3 | 2 2 2 2 | - | | | - | - | - | 11 - - - - | 2 2 2 | 2 | 2 2 2 3 2 2 2 2 2 |

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| | 9 | | | | | | | TUA. Ar dal, Kav | | | | | | on) | |
| RAMIREDDY SUBB | ARAMI REDDY COLLEGE | D | EPAR | TME | NT OI | F CON | IPUT | ER SC | CIENC | CE AN | D EN | GIN | EE | RIN | IG |
| Engineering f Through Inc | xcellence | | COU | RSE (|)UTC | OMES | & M | APPIN | GOF | COs v | vith P | Os 8 | e PS | SOs | |
| | | | SEM | : I – | Ι | |] | Reg: R | 15 | | AY: | 2017 | 7-20 | 18 | |
| Course (| Code: | Cou | rse Nan | ne: Co | mpute | r Prog | ramm | ing | | | | L | Τ | Р | С |
| 15A05 | 101 | Prer | requisit | e:Nil | | | | | | | | 3 | 1 | - | 3 |
| | | | | | | | | | | | | | | | |
| | | | | CC | DURSE | C OUTO | COME | S (COs |) | | | | | | |
| CO No. | COU | RSE (| DUTC | OME | | | | | | | | | | | |
| 5101.1 | Analyz | nalyze overview of computer programming (BTL4) | | | | | | | | | | | | | |
| 5101.2 | Unders | Analyze overview of computer programming (BTL4) Understand various statements in C and discuss the arrays, stings, functions (BTL2) | | | | | | | | | | | | | |
| 5101.3 | Illustra | te point | ters and | underst | anding t | he scope | e of fund | ctions. (I | BTL2) | | | | | | |
| 5101.4 | Develo | p the co | ommand | l line arg | guments | and stru | uctures (| (BTL 3) | | | | | | | |
| 5101.5 | Unders | stand the | e file ha | ndling f | unction | s and pre | e-proces | sor dire | ctives. (| BTL2) | | | | | |
| Mapping of | Course | Outcor | mes (CC |)s) with | Progra | um Outo | comes (I | POs) & | Progra | m Speci | fic Out | come | s (PS | 5 O s) | |
| COs | | | | | | Р | 0 | | | | | | | PS | 50 |
| COs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | ; | 1 | 2 |
| 5101.1 | 3 | 2 | 2 | 2 | - | - | - | - | - | - | - | 2 | | 2 | 3 |
| 5101.2 | 3 | 3 | 3 | 3 | - | - | - | - | - | - | - | 2 | | 2 | 3 |
| 5101.3 | 3 | 3 | 2 | 3 | - | - | - | - | - | - | - | 3 | | 2 | 2 |
| 5101.4 | 2 | 3 | 3 | 2 | - | - | - | - | - | - | - | 3 | | 3 | 2 |
| 5101.5 | 2 | 3 | 3 | 2 | - | - | - | - | - | - | - | 3 | | 2 | 2 |
| AVG | 3 | 3 | 3 | 2 | - | - | - | - | - | - | - | 3 | | 2 | 2 |
| 3/2/1 Indicat | tes Streng | gth of C | Correlati | on. 3-Hi | gh, 3-M | ledium a | and 1-Lo | ow | | | | | | | |

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| 100 | | | | | | E, Affilia hala, Bog | | | | | | Institution e, A.P.) | • | |
| | N. Contraction | | | | | | | | | | | CIENC | CES | |
| RAMIREDDY SUBBAR | AMI REDDY | C | OUR | SE O | UTCO | OMES | & M. | APPIN | IG OF | COs | with l | POs &] | PSOs | |
| Engineering Exc Through Innov | | S | EM: | I-I | | | R | leg: R | 15 | | AY: | 2017-2 | 2018 | |
| Course | Code: | Course | Name | Engi | neeri | ng Che | emistr | у | | |] | LT | Р | С |
| 15A51 | 1101 | Prerequ | iisite:] | None | | | | | | | | 3 1 | - | 3 |
| | | | C | COUR | SE OI | JTCON | AES ((| COs) | | | | | | |
| CO No. | COURSE | | | | | | | | | | | | | |
| 1101.1 | Differentiat | te betwe | en ha | ird and | d soft | water. | (L3) | | | | | | | |
| 1101.2 | Discuss Bl | JNA-S a | and Bl | JNA-N | l Elas | tromer | s (L2) | | | | | | | |
| 1101.3 | Understan | d the ele | ectroc | hemic | al sou | irces of | fener | gy. (L3 | 8) | | | | | |
| 1101.4 | Discuss abo | ut solid, | liquid, | gaseo | us fue | ls (L2) | | | | | | | | |
| 1101.5 | Understand | the prir | ciples | of lubr | ricants | and CN | ITs (L2 |) | | | | | | |
| Mappin | g of Course O | utcomes | (COs) | with Pı | rogran | 1 Outco | mes (P | Os) & I | Program | n Speci | fic Out | comes (P | 'SOs) | |
| G | | | | | | РО | | | | | | | PS | 0 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 1101.1 | 3 | 3 | 3 | 2 | 2 | 2 | - | - | 2 | - | - | 2 | 3 | - |
| 1101.2 | 2 | 2 | 3 | 3 | - | 1 | 1 | - | - | - | - | 2 | - | 2 |
| 1101.3 | 3 | 2 | 3 | 2 | - | - | 3 | - | 1 | - | - | - | 3 | - |
| 1101.4 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - | - | 2 | 2 |
| 1101.5 | 2 | 1 | 1 | 2 | - | 1 | - | - | - | - | - | - | 2 | - |
| AVG | 2.4 | 2 | 2.4 | 2.2 | 2 | 1.33 | 2 | - | 1.5 | - | - | 2 | 2.5 | 2 |
| 3/2/1 Indicates | Strength of Cor | rrelation. | 3-High | , 2-Mee | dium a | nd 1-Lov | N | | | | | | | |

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|--------------------------------|----------------------|-------------|-----------|----------|---------|----------|-------------|---------|----------|---------------------------|----------|-----------------------------|-------|-----|----------|
| 6.9 | | | | | | | | | | D 9001: 20 24 142, S.J | | ed Instituti lore, A.P.) | on. | | |
| | No. | | DE | | | | | | | | | CIEN | CES | | |
| RAMIREDDY SUBBAR | AMI RED DY DLLEGE | | | | | | | | | | | POs & | | | |
| Engineering Ex Through Inno | | S | EM: | I-I | | | R | leg: R | 15 | | AY: | 2017-20 |)18 | | |
| Course | Code: | Course | Name | : Envir | onmer | ntal Stu | udies | | | | Ι | L T | Р | C | 1 |
| 15A0110 | 1 | Prerequ | uisite:] | None | | | | | | | 3 | 3 1 | - | 3 | 1 |
| | | | | COL | JRSE | ουτο | COME | S (COs |) | | | | | | |
| CO No. | COURSE | OUTC | OME | | | | | | <u> </u> | | | | | | |
| 1101.1 | Understar | id the va | rious | natura | al resc | ources | (L2) | | | | | | | | |
| 1101.2 | Discribe a | bout the | Biodi | versity | / and I | Ecosys | tem (l | _2) | | | | | | | |
| 1101.3 | Discuss ab | out the | pollut | ion as | pects | (L3) | | | | | | | | | |
| 1101.4 | To know a | bout the | e socia | ıl issue | es rela | ted to | enviro | onmen | t and | thir pro | otectio | n acts (L | .1) | | |
| 1101.5 | Discribe a | bout the | рори | lation | explo | sion a | nd we | lfare p | rograr | nme (L | 2) | | | | |
| Mappi | ing of Course | Outcomes | (COs) | with F | Program | m Outc | omes (l | POs) & | Progra | am Spec | ific Out | comes (P | SOs) | | |
| | | | | | | PO |) | | | | | | | PSO | <u> </u> |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 |
| 1101.1 | 3 | 2 | 3 | 2 | 3 | - | 2 | - | 2 | - | - | - | 2 | 2 | - |
| 1101.2 | 2 | 2 | 3 | 2 | - | 2 | 3 | - | - | - | - | - | 3 | - | 2 |
| 1101.3 | 3 | 2 | 3 | 2 | - | - | 2 | - | - | - | - | 3 | 3 | 2 | - |
| 1101.4 | 2 | 2 | 3 | 2 | - | - | 2 | 2 | - | - | - | - | - | 3 | - |
| 1101.5 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | - | - | - | 3 | - | 3 | - |
| AVG | 2.4 | 2 | 3 | 2 | 3 | 2 | 2.4 | 2 | 2 | #### | #### | 3 | 2.67 | 2.5 | 2 |
| 3/2/1 Indicates | Strength of Co | orrelation. | 3-High | , 2-Me | dium ar | nd 1-Lo | W | | | | | | | | |

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| | ARAMI REDRY | | N | H-16, Ka | adanutha | ala, Bogo | ole Mand | al, Kava | di- 524 1 | 42, S.P.S | .R. Nello | ore, A.P.) | | |
| ENGINEERING | COLLEGE | - | | | | | | | | | | CIEN POs & | | |
| Through In | | | EM: | I-I | | | | eg: R | | | | : 2017-2 | | |
| Course | Code: | Course Skills | - | | ish La | ingua | | 0 | | on | | | P | 0 |
| 15A5 | 2102 | Prerequ | uisite: 1 | None | | | | | | | | | 4 | 2 |
| | | | | | | | | | | | | | | |
| | GOUD | | | | RSE O | UTC | DMES | (COs) |) | | | | | |
| CO No. | COURS | | | | | | | | | | | | | |
| 2102.1 | Distingui | sh the sp | beech s | ounds | and ad | cquire | better | pronu | nciatio | on | | | | |
| 2102.2 | Develop | oral flue | ncy and | d neuti | ralize r | nothei | r tongu | ie influ | ience. | | | | | |
| 2102.3 | Take par Poster, P | | | | | | | | kpertis | e in Pr | esenta | tion Skil | ls like (| Ora |
| 2102.4 | Apply lai speaking | | | propria | ately a | nd effe | ectively | / in int | erview | /s, grou | ıp disc | ussions | and p | ubli |
| 2102.5 | Take par | t in grou | p activi | tes wit | th mor | e conf | idence | there | by enh | ancing | the e | mployab | ility sk | ills |
| | g of Course | Outcome | s (COs |) with l | Progra | m Out | comes | (POs) | & Prog | gram Sj | pecific | Outcome | es (PSC |)s) |
| Mapping | | | | | | РО | | | | | | | PS | 50 |
| | | | | | | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| Mapping COs | 1 | 2 | 3 | 4 | 5 | U | - | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | - | - | 1 | 3 | 3 | 3 | 2 | - | - |
| COs | | | | | 5 - - | - | | 1 | 3 | 3 | 3 2 | 2 1 | - | - |
| COs 2102.1 | - | - | - | - | - | - | - | | | | | | | - |
| COs 2102.1 2102.2 | - | - | - | - | - | - | - | 1 | 3 | 3 | 2 | 1 | - | - |
| COs 2102.1 2102.2 2102.3 | - | - | - | - | - | - | - | 1 | 3 | 3 | 2 3 | 1 2 | - | |

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| RAMIREDDY SUBBI | ARAMI REDDY | Ι | | / | | 8 | | / | | / | | CIEN | CE | | | |
| Engineering E Through Inn | | CC | OURS | E OU | TCO | MES | & MA | PPIN | IG OI | F COs | with | POs & | PSOs | | | |
| | | S | EM: | I-I | | | R | eg: R | 15 | | AY | : 2017-2 | 2018 | | | |
| Course | Code: | Course | Name: | Engi | neerii | ng Ch | emist | ry Lal | b | | Ι | T | Р | С | | |
| 15A5 | 1102 | Prerequ | isite: 1 | None | | | | | | | - | | 4 | 2 | | |
| | | | | COLI | DEE O | UTCO | MES | $(\mathbf{CO}_{\mathbf{c}})$ | | | | | | | | |
| CO No. | COURS | E OUT | | | VSE O | | JNIES | (COS) | | | | | | | | |
| 1102.1 | Develop s | skills in d | eterm | ining t | he effe | ects of | hard w | vater i | n wate | r | | | | | | |
| 1102.2 | Distingui | istinguish different types of titrations in the volumetric analysis | | | | | | | | | | | | | | |
| 110212 | | | | | | | | | , | , | | | | | | |
| 1102.3 | Apply Co | onductor | netrv | instru | menta | l met | hod i | n vol | umetri | c ana | lvsis t | o deter | mine | the | | |
| 110210 | concentra | | | | | | | | | | • | | | | | |
| | | | | | | | | | | | | | | | | |
| 1102.4 | Correlate | the puri | ty of w | ater s | ample | s by dc | oing D. | O, Acio | lity an | d alkal | inity es | stimatior | าร | | | |
| 1102.5 | Analyze t | he effect | of ter | nperat | ure or | i viscos | sity by | using l | Redwo | od vis | comete | er | | | | |
| | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | 1 | | | |
| COs | | | | | | PO | | - | | | - | | PS | 0 | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | | |
| 1102.1 | 3 | 3 | - | - | - | - | 3 | 1 | 1 | 1 | - | - | - | - | | |
| 1102.2 | 3 | 3 | - | - | - | - | 2 | 1 | 1 | 1 | - | - | - | - | | |
| 1102.3 | 3 | 3 | 1 | _ | - | - | 1 | 1 | 1 | 1 | - | - | - | - | | |
| 1102.4 | 3 | 3 | 2 | - | - | - | 3 | 1 | 1 | 1 | - | - | - | - | | |
| 1102.5 | 3 | 3 | 2 | - | - | - | 1 | 1 | 1 | 1 | - | - | - | - | | |
| AVG | 3 | 3 | 2 | - | - | - | 2 | 1 | 1 | 1 | - | - | - | - | | |
| 3/2/1 Indicat | tes Strength | of Correl | ation. 3 | -High, | 2-Med | ium and | d 1-Lov | V | | | | | | | | |

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|------------------------------|-------------|---------------------|-----------|-----------|-----------|-----------|-------------|---------------------|----------|----------|---------------|--------|--------|------|-----------|
| | | | | | | | | TUA. Ar dal, Kav | | | | | | on) | |
| RAMIREDDY SUBB | ARAMI REDDY | D | EPAR | TME | NT OI | F CON | APUT | ER SC | CIENC | CE AN | D EN | GIN | IEE | RIN | IG |
| Engineering I Through Inr | | | COU | RSE (| OUTC | OMES | 5 & M. | APPIN | G OF | COs v | with P | Os & | & PS | SOs | |
| | | | SEM | [: I – | I | |] | Reg: R | 15 | | AY: | 201' | 7-20 | 18 | |
| Course (| Code: | Cou | rse Nar | ne: Co | mpute | r Prog | ramm | ing La | b | ł | | L | Т | Р | С |
| 15A05 | 201 | Prer | requisit | e: Prog | rammir | ng in C | | | | | | - | - | 4 | 2 |
| | | | | | | | | | | | | | | | |
| | | | | CC | DURSE | E OUT | COME | S (COs |) | | | | | | |
| CO No. | | | DUTC | - | | | | | | | | | | | |
| 5201.1 | | stand an hm. (B7 | | the exec | cution of | f progra | ms writt | ten in C | languag | ge and V | Vrite the | e C co | ode fo | orag | given |
| 5201.2 | Constr | uct prog | grams th | at perfo | rm conc | litional, | selectio | n statem | ents. (B | TL3) | | | | | |
| 5201.3 | Design | Progra | ms with | arrays | and fund | ctions, s | trings (E | BTL6) | | | | | | | |
| 5201.4 | Design | the pro | ograms v | with poi | nters, st | ructures | . (BTL6 |) | | | | | | | |
| 5201.5 | Apply | file ope | erations | to create | e several | l progra | ms. (BT | L3) | | | | | | | |
| Mapping of | Course | Outcon | mes (CC | Os) with | Progra | am Outo | comes (I | POs) & | Progra | m Speci | ific Out | tcome | es (P | SOs) | |
| COs | | | | | | Р | 0 | | | | | | | PS | 60 |
| COS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 2 | 1 | 2 |
| 5201.1 | 3 | 2 | 2 | 2 | - | - | - | - | 2 | - | - | 2 | | 3 | 2 |
| 5201.2 | 3 | 3 | 3 | 3 | - | - | - | - | 3 | - | - | 2 | | 2 | 3 |
| 5201.3 | 3 | 3 | 2 | 3 | - | - | - | - | 3 | - | - | 3 | | 2 | 2 |
| 5201.4 | 2 | 3 | 3 | 2 | - | - | - | - | 2 | - | - | 3 | | 3 | 2 |
| 5201.5 | 2 | 3 | 3 | 2 | - | - | - | - | 2 | - | - | 2 | | 2 | 2 |
| AVG | 3 | 3 | 3 | 2 | - | - | - | - | 2 | - | - | 2 | | 2 | 2 |
| 3/2/1 Indicat | tes Streng | gth of C | Correlati | on. 3-H | igh, 3-N | fedium a | and 1-Lo | ow | | • | | | | | |

I B.Tech, 1I Sem ECE Cos and pos mapping (R15-JNTUA)

| (and | 8 | | · • • | • | | / | | | | | | d Institutio ore, A.P.) | on. | |
|-----------------------------|----------------------------|------------|-------------|---------|---------|--------------|------------------|---------|---------|---------|--------|----------------------------|-----------|------|
| | \geq | Ι |)EPA | RTN | /IEN' | T OF | F HU | MAN | IITI | ES Al | ND S | CIEN | CES | |
| RAMIREDDY SUB ENGINEERIN | BARAMI REDDY IG COLLEGE | C | OURS | SE OU | TCO | MES | & M A | APPIN | | F CO | s with | POs & | : PSOs | 8 |
| Engineering Through I | | S | EM: | I-II | | | R | eg: R | 15 | | AY | : 2017- | 2018 | |
| Course | Code: | Course | Name | : Math | nemati | ics – I | Ι | | | | | L T | Р | 0 |
| 15A5 | 4201 | Prerequ | uisite: | None | | | | | | | | 3 1 | - | 3 |
| | | | | COU | RSE O | DUTC | OMES | (COs |) | | | | | |
| CO No. | COURS | SE OUT | COM | | | | | (000 | , | | | | | |
| 4201.1 | Understa | | | | ce Trai | nsform | ns. (BT | L2) | | | | | | |
| 4201.2 | Evaluate | the Four | ier Ser | ies exp | oansior | n of pe | riodic | functio | ons. (B | TL5) | | | | |
| 4201.3 | Understa | nd the us | sage of | Fourie | er Tran | sform | s. (BTI | L2) | | | | | | |
| 4201.4 | Formulat Dimensio | | | • | | | | - | | nd also | o find | the solu | itions of | of 1 |
| 4201.5 | Understa | and the us | sage of | Z-Tra | nsform | ns. (BT | TL2) | | | | | | | |
| Mapping | of Course | e Outcon | nes (C | Os) wi | th Pro | gram (PSO | | mes (l | POs) & | & Prog | gram S | pecific | Outcor | nes |
| <u>CO</u> r | | | | | | PO | - | | | | | | PS | 50 |
| COs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4201.1 | 3 | 2 | 2 | 2 | - | - | - | - | - | - | - | 1 | 2 | 3 |
| 4201.2 | 2 | 3 | 2 | 2 | - | _ | _ | _ | _ | _ | - | 1 | | |
| 4201.3 | 3 | 2 | 2 | 2 | _ | | | | _ | | | 1 | 2 | 2 |
| 4201.3 | | | | | | - | - | - | - | - | - | - | 2 | 2 |
| 100:1 | 3 | 2 | 2 | 2 | - | - | - | - | - | - | - | | 3 | 2 |
| 4201.4 | | 2 | 2 | 2 | - | _ | _ | - | - | - | _ | 1 | | |
| 4201.4 4201.5 | 3 | 2 | | | | | | | | | | | 2 | 2 |

| and a | | RAN | AIRE | DDY | SUBI | BAR | AMI I | REDD | Y EN | GIN | EERI | NG CC | OLLEC | ŝE |
|------------------------------|-------------|----------------|----------|----------|---------|--------|------------------|---------|--------|--------|----------|----------------------------|---------|------|
| | | | | | | | | | | | | l Institutio ore, A.P.) | on. | |
| RAMIREDDY SUBB | ARAMI REDBY | Γ | | | | | | | | | | CIEN | CES | |
| Engineering I Through Inr | xcellence | C | OURS | E OU | TCO | MES | & M A | PPIN | IG OI | F COs | with | POs & | PSOs | 3 |
| Through the | | S | SEM: | I-II | | | R | eg: R | 15 | | AY | : 2017- | 2018 | |
| Course | Code: | Course COMN | | | | FOR I | PROF | ESSIO | NAL | | Ι | | Р | C |
| 15A5 | 2201 | Prereq | uisite:l | NONE | | | | | | | (°, | 3 1 | - | 3 |
| | | | | | | | | | | | - | | | |
| | | | | COU | RSE C | OUTCO | OMES | (COs) |) | | | | | |
| CO No. | COURS | SE OUT | COM | IE | | | | | | | | | | |
| 2201 1 | Particip | ate effe | ctivel | y in de | ebates | s on m | oderi | ı corp | oratis | m and | d lister | n, and s | speak | well |
| 2201.1 | in Engli | sh in gr | oup d | iscuss | ions. | (BTL | 3) | | | | | | | |
| 2201.2 | Recall t | he alter | nativ | e soui | ces o | of ene | rgy by | v liste | ning, | summ | narizir | ig and | rewri | ting |
| | report | s. (BTL | 1) | | | | | | | | | | | |
| 2201.3 | Develop | report | writi | ng ski | lls. (B | BTL3) | | | | | | | | |
| 2201.4 | Interpre | t charts | s and | tables | . (BTI | L2) | | | | | | | | |
| 2201.5 | Commu | | | | | , | ews | hv de | eveloi | ning | requir | ed co | mnete | ence |
| 2201.5 | thereby | | | - | | | | - | - | 51116 | requi | cu co | mpeu | Jiee |
| Mapping | of Course | Outcome | s (COs |) with] | Progra | ım Out | comes | (POs) a | & Prog | ram Sj | pecific | Outcom | es (PSC |)s) |
| 00 | | | | | | РО |) | | | | | | PS | 50 |
| COs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 2201.1 | - | - | - | - | - | - | - | - | 3 | 3 | 2 | 2 | - | - |
| 2201.2 | - | - | - | - | - | - | - | - | 2 | 3 | - | 2 | - | - |
| 2201.3 | - | _ | - | _ | - | - | _ | _ | 3 | 3 | 2 | 3 | _ | - |
| 2201.4 | - | _ | - | _ | _ | - | _ | _ | 3 | 3 | | | | + |
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2201.5

AVG

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3/2/1 Indicates Strength of Correlation. 3-High, 2-Medium and 1-Low

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RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE

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IAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE Engineering Excellence Through Innovation

DEPARTMENT OF HUMANITIES AND SCIENCE COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

| Intough Innovation | | | | | | |
|---------------------|--------------------|-------------|--------------|--------|------|---|
| | SEM: I-II | Reg: R15 | AY: 2 | 2017-2 | .018 | |
| Course Code: | Course Name: NETWO | RK ANALYSIS | L | Т | Р | С |
| 15A04201 | Prerequisite: None | | 3 | 1 | - | 3 |

| | COURSE OUTCOMES (COs) |
|--------|--|
| CO No. | COURSE OUTCOME |
| 4201.1 | Determine the equivalent impedance of given network by using network reduction techniques and determine the current, voltage and power in any element(BTL3) |
| 4201.2 | Compare behaviour of circuit elements during switching, Analyze transient response of RL RC RLC circuits for DC excitation(BTL2) |
| 4201.3 | To understand voltage, current and power relationships in 1- ϕ AC circuits with basic elements R,L,C and determine the real power, reactive power, power factor etc,. For a Given a circuit and the excitation (BTL3) |
| 4201.4 | interprete Resonance phenominon in Electrical circuits, Determine Self, Mutual Inductances and Coefficient of Coupling of magnetic coil(BTL2) |
| 4201.5 | Determine two port network parameters, understand the concept of transferfunction and pole zeros of network function, Study the Filters concept (BTL3) |

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

| CO . | | | | | | PO | | | | | | | PS | PSO | |
|-------------|---|---|---|---|---|----|---|---|---|----|----|----|----|-----|--|
| COs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | |
| 4201.1 | 2 | 3 | 2 | 1 | - | - | - | - | - | - | - | 2 | 2 | 2 | |
| 4201.2 | 2 | 3 | 3 | 2 | - | - | - | - | - | - | - | 2 | 2 | 2 | |
| 4201.3 | 3 | 3 | 2 | 2 | - | - | - | - | - | - | - | 2 | 2 | 2 | |
| 4201.4 | 3 | 2 | 2 | 2 | - | - | - | - | - | - | - | 1 | 2 | 2 | |
| 4201.5 | 3 | 3 | 2 | 2 | - | - | - | - | - | - | - | 2 | 2 | 2 | |
| AVG | 3 | 3 | 3 | 3 | - | - | - | - | - | - | - | 2 | 2 | 2 | |

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RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE

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RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE Engineering Excellence

DEPARTMENT OF HUMANITIES AND SCIENCES COURSE OUTCOMES & MAPPING OF COs with POS & PSOS

| Through Innovation | | | | | | | | | |
|---------------------|----------------------|-------------------------------|---|---|---|---|---|--|--|
| | SEM: I-II | SEM: I-II Reg: R15 AY: 2017-2 | | | | | | | |
| Course Code: | Course Name: Enginee | L | Т | Р | С | | | | |
| 15A56101 | Prerequisite:NONE | | | 3 | 1 | - | 3 | | |

COURSE OUTCOMES (COs)

| CO No. | COURSE OUTCOME |
|--------|---|
| 6101.1 | Articulate interference, diffraction (BTL3), Analyze (BTL4). Device laser (BTL4), Develop optic fiber (BTL6) |
| 6101.2 | Interpret crystallography (BTL2), Use ultrasonics (BTL3). |
| 6101.3 | Illustrate quantum mechanics (BTL1) and solve electron theory(BTL3). |
| 6101.4 | Categorize semiconductors and magnetic materials (BTL4). |
| 6101.5 | Explain superconductivity (BTL1) and Connect nanomaterials (BTL4) |

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

| COr | | | | | | РО |) | | | | | | PS | PSO | |
|--------|---|---|---|---|---|----|---|---|---|----|----|----|----|-----|--|
| COs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | |
| 6101.1 | 2 | 3 | 2 | 2 | 3 | 1 | _ | _ | | _ | — | 1 | 2 | 3 | |
| 6101.2 | 3 | 2 | 3 | 2 | 2 | 3 | - | _ | - | _ | — | 1 | 3 | 3 | |
| 6101.3 | 2 | 3 | 2 | 1 | 2 | 2 | - | _ | | _ | — | 2 | 3 | 3 | |
| 6101.4 | 3 | 3 | 3 | 1 | 3 | 1 | - | — | _ | — | _ | 1 | 2 | 2 | |
| 6101.5 | 3 | 2 | 2 | 2 | 2 | 2 | _ | _ | | _ | _ | 3 | 2 | 2 | |
| AVG | 3 | 3 | 3 | 2 | 3 | 3 | - | - | - | - | - | 2 | 3 | 3 | |



Engineering Excellence

RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE

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DEPARTMENT OF H&S

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

| Through Innovation | | | | | | |
|---------------------|----------------------------|-----------------|-------|-------|------|---|
| | SEM: I-II | Reg: R15 | AY: 2 | 017-2 | 2018 | |
| Course Code: | Course Name: <u>ENGINE</u> | ERING DRAWING | L | Т | Р | С |
| 15A03101 | Prerequisite: None | | 0 | - | - | 3 |

COURSE OUTCOMES (COs)

| CO No. | COURSE OUTCOME |
|---------|---|
| 3101T.1 | Draw various curves applied in engineering. |
| 3101T.2 | Show projections of points, lines, planes and solids graphically. |
| 3101T.3 | Draw the development of surfaces of solids. |
| 3101T.4 | Use computers as a drafting tool. |
| 3101T.5 | Draw isometric and orthographic drawings using CAD packages. |

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

| ~~~ | | РО | | | | | | | | | | | | PSO | |
|---------|---|----|---|---|---|---|---|---|---|----|----|----|---|-----|--|
| COs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | |
| 3101T.1 | 3 | 1 | 1 | - | - | - | - | - | - | 3 | - | - | 3 | 1 | |
| 3101T.2 | 3 | 3 | 2 | - | - | | - | - | - | 3 | - | - | 3 | 1 | |
| 3101T.3 | 3 | 1 | 1 | - | - | | - | - | - | 3 | - | - | 3 | 1 | |
| 3101T.4 | 3 | 3 | 3 | - | - | - | - | - | 1 | 3 | - | - | 3 | 1 | |
| 3101T.5 | 3 | 2 | 3 | 1 | - | - | - | - | 2 | 3 | - | - | 3 | 1 | |
| | 3 | 2 | 2 | - | - | - | - | - | 1 | 3 | - | - | 3 | 1 | |

| ANTE | | RAN | IIREI | DDY S | SUBE | BAR/ | ¥MI f | REDD | YEN | IGINI | EERI | ng co | LLEC | iE |
|------------------------------|--------------|-----------|----------|--------|----------|----------|------------------|----------|--------|----------|-------|-----------------------------|------------|----|
| | | | | | | | | | | | | d Institution ore, A.P.) | n . | |
| RAMIREDDY SUBB | ARAMI REDDY | I | | | | | | | | | | SCIEN | CE | |
| ENGINEERING Engineering E | COLLEGE | | | | | | | | | | | POs & | | |
| Through Inn | ovation | SI | EM: | I-II | | | R | eg: R | 15 | | AY | : 2017-2 | 2018 | |
| Course | Code: | Course | Name: | Netw | ork A | nalys | | 0 | | |] | L T | Р | С |
| 15A04 | 4202 | Prerequ | | | | · | | | | | | | 4 | 2 |
| | | | | COUF | SE O | | OMES | (COs) | | | | | | |
| CO No. | COURS | E OUT | | | | | | (003) | | | | | | |
| 4202.1 | Analyze t | | | | neoren | ns | | | | | | | | |
| 4202.2 | Evaluate | the frequ | uency | respon | se of s | eries a | and pai | rallel r | esonar | nce ciro | cuits | | | |
| 4202.3 | Analyze t | he Trans | ient re | sponse | e of se | ries D(| C Circu | its | | | | | | |
| 4202.4 | Design th | e freque | ncy re | sponse | e of vai | rious fi | lters | | | | | | | |
| | 1 | | | | | | | | | | | | | |
| COs | | | | | | РО | | | | | | | PS | 0 |
| COS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4202.1 | 3 | 3 | 1 | - | - | - | - | 1 | 1 | 1 | - | - | 2 | 2 |
| 4202.2 | 3 | 3 | 2 | 2 | - | - | - | 1 | 1 | 1 | - | - | 2 | 2 |
| 4202.3 | 3 | 3 | 1 | - | - | - | - | 1 | 1 | 1 | - | - | 2 | 2 |
| 4202.4 | 3 | 3 | 2 | 2 | - | - | - | 1 | 1 | 1 | - | _ | 2 | 2 |
| AVG | 3 | 3 | 2 | 2 | - | _ | - | 1 | 1 | 1 | _ | - | 2 | 2 |
| 3/2/1 Indicat | tes Strength | of Correl | ation. 3 | -High, | 2-Med | ium an | d 1-Lov | v | | | | | | |

| and a | FI | RAN | IIREI | DDY | SUBE | BAR/ | ¥MI I | REDD | YEN | IGINI | EERI | NG CO | LLEC | Æ |
|-----------------|--------------|-----------|-----------|---------|---------|---------|------------------|----------|---------|-------|------|----------------------------|------|---|
| | | | | | | | | | | | | d Institutio ore, A.P.) | n. | |
| RAMIREDDY SUBB/ | RAMI REDDY | J | | | | | | | | | | SCIEN | CE | |
| Engineering E | | | | | | | | | | | | POs & | | |
| Through Inn | noitevo | S | EM: | I-II | | | R | eg: R | 15 | | AY | : 2017-2 | 2018 | |
| Course | Code: | Course | Name: | Engi | neerir | ıg Phy | ysics I | Lab | | |] | T | Р | С |
| 15A5(| 6102 | Prerequ | uisite: 1 | None | | | | | | | | | 4 | 2 |
| | | | | COLU | | | | | | | | | | |
| | COURS | EOUT | | | RSE O | UICO | JMES | (COs) | | | | | | |
| CO No. | | | | | rforor | | Viffract | ion of | light | | | | | |
| 6102.1 | Analyze t | ne impo | rtance | orme | enerer | | лпасі | .1011 01 | iignt | | | | | |
| 6102.2 | Apply Las | ers & Fil | per opt | ics to | measu | re vari | ous pa | iramet | ers | | | | | |
| 6102.3 | Calculate | the Ene | rgy gap | o of Se | micon | ductor | laser o | diode | | | | | | |
| 6102.4 | Apply the | applica | tions o | f magr | netic m | nateria | ls in da | ay-to-d | ay scie | ence | | | | |
| | | | | | | | | | | | | | | |
| 60 | | | | | | РО | | | | | | | PS | 0 |
| COs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 6102.1 | 3 | 3 | - | - | - | - | - | 1 | 1 | 1 | - | - | - | - |
| 6102.2 | 3 | 2 | - | - | - | - | - | 1 | 1 | 1 | - | - | - | - |
| 6102.3 | 3 | 2 | - | - | - | - | - | 1 | 1 | 1 | - | - | - | - |
| 6102.4 | 3 | 2 | - | - | - | - | - | 1 | 1 | 1 | - | - | - | - |
| AVG | 3 | 2 | - | - | - | - | - | 1 | 1 | 1 | - | - | - | - |
| 3/2/1 Indicat | tes Strength | of Correl | ation 2 | High | 2 Mad | ium an | d 1 L or | | | | | | | |

3/2/1 Indicates Strength of Correlation. 3-High, 2-Medium and 1-Low

| | | R | AMIR | EDD | Y SUE | BBAR | AMI | REDD | Y EN | GINE | ERIN | 9 C(| DLI | ÆG | E |
|--------------------------------|------------------|--|-----------|----------|---------------------|----------|------------------|----------------------|----------|-----------|-----------|--------|------|--------|-----------|
| (And) | | | | | | | | TUA. An dal, Kava | | | | | | on) | |
| | | DI | EPAR | TME | NT OF | F CON | IPUT | ER SC | CIENC | CE AN | D EN | GIN | EE | RIN | IG |
| RAMIREDDY SUBBA ENGINEERING | RAMI REDDY | | COU | RSE C | OUTC | OMES | & M A | APPIN | GOF | COs v | vith P | Os 8 | e PS | SOs | |
| Engineering E Through Inn | xcellence | | SEM | : I- | II | |] | Reg: R | .15 | | AY: | 2017 | 7-20 | 18 | |
| Course C | Code: | Cou | rse Nan | ne: En | gineeri | ng & I | T Wor | kshop | | | | L | Т | ГР | |
| 15A992 | 201 | Prer | equisite | e: | | | | | | | | - | - | 4 | 2 |
| | | | | | | | | | | | | | | | |
| | | | | CC | DURSE | C OUTO | COME | S (COs |) | | | | | | |
| CO No. | | | OUTC | | | | | | | | | | | | |
| 9201.1 | Unders (BTL2) | | isassem | ble and | Asseml | ole a Pe | rsonal (| Compute | er and p | prepare (| he com | puter | read | ly to | use. |
| 9201.2 | Design | Design the Documents using Word processors. (BTL6) | | | | | | | | | | | | | |
| 9201.3 | Design | Design Slide presentations using the presentation tool. (BTL6) | | | | | | | | | | | | | |
| 9201.4 | | | | | of two c r. (BTL | | compute | ers for in | formati | on shari | ng and i | nstall | sing | gle or | dual |
| 9201.5 | Illustra | te the A | Access fr | om Inte | rnet and | Browse | e it to ol | otain the | require | d inform | nation. (| BTL2 | 2) | | |
| Mapping of | Course | Outcor | nes (CC |)s) with | Progra | um Outo | comes (I | POs) & | Progra | m Speci | fic Out | come | s (P | SOs) | |
| COs | | | | | | Р | 0 | | | | | | | PS | O |
| cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 2 | 1 | 2 |
| 9201.1 | 3 | 2 | 3 | 2 | - | - | - | - | 3 | - | - | 3 | | 2 | 3 |
| 9201.2 | 2 | 3 | 2 | 3 | - | - | - | - | 3 | - | - | 2 | | 3 | 2 |
| 9201.3 | 3 | 2 | 2 | 2 | - | - | - | - | 3 | - | - | 2 | | 2 | 3 |
| 9201.4 | 2 | 3 | 2 | 2 | - | - | - | - | 3 | - | - | 2 | | 2 | 3 |
| 9201.5 | 2 | 3 | 3 | 2 | - | - | - | - | 3 | - | - | 2 | | 3 | 2 |
| AVG | 2 | 3 | 2 | 2 | - | - | - | - | 3 | - | - | 2 | | 3 | 3 |
| 3/2/1 Indicat | es Streng | gth of C | orrelati | on. 3-Hi | igh, 3-M | ledium a | ind 1-Lo | ow | | | | | | | |



DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CO'S AND PO'S MAPPING

JNTUA-R15 REGULATION

INDEX

List of all courses offered by the institution for the regulation R15, JNTUA

| S.No | Course Code | Course Name | Year & Sem |
|------|----------------|--|------------|
| 1 | 15A54301 | Mathematics –III | |
| 2 | 15A04301 | Electronic Devices and Circuits | |
| 3 | 15A04302 | Switching Theory and Logic Design | |
| 4 | 15A04303 | Signals and Systems | |
| 5 | 15A04304 | Probability Theory and Stochastic Processes | II-I Sem |
| 6 | 15A02306 | Electrical Technology | |
| 7 | 15A04305 | Electronic Devices and Circuits Laboratory | |
| 8 | 15A02307 | Electrical Technology and Basic Simulation Laboratory | |
| | | Laboratory | |
| 10 | 15A54402 | Mathematics – IV | |
| 10 | 15A04401 | Electronic Circuit Analysis | |
| 12 | 15A04402 | Analog Communication Systems | - |
| 13 | 15A04403 | Electromagnetic Theory and Transmission Lines | - |
| 14 | 15A05201 | Data Structures | II-II Sem |
| 15 | 15A02303 | Control Systems Engineering | |
| 16 | 15A04404 | Electronic Circuit Analysis Laboratory | |
| 17 | 15A04405 | Analog Communication Systems Laboratory | |
| 18 | 15A04406 | Comprehensive Online Examination – I | |

| No. Solv 54301.1 Solv 54301.2 Inter 54301.3 Appl 54301.4 Appl 54301.4 Com | Cours | NH-1 EM: COURS EM: COURS EM: COURS EM: COURS COURCOURS COURO | 6, Kada DEP / CON SE O II-I e: M/ : None DURS DURS DURS DURS DURS DURS DURS DURS | muthala ART IMU UTC ATHI e SE O inear ods fution, 1 | a, Bogol ME JNIC OME EMA EMA UTC y appl equat | d to JNT <u>e Mand</u> NT (CAT] CAT] S & I I R TICS OME ying t tions v arious | al, Kava DF E ION MAP PSOs aeg: R -III S (CC the cc with a | ISO 90 LEC ENC PINC 215 Ds) oncept hema | t of m | AY | ING with P 7: 2019 2 T 3 1 | Os & 0-2020 P 0 | C 3 |
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| Course Code: ISA54301 CO ISA54301 CO No. CO 54301.1 Solv 54301.2 Inter 54301.3 Apple 54301.4 Apple 54301.5 Com | Cours Prere JRSE OU e enginee pret and y numer polation, y curve- | OURS EM: se Nam quisite: CC JTCO rring p solve r cical 1 Differ fitting | CON SE O II-I e: MA : None OURS OME roble: non- 1 methor rentiat | IMU UTCO ATHI e SE O inear ods fo tion, 1 | JNIC OMF EMA UTC y appl equat or va Integr | CATI S & I I R TICS OME ying t tions v | ION MAP PSOs eg: R -III S (CC the cc with a | ENC PING a15 oncept a sing hema | GINE OF | AY | ING with P 7: 2019 2 T 3 1 | P-2020 | C 3 |
| Course Code: 15A54301 CO 15A54301 CO 54301.1 54301.2 54301.3 54301.4 600 54301.4 601 54301.5 | Cours Prere JRSE OU e enginee pret and y numer polation, y curve- | OURS EM: se Nam quisite: CC JTCO ring p solve r -ical 1 Differ fitting | II-I e: MA : None DURS DURS DOME roble: non- 1 methor rentiat | UTC ATHI e SE O inear ods f tion, 1 | OME EMA UTCO y appl equat for va Integr | S & I I R TICS OME ying t tions | MAP PSOs leg: R -III S (CC the co with a | PING 15 Ds) oncept t sing hema | t of m | AY AY 3 atrice | with P 7: 2019 2 T 3 1 | P-2020 | C 3 |
| Course Code: 15A54301 CO 15A54301 CO 54301.1 54301.2 54301.3 54301.4 600 54301.4 601 54301.5 | Cours Prere JRSE OU e enginee pret and y numer polation, y curve- | EM: we Nam quisite: CC JTCO wring p solve r biffer fitting | II-I e: MA : None DURS DURS DME roble: non- 1 methor rentiat | ATHI e SE O ms by inear ods fe tion, 1 | EMA UTC y appl equat or va Integr | I R TICS OME ying tions | PSOs eeg: R -III S (CC the cc with a | 215 Ds) oncept a sing hema | t of m le var | AY I 3 atrice iable. | 7:2019 L T 3 1 (L2) | P-2020 | C 3 |
| CO CO 15A54301 Inter 54301.1 Solv 54301.2 Inter 54301.3 App 54301.4 App 54301.5 Com | Course Prere URSE OU e enginee pret and y numer polation, y curve- | e Nam quisite: CC JTCO ring p solve r -ical t Differ fitting | e: MA : None DURS DURS DME roble: non- 1 methor rentiat | SE O ms by inear ods f | UTC y appl equat for va Integr | TICS OME ying t tions y | S (CC) the co with a | Ds) oncept a sing hema | le var | I 3 atrice | L T B 1 | P 0 | C 3 |
| ISA54301 CO CO No. Solv 54301.1 Solv 54301.2 Inter 54301.3 Appl 54301.4 Appl 54301.4 Com 54301.5 Com | Prere JRSE OU e enginee pret and y numer polation, y curve- | quisite: CC JTCO ring p solve r cical 1 Differ fitting | : None DURS DME roble: non- 1 metho rentiat | e SE O ms by inear ods f | UTC y appl equat for va Integr | OME ying t tions v | S (CC) the co with a | oncept a sing hema | le var | atrice iable. | 8 1 s(L3) (L2) | 0 | 3 |
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| CO No.COU54301.1Solv54301.2Inter54301.3Appl54301.4Appl54301.4Com54301.5Com | e enginee pret and y nume polation, y curve- | J TCO ring p solve r cical 1 Differ fitting | oME robles non- 1 metho rentiat | ms by inear ods fr tion, 1 | y appl equat or va Integr | ying tions v | the co with a | oncept a sing hema | le var | iable. | (L2) | such | as |
| No. Corr 54301.1 Solv 54301.2 Inter 54301.3 Appl 54301.4 Appl 54301.4 Corr 54301.5 Corr | e enginee pret and y nume polation, y curve- | J TCO ring p solve r cical 1 Differ fitting | oME robles non- 1 metho rentiat | ms by inear ods fr tion, 1 | y appl equat or va Integr | ying tions v | the co with a | oncept a sing hema | le var | iable. | (L2) | such | as |
| 54301.1 Solv 54301.2 Inter 54301.3 Appl 54301.4 Appl 54301.4 Com 54301.5 Com | pret and y numer polation, y curve- | solve r rical 1 Differ fitting | non- 1 metho centiat | inear ods fe | equat for va | tions | with a | n sing hema | le var | iable. | (L2) | such | as |
| 54301.2 Appl 54301.3 Inter 54301.4 Appl 54301.4 Com 54301.5 Com | y numer polation, ly curve- | rical 1 Differ | metho centiat | ods fottion, 1 | or va Integr | arious | mat | hema | | | | such | as |
| 54301.3Inter54301.4Appl engin54301.4Com meth | polation, y curve- | Differ fitting | rentiat | tion, I | Integr | | | | tical | opera | ations | such | as |
| 54301.4 engin 54301.5 Com 54301.5 meth | • | U | | nique | | | | | | | | | |
| 54301.5 meth | | | s. (L3 | - | es for | data | repre | esenta | tions | and | compu | tation | in |
| Mapping of | pare num | | | | | | • | liffere | ential | equa | tions | with | the |
| | Course (| | | | | | | | omes | (POs) |) & Pr | ograr | n |
| | | | Speci | ific () | | | PSOs |) | | | | | |
| Cos | | | 1 | 1 | PO |) | | 1 | 1 | | | PS | 0 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 54301.1 2 | 2 | 3 | 1 | _ | - 1 | - | - | _ | _ | _ | - | 2 | - |
| 54301.2 ₂ | 3 | 2 | 1 | 1 | - | - | - | - | - | - | 1 | 2 | - |
| 54301.3 2 | 2 | 1 | 1 | 1 | - | - | - | - | - | - | - | 2 | - |
| 54301.4 2 | 2 | 2 | 2 | 2 | - | _ | - | - | - | - | 2 | 3 | - |
| 54301.5 2 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | 2 | 3 | - |
| AVG 2 3/2/1 Indicates | | 2 | 1 | 2 | | | | | | . Т | | 2 | |

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| RAMIREDDY SUBB/ ENGINEERING | ARAMI REDDY COLLEGE | | | | | | ENG | INEEF | ING | | | | | |
| Engineering E Through Inn | | | | | OUTCO | OMES | | | | COs | | Os & P | | |
| | | SEM: Course | | | FCTD | | | eg: R | | | AY: | 2019- | 2020 | 1 |
| Course | Code: | Cours | | e: ELI | | ONIC | C DE | VICE |) AN | J | L | , T | Р | C |
| 15A0 | 4301 | Prereq | uisite: 1 | None | | | | | | | 3 | 1 | 0 | 3 |
| | | | | COUF | RSE O | UTCO | DMES | (COs) | | | | | | |
| CO No. | COURS | | | | | | | | | | | | | |
| 4301.1 | Construe | ct electr | onic ci | rcuits | using | vario | us dio | des. (l | _2) | | | | | |
| 4301.2 | Develop regulato | | (Linea | ar Moo | de Pov | ver Su | ipply) | units | using | rectifi | ers, fil | ters & | | |
| | | | | | | | | | | | | | | |
| 4301.3 | Demons in variou | | | ructio | n, woi | rking a | and ch | aracte | ristics | of BJ | T, JFE | ET and | MOSI | FET |
| 4301.3 4301.4 | | is mode | s(L2) | | | _ | | | | | T, JFE | ET and | MOSI | FET |
| | in variou | is mode DC bia | s(L2) s circu | its for | BJT | and FI | ET Ar | nplifie | rs. (L | 4) | T, JFE | ET and | MOSI | FET |
| 4301.4 4301.5 | in variou Analyse | is mode DC bia transist | s(L2) s circu or amp | its for olifier | BJT : | and FI ts usir | ET An ng BJT | nplifie Г & FI | rs. (L ET(L4 | 4) | | | | |
| 4301.4 4301.5 Mapping o (PSOs) | in variou Analyse Analyse | is mode DC bia transist | s(L2) s circu or amp | its for olifier | BJT : | and FI ts usir | ET Ar ng BJT utcom | nplifie Г & FI | rs. (L ET(L4 | 4) | | | itcome | |
| 4301.4 4301.5 Mapping o | in variou Analyse Analyse | is mode DC bia transist | s(L2) s circu or amp | its for olifier | BJT : | and FI ts usir am O | ET Ar ng BJT utcom | nplifie Г & FI | rs. (L ET(L4 | 4) | | | itcome | 28 |
| 4301.4 4301.5 Mapping o (PSOs) | in variou Analyse Analyse of Course O | us mode DC bia transist utcome | s(L2) s circu or amp s (COs | its for plifier) with | BJT : | and FF ts usir am Ou PO | ET Ar | nplifie Г & FI es (PO | rs. (L ET(L4 s) & I | 4)) Progra | m Spec | cific Ou | itcome PS | es SO |
| 4301.4 4301.5 Mapping o (PSOs) Cos | in variou Analyse Analyse of Course O | us mode DC bia transist Dutcome 2 | s(L2) s circu or amp s (COs 3 | its for plifier) with | BJT : | and FF ts usir am Ou PO | ET Ar | nplifie Г & FI es (PO | rs. (L ET(L4 s) & I | 4)) Progra | m Spec | cific Ou | itcome PS 1 | es 50 2 1 |
| 4301.4 4301.5 Mapping o (PSOs) Cos 4301.1 | in variou Analyse Analyse f Course O 1 3 | IS mode DC bia transist Dutcome 2 2 2 | s(L2) s circu or amp s (COs 3 1 | its for plifier) with | BJT : circui Progr 5 - | and FI ts usir ram Ou PO 6 - | ET Ar ng BJT utcom 7 - | nplifie F & FI es (PO 8 - | rs. (L ET(L4 s) & I 9 - | 4)) Progra 10 - | m Spec 11 - | cific Ou 12 - | PS 1 3 | SO |
| 4301.4 4301.5 Mapping o (PSOs) Cos 4301.1 4301.2 | in variou Analyse Analyse f Course O 1 3 3 | IS mode DC bia transist Dutcome 2 2 2 2 | s(L2) s circu or amp s (COs 3 1 1 | its for plifier) with | BJT : circui Progr 5 - | and FF ts usir am O PO 6 - | ET Ar ng BJT utcom 7 - | nplifie | rs. (L ET(L4 s) & I 9 - | 4)) Progra 10 - | m Spec | cific Ou 12 - | PS 1 3 3 | SO 2 1 |
| 4301.4 4301.5 Mapping o (PSOs) Cos 4301.1 4301.2 4301.3 | in variou Analyse Analyse of Course O 1 3 3 3 | IS mode DC bia transist Dutcome 2 2 2 3 | s(L2) s circu or amp s (COs 3 1 1 2 | its for plifier) with | BJT : circui Progr 5 - | and FF ts usir am Or PO 6 - - | ET Ar ng BJT utcom 7 - - | nplifie | rs. (L ET(L4 s) & I 9 - | 4)) Progra 10 - - | m Spec | cific Ou 12 - - | PS 1 3 3 3 | SO 2 1 1 1 |

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| | COLLEGE | C | DURS | | | | | | | | ERIN with | G POs & | PSOs | |
| Engineering Through In | | | | | | | | | | | | | | |
| | | Course | EM: | II-I | | | | leg: R | | | | 2019-2 | 2020 | <u> </u> |
| Course | Code: | DESI | | 2111 | CHI | NG II | HEUI | XY AI | ND LV | JGIC | L | T | Р | C |
| 15A0 | 4302 | Pre-rec | uisite: | EMTI | | | | | | | 3 | 1 | 0 | 3 |
| | | | C | COUR | SE O | UTC | OME | S (CO | s) | | | | | |
| CO No. | COURS | SE OUT | COM | Έ | | | | | | | | | | |
| 4302.1 | | and Boo cuits. (L | | algebra | a, Nui | mber s | systen | ns and | logic | gates | in the | e develo | opmer | nt of |
| 4302.2 | Apply k | K-Map & | : Tabu | lar Me | ethods | s to mi | inimiz | e logi | e func | tions. | (L3) | | | |
| 4302.3 | Design | different | comb | oinatio | nal Lo | ogic ci | rcuits | . (L6) | | | | | | |
| | | | | | | | | | | | | | | |
| 4302.4 | Design | different | Seque | ential | Logic | circui | ts and | their | applic | ations | . (L6) | | | |
| 4302.4 4302.5 | | different different | - | | 0 | | | | | | . (L6) | | | |
| 4302.5 | | different | comb | oinatio | nal log s) with | gic cir h Pro ş | cuits t gram | using 1 Outco | PLDs. | (L6) | | gram \$ | Specif | ic |
| 4302.5 Mappi | Design | different | comb | oinatio | nal log s) with | gic cir | cuits gram (PSO) | using 1 Outco | PLDs. | (L6) | | gram (| Specif PS | |
| 4302.5 | Design | different | comb | oinatio | nal log s) with | gic cir h Proş omes | cuits gram (PSO) | using 1 Outco | PLDs. | (L6) | | gram S | - | |
| 4302.5 Mappi | Design of Cou | different | comes | oinatio | nal log s) with Outco | gic cir h Prog omes PO | cuits gram (PSO) | using D Outco s) | PLDs. | (L6) (POs) | & Pro | | PS | 50 |
| 4302.5 Mappin | Design of Cou | different trse Out | comb comes | inatio (CO: | nal log s) with Outco | gic cir h Prog omes PO | cuits gram (PSO) | using D Outco s) | PLDs. | (L6) (POs) | & Pro | 12 | PS | SO 2 |
| 4302.5 Mappin Cos 4302.1 | Design of Cou | different Irse Out 2 3 | comes 3 | inatio (CO: 4 2 | nal log s) with Outco | gic cir h Prog omes PO | cuits gram (PSO) | using D Outco s) | PLDs. | (L6) (POs) | & Pro | 12 2 | PS 1 | 50 2 2 2 |
| 4302.5 Mappin Cos 4302.1 4302.2 | Design of Cou | different urse Out 2 3 3 | comes 3 1 | inatio (CO: 4 2 1 | nal log s) with Outco | gic cir h Prog omes PO | cuits o gram (PSO) | using D Outco s) | PLDs. | (L6) (POs) | & Pro | 12 2 2 | P S 1 1 1 | 50 2 2 2 2 2 |
| 4302.5 Mappin Cos 4302.1 4302.2 4302.3 | Design of Cou | different Irse Out 2 3 3 3 | a a a 1 1 2 | inatio (CO: 4 2 1 2 | nal log s) with Outco | gic cir h Prog omes PO | cuits o gram (PSO) | using D Outco s) | PLDs. | (L6) (POs) | & Pro | 12 2 2 1 | P S 1 1 1 1 | 50 2 2 |

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| AMIREDDY SUBB ENGINEERING | ARAMI RED DY COLLEGE | | | | | | | | | | ERIN | | | |
| Engineering I Through Inr | | C | DURS | E OU | TCO | MES | & M A | PPIN | IG OI | F COs | with | POs & | : PSOs | 5 |
| | | S | EM: | II-I | | | R | eg: R | 15 | | AY | : 2019- | 2020 | |
| Course | Code: | Course | Name | SIGN | ALS A | AND S | SYST | EMS | | | Ι | T | Р | С |
| 15A0 | 4303 | Prerequ | uisite: l | None | | | | | | | 3 | 3 1 | 0 | 3 |
| | | | | COUI | RSE O | UTCO | OMES | (COs) | | | | | | |
| CO No. | COURS | SE OUT | COM | E | | | | | | | | | | |
| 4303.1 | Apply F | ourier s | eries to | o anal | yse pe | riodic | signa | ls and | their | spectr | a.(L3) | | | |
| | | | | • | 1 | · . | 7 | trong | form | $(\mathbf{I} \mathbf{A})$ | | | | |
| 4303.2 | Analyse | continu | ous tir | me sig | nals u | sing F | ourie | uans | 101111. | (L4) | | | | |
| 4303.2 4303.3 | Analyse Examine | | | | | Ũ | | | | (L4) | | | | |
| | | e signal | transm | nissior | n throu | ıgh lin | iear sy | vstems | (L4) | | orm(L | .4) | | |
| 4303.3 | Examine | e signal s discret | transm e time | nissior e signa | n throu Ils usin | igh lin ng dise | iear sy crete t | vstems ime Fo | (L4) ourier | transf | | | s(L3) | |
| 4303.3 4303.4 4303.5 | Examine | e signal s discret aplace a | transm te time | nissior signa ransfo | n throu Ils usin rm to s) with | ng dise analys | crete t se con | vstems ime Fo tinuou Outco | (L4) ourier is & d | transf | e time | system | | ïc |
| 4303.3 4303.4 4303.5 Mappin | Examine Analyse Apply L | e signal s discret aplace a | transm te time | nissior signa ransfo | n throu Ils usin rm to | ng dise analys | crete t se con gram | vstems ime Fo tinuou Outco | (L4) ourier is & d | transf | e time | system | Specif | ic SO |
| 4303.3 4303.4 4303.5 | Examine Analyse Apply L | e signal s discret aplace a | transm te time | nissior signa ransfo | n throu Ils usin rm to s) with | igh lin ng dise analys n Prog | crete t se con gram | vstems ime Fo tinuou Outco | (L4) ourier is & d | transf | e time | system | Specif | |
| 4303.3 4303.4 4303.5 Mappin | Examine Analyse Apply L ng of Cou | e signal s discret aplace a rse Out | transm te time and z tr comes | nissior e signa ransfo | n throu Ils usin rm to s) with Outco | igh lin ng dise analys n Prog omes PO | crete t se con gram (PSOs | vstems ime Fo tinuou Outco | (L4) ourier is & d mes (| transf iscrete POs) | e time & Pro | system gram | Specif PS | 50 |
| 4303.3 4303.4 4303.5 Mappin | Examine Analyse Apply L ng of Cou | e signal s discret aplace a rse Out | transme time and z tr comes | nissior e signa ransfo | n throu Ils usin rm to s) with Outco | igh lin ng dise analys n Prog omes PO | crete t se con gram (PSOs | vstems ime Fo tinuou Outco | (L4) ourier is & d mes (| transf iscrete POs) | e time & Pro | system gram | Specif PS 1 | 50 2 |
| 4303.3 4303.4 4303.5 Mappin COs 4303.1 | Examine Analyse Apply L ng of Cou | e signal s discret aplace a rse Out 2 3 | transme time and z transme comes 3 | nissior e signa ransfo | n throu Ils usin rm to s) with Outco | igh lin ng dise analys n Prog omes PO | crete t se con gram (PSOs | vstems ime Fo tinuou Outco | (L4) ourier is & d mes (| transf iscrete POs) | e time & Pro | system ogram | Specif PS 1 | 50 2 1 |
| 4303.3 4303.4 4303.5 Mappin cos 4303.1 4303.2 | Examine Analyse Apply L ng of Cou 1 1 2 | e signal s discret aplace a rse Out 2 3 2 | transme te time and z tr comes 3 1 2 | nissior e signa ransfo | n throu Ils usin rm to s) with Outco | igh lin ng dise analys n Prog pmes PO 6 - - | rear sy crete t se con gram (PSOs 7 - | vstems ime Fo tinuou Outco s) 8 - | (L4) ourier is & d mes (9 - | transf iscrete POs) 10 - | e time & Pro 11 - | system ogram 12 - - | Specif PS 1 1 2 | SO 2 1 1 |
| 4303.3 4303.4 4303.5 Mappin COs 4303.1 4303.2 4303.3 | Examine Analyse Apply L ng of Cou 1 1 2 3 | e signal s discret aplace a rse Out 2 3 2 3 | transme time and z transme comes 3 1 2 2 | nissior e signa ransfo | n throu Ils usin rm to s) with Outco | igh lin ng dise analys n Prog omes PO 6 - - - | rear sy crete t se con gram (PSOs 7 - - | vstems ime Fo tinuou Outco s) 8 - - - | (L4) ourier is & d mes (9 - - | transf iscrete POs) 10 - | e time & Pro 11 - - | system ogram 12 - - - | Specif PS 1 1 2 2 | 50 2 1 1 1 |

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| Engineering I Through Inr | | | DURS | EOU | ICO | MES | & MA | IPPIN | IG OI | | | | | | |
| | | | EM: | II-I | | | | eg: R | | | AY | : 201 | 19-2 | 020 | 1 |
| Course | Code: | Course STOC | | | | | | ORY | AND | |] | L | Т | Р | C |
| 15A0 | 4304 | Pre-req | uisite: | Digita | al Syst | em D | esign | | | | | 3 | 1 | 0 | 3 |
| | | 1 | C | COUR | SE O | UTC | OMES | 5 (CO | s) | | | | | | |
| CO No. | COURS | E OUT | COM | E | | | | | | | | | | | |
| 4304.1 | Analyse | various | proba | bility | densit | y func | ctions | of ran | dom v | variabl | es. (L | 4) | | | |
| 4304.2 | Apply th | ne conce | pts of | Multi | ple rai | ndom | variab | oles in | comn | nunica | tion s | yster | ns. (| L3) | |
| 4304.3 | Solve th | e engine | ering | proble | ems in | volvir | ng rano | dom p | rocess | ses. (L | 6) | | | | |
| 4304.4 | Analyse | the spec | ctral cl | haract | eristic | s of ra | Indom | proce | ess. (L | 4) | | | | | |
| 4304.5 | Analyse spectral | - | | | • | | with r | andon | n inpu | ts and | also | com | pare | diffe | rent |
| Mappir | ng of Cou | rse Out | comes | | | - | gram ((PSOs | | omes (| POs) | & Pro | ogra | m S | pecifi | ic |
| Car | | | | | | РО | | | | | | | | PS | 0 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 1 | 2 | 1 | 2 |
| 4304.1 | 3 | 3 | 1 | 1 | 1 | 1 | - | - | - | 1 | - | 1 | | 2 | 1 |
| -50-1.1 | - | 5 | 1 | 1 | 1 | 1 | | | | 1 | | | | _ | - |
| 4304.1 | 3 | 3 | 1 | 1 | 1 | 1 | - | - | - | 1 | - | 1 | | 2 | - |
| | | | | | | | - | - | - | | - | 1 | | | - |
| 4304.2 | 3 | 3 | 1 | 1 | 1 | 1 | - | - | - | 1 | - | | | 2 | - |
| 4304.2 4304.3 | 3 3 | 3 3 | 1 | 1 | 1 | 1 | | - - - | | 1 | | 1 | | 2 | - |

| 124 | See. | | | | | | | | | | | | | | |
|--|---|--|---|---|---------------------------------------|--|-------------------------------------|-----------------|--------------------------------------|-------------------------|--|---|-------------------------------------|---|------------------------|
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| AMIREDDY SUBB ENGINEERING | ARAMI REDDY COLLEGE | | | | | | | | | | ERIN | | 0.1 | | |
| Engineering I Through Inr | | C | JURS | EOU | TCO | MES | & MA | PPIN | IG OI | COs | with | POs | 8 & I | PSOs | |
| | | S | EM: | II-I | | | R | eg: R | 15 | | AY | : 201 | 19-2 | 020 | |
| Course | Code: | Course | Name: | ELE | CTRI | CAL | TECI | HNOI | LOGY | 7 | Ι | | Т | Р | (|
| 15A0 | 2306 | Pre-req | uisite: | None | | | | | | | | 3 | 1 | - | 3 |
| | | | | COUI | RSE O | UTCO | OMES | (COs) | | | | | | | |
| CO No. | COURS | SE OUT | COM | Έ | | | | | | | | | | | |
| 2306.1 | Explain | the oper | ation | and co | onstrue | ction o | of DC | gener | ators ı | ising l | EMF e | equat | ion. | (L2) | |
| 2306.2 | Explain | the open | ation | and co | onstrue | ction of | of DC | motor | using | torqu | e equa | ation | . (Ľ | 2) | |
| | | | | | | | | | | | | | | | |
| 2306.3 | Analyse | the Ope | rating | Princ | iple a | nd des | ign as | pects | of Sin | gle-pl | nase tr | ansfo | orm | ers. (l | L4) |
| 2306.3 2306.4 | Analyse Analyse (L4) | 1 | 0 | | • | | 0 | • | | 0 1 | | | | | |
| | Analyse | the Ope | erating | Princ | iple a | nd des | sign as | pects | of Th | ree ph | ase inc | ducti | on r | notor | s. |
| 2306.4 2306.5 | Analyse (L4) | the Ope | erating | Princ const | iple an ructio | nd des | atures | pects of dif | of Th | ree ph | ase ind ronou | ducti s ma | on r | notor nes. (l | rs. [_4] |
| 2306.4 2306.5 Mappin | Analyse (L4) Interpre | the Ope | erating | Princ const | iple an ructio | nd des nal fea h Prog | ign as atures gram ((PSOs | pects of dif | of Th | ree ph | ase ind ronou | ducti s ma | on r | notor nes. (l | s. L4) ic |
| 2306.4 2306.5 | Analyse (L4) Interpre | the Ope | erating | Princ const | iple an ructio | nd des nal fea h Prog omes (| ign as atures gram ((PSOs | pects of dif | of Th | ree ph | ase ind | ducti s ma | on r achir m S | notor nes. (1 pecif | s. [4] ic |
| 2306.4 2306.5 Mappin | Analyse (L4) Interpre | the Ope | erating nciple, comes | ; Princ const | iple an ructio s) with Outco | nd des nal fea h Prog omes PO | ign as atures gram (PSOs | of dif | of Thi | ree ph synch POs) | ase ind ronou & Pro | ducti s ma | on r nchir m S 2 | notor nes. (1 pecif PS | s. L4) ic |
| 2306.4 2306.5 Mappin Cos | Analyse (L4) Interpre ng of Cou | the Ope t the prin rse Out | erating nciple, comes | Princ const const const | iple an ructio s) with Outco | nd des nal fea h Prog omes PO | ign as atures gram (PSOs | of dif | of Thi | ree ph synch POs) | ase ind ronou & Pro | ducti s ma ogran | on r achir m S 2 | notor nes. (1 pecif PS 1 | s. L4) ic |
| 2306.4 2306.5 Mappin Cos 2306.1 | Analyse (L4) Interpre ng of Cou 1 2 | the Ope t the prin rse Out | prating nciple, comes 3 2 | Princ const s (COs 4 2 | iple an ructio s) with Outco | nd des nal fea h Prog omes PO | ign as atures gram (PSOs | of dif | of Thi ferent omes (9 - | ree ph synch POs) | ase ind ronou & Pro | lucti s ma ogran | on r achir m S 2 2 | notor nes. (1 pecif PS 1 2 | s. [4] ic |
| 2306.4 2306.5 Mappin Cos 2306.1 2306.2 | Analyse (L4) Interpre ng of Cou 1 2 3 | the Ope t the prin rse Out | comes | Princ const const const const 2 2 | iple an ructio s) with Outco | nd des nal fea h Prog omes PO | ign as atures gram (PSOs | of dif | of Thi ferent omes (9 - | ree ph synch POs) | ase ind ronou & Pro 11 - - | ducti s ma ogran | on r achir m S 2 2 | notor nes. (1 pecif PS 1 2 2 | s. [4] ic |
| 2306.4 2306.5 Mappin Cos 2306.1 2306.2 2306.3 | Analyse (L4) Interpre ng of Cou 1 2 3 3 3 | the Ope t the prin rse Out 2 3 3 3 | aciple, comes 3 2 2 2 2 | Princ const (COs 4 2 2 2 | iple an ructio s) with Outco | nd des nal fea h Prog omes PO | ign as atures gram (PSOs | of dif | of Thi ferent omes (9 - | ree ph synch POs) | ase ind ronou & Pro 11 - - - | lucti s ma ogran 11 2 2 2 | on r achir m S 2 2 2 | notor nes. (1 pecif PS 1 2 2 2 | s. [4] ic |

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| RAMIREDDY SUBB ENGINEERING | ARAMI REDDY | | | CO | MM | UNI | CAT | ION | ENG | INE | ERIN | NG | | |
| Engineering I Through Inc | Excellence | C | DURS | E OU | TCO | MES | & MA | PPIN | IG OI | F COs | with | POs & | PSOs | |
| rinough in | | S | EM: | II-I | | | R | eg: R | 15 | | AY | : 2019-2 | 2020 | |
| Course 15A | Code: 04305 | Course CIRC | | | | | | ICES | AND | - |] | LT | Р | C |
| | | | | | | UTC | | 5 (CO | s) | | | | 1 | |
| CO No. | COURS | SE OUT | | | | | | | , | | | | | |
| 4305.1 | Understa | and the | parame | eters c | of Dio | des an | d tran | sistors | s from | the cl | naract | eristics. | (12) | |
| 4305.2 | Demons | trate the | rectif | ier and | d volta | age re | gulato | r circu | iits us | ing di | odes. | (L2) | | |
| 4305.3 | Construe | ct variou | ıs amp | lifiers | using | g BJTs | and F | ETs. | (L6) | | | | | |
| 4305.4 | analyze | the char | acteris | stics of | f SCR | and U | JJT. (I | () | | | | | | |
| Mappii | ng of Cou | rse Out | comes | - | - | h Prog omes (| - | | omes (| POs) | & Pro | ogram S | Specif | ic |
| Car | | | | | | РО | | | | | | | PS | 50 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4305.1 | 3 | 2 | 1 | 1 | - | - | - | - | 1 | 1 | 2 | 1 | 3 | 1 |
| | | 2 | 1 | 1 | - | - | - | - | 1 | 1 | 2 | 1 | 3 | 1 |
| 4305.2 | 3 | 2 | 1 | | | | | | | | | | | |
| 4305.2 4305.3 | 3 | 2 | 1 | 1 | - | - | - | - | 1 | 1 | 2 | 1 | 3 | 1 |
| | | | 1 2 | 1 | - | - | - | - | 1 | 1 | 2 2 | 1 | 3 3 | 1 |

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| Engineering | Excellence | С | OURS | SE OU | TCO | MES | & M A | APPIN | IG OI | F COs | s with | POs & | PSOs | 5 |
| Through In | novation | SEM: | II-I | [| | | R | eg: R | 15 | | AY | : 2019- | 2020 | |
| Course | code: | Course BASI | | | | | | | | ANI |) | LT | Р | C |
| 15A | 02307 | Prereq | uisite: | None | | | | | | | | | 4 | 2 |
| | | | (| COUR | SE O | UTC | OMES | S (CO | s) | | | | | 1 |
| CO No. | COUR | SE OUI | COM | IE | | | | | | | | | | |
| 2307.1 | Explain field res | - | - | | | eristic | s of D | C ger | erator | : & mo | otor ar | nd find o | critical | 1 |
| 2307.2 | Demons | strate the | e OC & | & SC t | est of | single | -phase | e trans | sforme | er & fi | nd the | efficie | ncy. (I | L2) |
| 2307.3 | Apply t | he vario | us ope | ration | s on C | Continu | lous a | nd Di | screte | time s | signals | s. (L3) | | |
| 2307.4 | analyze | the LTI | syster | ns usi | ng tra | nsforn | ns. (L4 | 4) | | | | | | |
| Mapping Outcome | | e Outco | mes (| COs) | with I | Progra | am Ou | utcom | es (P | Os) & | Prog | ram Sp | ecific | |
| Car | | | | | | РО |) | | | | | | PS | 50 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 2307.1 | 3 | 2 | 1 | 1 | - | - | - | 1 | 1 | 1 | 3 | 1 | 2 | 2 |
| 2307.2 | 3 | 2 | 1 | 1 | - | - | - | 1 | 1 | 1 | 3 | 1 | 2 | 2 |
| | 3 | 2 | 1 | 1 | - | - | - | 1 | 1 | 1 | 3 | 1 | 2 | 1 |
| 2307.3 | | | | | | 1 | 1 | 1 | 1 . | 1 | 1 | 1 | - | |
| 2307.3 2307.4 | 3 | 3 | 2 | 1 | - | - | - | 1 | 1 | 1 | 3 | 1 | 2 | 1 |

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| ENGINEERING | | C | NIDS | | | | | | | | | | z PSOs | • |
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| Course | Code: | Course | | | THEN | IATI | CS-IV | | | | | | P | C |
| 15A5 | 4402 | Pre-req | uisite: | None | | | | | | | 3 | 1 | 0 | 3 |
| | | | C | COUR | SE O | UTC | OMES | 5 (CO | s) | | | | | |
| CO No. | COURS | SE OUT | COM | Έ | | | | | | | | | | |
| | Apply th | e Frobe | nius n | nethod | l to ob | tain a | series | soluti | on for | the g | iven lir | near se | cond o | rdei |
| 4402.1 | Ordinary | y Differe | ential e | equati | ons. (I | (_3) | | | | | | | | |
| | Solve th | e engin | eerina | nroh | leme 1 | ising | Besse | l func | tions | and I | egendr | e's nc | lynom | iale |
| 4402.2 | (L3) | ic engin | cering | , proo | | ising | Desse | i iune | tions | | egenar | c s pc | Jiynom | 1415 |
| 4402.3 | Analysa | 41 | 1 (| | | | | | | | | | | |
| 4402.3 | Anaryse | the con | plex i | unctio | ons wi | th refe | erence | to the | eir ana | lyticit | y. (L4) |) | | |
| 4402.3 | Apply T | | - | | | | | | | • | |) | | |
| | | aylor's | & Lau | rent's | series | to so | lve co | mplex | funct | • | |) | | |
| 4402.4 4402.5 | Apply T | aylor's on a second sec | & Lau integra | rent's als by | series using s) with | to so residu n Pro g | lve co ie met | mplex hod. (<mark>Outco</mark> | funct L3) | ions.(| L3) | | Specif | ïc |
| 4402.4 4402.5 Mappin | Apply T Solve in | aylor's on a second sec | & Lau integra | rent's als by | series using s) with | to so residu n Pro g | lve co ie met gram (PSOs | mplex hod. (<mark>Outco</mark> | funct L3) | ions.(| L3) | | Specif PS | |
| 4402.4 4402.5 | Apply T Solve in | aylor's on a second sec | & Lau integra | rent's als by | series using s) with | to so residu n Prog | lve co ie met gram (PSOs | mplex hod. (<mark>Outco</mark> | funct L3) | ions.(| L3) | | | |
| 4402.4 4402.5 Mappin | Apply T Solve in ng of Cou | aylor's on proper states of the second secon | & Lau integra | rent's als by | series using s) with Outco | to so residu Prog PO | lve co ue met gram (PSOs | mplex hod. (Outco | L3) | ions.(| L3) & Pro | gram | PS | 50 |
| 4402.4 4402.5 Mappin Cos | Apply T Solve in ng of Cou | aylor's on proper second terms of the second terms of | & Lau integra comes | rent's als by s (COs | series using s) with Outco | to so residu Prog PO | lve co ue met gram (PSOs | mplex hod. (Outco | L3) | ions.(| L3) & Pro | gram | PS | 50 |
| 4402.4 4402.5 Mappin Cos 4402.1 | Apply T Solve in ng of Cou | aylor's on a proper rise Out 2 | & Lau integra comes | rent's als by s (COs 4 | series using s) with Outco | to so residu Prog PO | lve co ue met gram (PSOs | mplex hod. (Outco | L3) | ions.(| L3) & Pro | gram | PS 1 2 | 50 |
| 4402.4 4402.5 Mappin Cos 4402.1 4402.2 | Apply T Solve in ng of Cou 1 2 2 | aylor's on proper se Out | & Lau integra comes 3 1 1 | rent's als by s (COs 4 2 2 | series using s) with Outco 5 - | to so residu Prog PO | lve co ie met gram (PSOs 7 - - | mplex hod. (Outco ;) 8 - | s funct L3) omes (<u>9</u> - | ions.(POs) 10 - | L3) & Pro 11 | gram 12 - | PS 1 2 2 | 50 |
| 4402.4 4402.5 Mappin Cos 4402.1 4402.2 4402.3 | Apply T Solve in ng of Cou 1 2 2 3 | aylor's on a proper se Out contract of the second s | & Lau integra comes 3 1 1 2 | rent's als by s (COs 4 2 2 3 | series using s) with Outco 5 - - 1 | to so residu Prog PO | lve co ne met (PSOs 7 - - | mplex hod. (Outco s) 8 - - - | s funct L3) mes (9 - - - | ions.(POs) 10 - - | L3) & Pro 11 | gram 12 - 1 | PS 1 2 2 2 2 | SO 2 - - |

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| Through Inc | novation | S | EM: | II-II | | | R | eg: R | 15 | | AY | : 20 | 19-2 | 020 | |
| Course | Code: | Course | Name: | ELE | CTRO | ONIC | CIRC | CUIT | ANA | LYSIS | 5 1 | | Т | Р | C |
| 15A0 | 4401 | Pre-req | uisite: | NONE | Ŧ | | | | | | - | | - | 4 | 2 |
| | | | | COUR | SE O | | OMES | | 2) | | | | | | |
| CO No. | COURS | | | | | | | | 3) | | | | | | |
| CO NO. | | | | | 1 4 | 1.0 | 0.0 | •11 | (7 | | | | | | |
| 4401.1 | Analyze | the vari | ous fe | edbac | k Amj | plifter | s & O | scillat | ors.(L | 4) | | | | | |
| | Analyze | the S | mall | signal | l higł | n free | quency | y tran | sistor | Amp | olifier | m | odel | for | CE |
| 4401.2 | Configu | ration.(I | .4) | | | | | | | | | | | | |
| | Apply th | e conce | pts of | h-para | ameter | : & an | alyze | the Mu | ulti sta | ige am | plifie | rs ar | nd di | ffere | ntia |
| 4401.3 | amplifie | rs.(L3) | | | | | | | | | | | | | |
| 4401.4 | Examine | the des | ign as | pects | of diff | erent | power | ampl | ifiers. | (L4) | | | | | |
| 4401.5 | Examine | the des | ign as | pects | of diff | erent | tuned | ampli | fiers.(| L4) | | | | | |
| Mappi | ng of Cou | rse Out | comes | | 1 - C | | gram ((PSOs | | mes (| POs) | & Pro | gra | m S | pecif | ic |
| | 1 | | | | | РО | | | | | | | | PS | 60 |
| C | | | | | | | | | | | | | • | 4 | 1 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 1 | 2 | 1 | 2 |
| Cos 4401.1 | 1 3 | 2 3 | 3 2 | 4 | 5 | 6 - | 7 | 8 | 9 | 10 - | 11 • | | 2 1 | 1 | |
| | | | - | | 5 - - | 6 - - | 7 | 8 - - | 9 - - | 10 - - | 11 - - |] | | | 1 |
| 4401.1 | 3 3 3 | 3 | 2 | 1 | - | - | - | - | - | - | - | 1 | 1 | 3 | 1 |
| 4401.1 4401.2 4401.3 4401.4 | 3 3 3 3 | 3 3 2 2 | 2 2 1 1 | 1 1 1 1 | - | - | - | - | • | - | - | 1 | 1 1 1 1 | 3 3 2 2 | 1 1 1 |
| 4401.1 4401.2 4401.3 | 3 3 3 | 3 3 2 | 2 2 1 | 1 1 1 | - | - | - | - | - | - | - | 1 | 1 | 3 3 2 | 2 1 1 1 1 1 1 1 1 |

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| Engineering I Through Inc | Excellence | C | DURS | E OU | TCO | MES | & M A | PPIN | GOI | COs | with] | POs & | PSOs | 5 |
| riite ga rii | | S | EM: I | II-II | | | R | eg: R | 15 | | AY: | 2019- | 2020 | |
| Course | Code: | Course SYST | | ANA | LOG | COM | IMUN | ICA | FION | | L | T | Р | C |
| 15A0 | 4402 | Pre-req | uisite: | NONI | Ŧ | | | | | | - | - | 4 | 2 |
| | | | C | COUR | SE O | UTC | OMES | 6 (CO: | s) | | | | | |
| CO No. | COURS | E OUT | COM | E | | | | | | | | | | |
| 4402.1 | Analyze domains | | nplitu | de mo | odulati | ion & | demo | odulat | ion sy | /stems | s in tii | ne & | freque | ency |
| | Analyza | tha A | | | lation | 0 | 1 1 | -1-41- | | | | | C | |
| 4402.2 | domains | | ngle | modu | lation | æ c | lemod | ulatio | n sys | tems | in tim | ne & | freque | ency |
| 4402.2 4402.3 | • | .(L4) | U | | | | | | · | | | | 1 | J |
| | domains | .(L4) the perf | formar | nce of | anaolg | g com | munic | ations | system | n in the | e prese | nce of | 1 | J |
| 4402.3 | domains Analyze | .(L4) the perf differen sic coor | Formar nt discu | nce of rete m ation p | anaolg odula | g com tion & ms & | munic z demc calcul | ation s odulati | systen | n in the chniqu | e prese es.(L4 | nce of | noise. | (L4) |
| 4402.3 4402.4 4402.5 | domains Analyze Analyze Solve ba | .(L4) the perf differer sic coor te comr | Formar nt discr munica nunica | nce of rete m ation p ation c | anaolş odula proble: hanne | g com tion & ms & d.(L3) | munic c demo calcul gram (| ation s odulati ate inf | system on tec | n in the Chniqu | e prese es.(L4 te and | nce of) channe | noise. | (L4) |
| 4402.3 4402.4 4402.5 Mappin | domains Analyze Analyze Solve ba of discre | .(L4) the perf differer sic coor te comr | Formar nt discr munica nunica | nce of rete m ation p ation c | anaolş odula proble: hanne | g com tion & ms & d.(L3) | munica c demo calcul gram ((PSOs | ation s odulati ate inf | system on tec | n in the Chniqu | e prese es.(L4 te and | nce of) channe | noise. | (L4) acity |
| 4402.3 4402.4 4402.5 | domains Analyze Analyze Solve ba of discre | .(L4) the perf differer sic coor te comr | Formar nt discr munica nunica | nce of rete m ation p ation c | anaolş odula proble: hanne | g com tion & ms & d.(L3) h Prog | munica c demo calcul gram ((PSOs | ation s odulati ate inf | system on tec | n in the Chniqu | e prese es.(L4 te and | nce of) channe | noise. | (L4) acity |
| 4402.3 4402.4 4402.5 Mappin | domains Analyze Analyze Solve ba of discre ng of Cour | .(L4) the perf differen sic coon te comm rse Out | formar nt discr nunica nunica | nce of rete m ation p ation c | anaolş odula proble: hanne s) with Outco | g com tion & ms & d.(L3) h Prog omes PO | munica c demo calcul gram ((PSOs | ation s odulati ate inf Outco | systen ion tec format | n in the chniqu ion ra POs) | e prese es.(L4 te and & Pro | nce of) channe gram \$ | noise. | (L4) acity |
| 4402.3 4402.4 4402.5 Mappin Cos | domains Analyze Analyze Solve ba of discre ng of Cour 1 | .(L4) the perf differen sic coon te comment rse Out | formar nt discr nunica nunica | nce of rete m ation p ation c | anaolş odula proble: hanne s) with Outco | g com tion & ms & d.(L3) h Prog omes PO | munica c demo calcul gram ((PSOs | ation s odulati ate inf Outco | systen ion tec format | n in the chniqu ion ra POs) | e prese es.(L4 te and & Pro | nce of) channe gram \$ | noise. el capa Specif PS 1 | (L4 acity ic 50 2 2 |
| 4402.3 4402.4 4402.5 Mappin Cos 4402.1 | domains Analyze Analyze Solve ba of discre ng of Cour 1 2 | (L4) the perf differen sic coon te comment rse Out | formar nt discr nunica comes | nce of rete m ation p ation c | anaolş odula proble: hanne s) with Outco | g com tion & ms & d.(L3) h Prog omes PO | munica c demo calcul gram ((PSOs 7 - | ation s odulati ate inf Outco) 8 - | systen ion tec format | n in the chniqu ion ra POs) | e prese es.(L4 te and & Pro 11 - | nce of) channe gram (12 - | noise. el capa Specif PS 1 2 3 1 | (L4) acity ic SO 2 2 2 |
| 4402.3 4402.4 4402.5 Mappin Cos 4402.1 4402.2 | domains Analyze Analyze Solve ba of discre ng of Coun 1 2 3 | (L4) the perf differen sic coon te comr rse Out | Formar nt discr nunica comes | nce of rete m ation p ation c | anaolş odula proble: hanne s) with Outco | g com tion & ms & d.(L3) h Prog omes PO | munica c demo calcul gram ((PSOs 7 - | ation s odulati ate inf Outco s) 8 - | systen ion tec format | in the chnique ion ration rati | e prese es.(L4 te and & Pro 11 - | nce of) channe gram { 12 | noise. el capa Specif PS 1 2 3 | (L4) acity acity 50 2 2 2 1 |
| 4402.3 4402.4 4402.5 Mappin Cos 4402.1 4402.2 4402.3 | domains Analyze Analyze Solve ba of discre ng of Coun 1 2 3 3 3 | (L4) the perf differen sic coon te comr rse Out 2 1 2 1 | Formar nt discr nunica comes | nce of rete m ation p ation c | anaolş odula proble: hanne s) with Outco | g com tion & ms & d.(L3) h Prog omes PO | munica calcul gram ((PSOs 7 - - | ation s odulati ate inf Outco :) 8 - - - | systen ion tec format | in the chnique ion ration rati | e prese es.(L4 te and & Pro, 11 - - | nce of) channe gram (12 - - - | noise. el capa Specif PS 1 2 3 1 | (L4) acity ic |

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| | | (Approved by AICTE, Affiliated to JNTUA. An ISO 9001: 2015 Certified Institution. | | | | | | | | | | | | | |
| | X | NH-16, Kadanuthala, Bogole Mandal, Kavali- 524 142, S.P.S.R. Nellore, A.P.) DEPARTMENT OF ELECTRONICS & | | | | | | | | | | | | | |
| RAMIREDDY SUBB/ ENGINEERING | ARAMI REDDY COLLEGE | | | | | | | | | | ERIN | | DCO | | |
| Engineering E Through Inn | | | JURS | EOU | TCO | MES | & MA | APPIN | IG OI | f COs | s with | POs & | PSOs | 3 | |
| | | | EM: 1 | | | | | eg: R | | | AY: | 2019-2 | 2020 | | |
| Course | Code: | Course AND ' | | | | | | TIC T | HEOT | ГҮ | L | T | Р | C | |
| 15A04 | 4403 | Pre-rec | uisite: | | | | | | | | - | - | 24 | 12 | |
| | | | C | COUR | SE O | UTC | OMES | 5 (CO | s) | | | | | | |
| CO No. | COURS | SE OUT | COM | Έ | | | | | | | | | | | |
| 4403.1 | Analyze space.(L | halyze and solve the problems of electric and magnetic fields that vary with time and | | | | | | | | | | | | | |
| 4403.2 | Apply M | ply Maxwell's equations in solving electromagnetic field equations.(L3) | | | | | | | | | | | | | |
| 4403.3 | Analyze | electro | magne | tic wa | ive pro | opagat | ion in | differ | ent m | edia.(1 | L4) | | | | |
| 4403.4 | Explain | the cond | cept of | f trans | missic | on line | s and | their a | pplica | ations. | (L2) | | | | |
| 4403.5 | Analyze | and des | ign va | rious | imped | lance | match | ing teo | chniqu | ies.(L4 | 4) | | | | |
| Mappin | ng of Cou | rse Out | comes | | | | gram (PSOs | | omes (| POs) | & Pro | gram (| Specif | ic | |
| | | | | | | РО | | , | | | | | PS | 50 | |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | |
| 4403.1 | 3 | 3 | 2 | 1 | - | - | - | - | - | 3 | - | 2 | 2 | - | |
| 4403.2 | 3 | 3 | 1 | 1 | - | - | - | - | _ | 2 | - | 2 | 2 | - | |
| 4403.3 | 3 | 3 | 3 | 1 | - | - | - | - | - | 1 | - | 2 | 1 | - | |
| 4403.4 | 3 | 3 | 3 | 1 | - | - | - | - | - | 1 | - | 2 | 2 | - | |
| 4403.5 | 3 | 3 | 3 | 1 | - | - | - | - | - | 2 | - | 2 | 1 | - | |
| AVG | 3 | 3 | 2 | 1 | - | - | - | - | - | 2 | - | 2 | 2 | - | |

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| RAMIREDDY SUBB | ARAMI REDBY | | | | | ΓME UNI | | | | | | | | | | |
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| Through Ini | novation | SEM: II-II Reg: R15 | | | | | | | | | | AY: 2019-2020 | | | | |
| Course | Code: | Course | Name: | DAT | A ST | RUC | TURE | S | | | Ι | T | Р | C | | |
| 15A0 | 5201 | Pre-req | uisite: | | | | | | | | • | | 24 | 12 | | |
| | | | (| COUR | SE O | UTC | OMES | S (CO | s) | | | • | | • | | |
| CO No. | COURS | E OUT | СОМ | Έ | | | | | | | | | | | | |
| 5201.1 | Apply th | | | arrays | with a | asymp | totic r | notatic | ons in | buildi | ng line | ear and | l non li | near | | |
| 5201.1 | data stru | ctures. (| L3) | | | | | | | | | | | | | |
| 5201.2 | Analyze | stacks. | anene | s and | linked | l list n | sing d | vnami | ic mer | norv a | llocat | ion (L | 4) | | | |
| 5401.4 | 5 | ~~~~, | queue | | | i inst u | | 5 | | | nocut | 1011.(L- | ., | | | |
| 5201.2 | Develop | | - | | | | | - | | | | | ., | | | |
| | | e algorit | thms f | or tree | es and | graph | us.(L3) |) | | - | | | ., | | | |
| 5201.3 | Develop | e algorit e and im | thms f | for tree | es and ferent | graph sortin | g tech |) inique | s.(L5) | | | | · , | | | |
| 5201.3 5201.4 5201.5 | Develop Compare | e algorit e and im | thms f | For tree | es and ferent chniqu s) with | graph sortin es and | g tech l hash | ing me | s.(L5) ethods | s.(L3) | | | | ic | | |
| 5201.3 5201.4 5201.5 Mappin | Develop Compare Build dit | e algorit e and im | thms f | For tree | es and ferent chniqu s) with | graph sortin es and | g tech l hash gram (PSOs | ing me | s.(L5) ethods | s.(L3) | | | Specif | fic SO | | |
| 5201.3 5201.4 5201.5 | Develop Compare Build dit | e algorit e and im | thms f | For tree | es and ferent chniqu s) with | graph sortin es and h Prog | g tech l hash gram (PSOs | ing me | s.(L5) ethods | s.(L3) | | | Specif | | | |
| 5201.3 5201.4 5201.5 Mappin | Develop Compare Build dif | e algorit e and im fferent s rse Out | hms f pleme earchi | or tree ent dif ng tec | es and ferent chniqu s) with Outco | graph sortin es and h Prog omes (PO | g tech l hash gram (PSOs | ing ma Outco | s.(L5) ethods | .(L3) (POs) | & Pro | ogram | Specif | 50 | | |
| 5201.3 5201.4 5201.5 Mappin | Develop Compare Build dif ng of Cour 1 | e algorit e and im fferent s rse Out | thms f pleme earchi comes | or tree ent dif ng tec s (CO: | es and ferent chniqu s) with Outco | graph sortin es and h Prog omes (PO | g tech l hash gram (PSOs | ing ma Outco | s.(L5) ethods | .(L3) (POs) | & Pro | ogram | Specif PS 1 | 50 2 | | |
| 5201.3 5201.4 5201.5 Mappin Cos 5201.1 | Develop Compare Build dif ng of Cour 1 3 | e algorit e and im fferent s rse Out | thms f pleme earchi comes 3 2 | ent dif ng tec s (COs 4 2 | es and ferent chniqu s) with Outco | graph sortin es and h Prog omes (PO | g tech l hash gram (PSOs | ing ma Outco | s.(L5) ethods | E.(L3) POs) | & Pro 11 | bgram 12 2 | Specif PS 1 2 | SO 2 3 3 | | |
| 5201.3 5201.4 5201.5 Mappin Cos 5201.1 5201.2 | Develop Compare Build dif ng of Cour 1 3 3 | e algorit e and im fferent s rse Out 2 2 3 | thms f pleme earchi comes 3 2 3 | or tree ent diffing tec s (COs 4 2 3 | es and ferent chniqu s) with Outco | graph sortin es and h Prog omes (PO | g tech l hash gram (PSOs | ing ma Outco | s.(L5) ethods | E.(L3) POs) | & Pro 11 - - | bgram 12 2 2 | Specif P 1 2 2 | 50 2 3 | | |
| 5201.3 5201.4 5201.5 Mappin Cos 5201.1 5201.2 5201.3 | Develop Compare Build dif ng of Cour 1 3 3 3 | e algorit e and im fferent s rse Out 2 2 3 3 | thms f pleme earchi comes 3 2 3 2 | ent different di | es and ferent chniqu s) with Outco | graph sortin es and h Prog omes (PO | g tech l hash gram (PSOs | ing ma Outco | s.(L5) ethods | 5.(L3) (POs) 10 - - | & Pro 11 | bgram 12 2 2 3 | Special P 1 2 2 2 2 | SO 2 3 3 2 2 | | |

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| | | S | EM: I | II-II | | | R | eg: R | 15 | | AY | : 2019 | -2020 | | |
| Course | Code: | Course ENGI | | | TRO | L SYS | STEM | IS | | | Ι | . T | Р | C | |
| 15A0 | 2303 | Pre-req | uisite: | | | | | | | | - | - | 24 | 12 | |
| | | | C | COUR | SE O | UTC | OME | 5 (CO | s) | | | | | | |
| CO No. | COURS | SE OUT | COM | Έ | | | | | | | | | | | |
| | Apply r | nathema | tical 1 | model | s, sig | nal flo | ow gr | aph 8 | z Bloo | ek dia | gram | repres | entatio | n to | |
| 2303.1 | determin | ne transf | er fun | ction of | of con | trol sy | stems | .(L3) | | | | | | | |
| 2303.2 | Analyse | ermine transfer function of control systems .(L3) lyse the time domain responses of first and second-order systems. (L4) | | | | | | | | | | | | | |
| | | e control systems by applying Routh-Hurwitz and root-locus techniques.(L4) | | | | | | | | | | | | | |
| 2303.3 | Analyse | control | systen | ns by | applyi | ing Ro | outh-H | lurwit | z and | root-l | ocus te | echniq | ues.(L4 | 4) | |
| 2303.3 2303.4 | Analyse Apply B frequence | ode plot | t, Pola | r & N | | | | | | | | | | 4) | |
| | Apply B | ode plot cy doma | t, Pola in.(L3 | r & N) | yquist | plot c | concep | ots to a | analyz | e the o | control | l syster | ns in | | |
| 2303.4 2303.5 | Apply B frequence | ode plot cy doma tate spac | t, Pola in.(L3 e mod | r & N) lel for | yquist a give s) witl | plot c en phy h Prog | concep vsical s gram | ots to a system Outco | analyz | e the o | control | l syster | ns in tions. | (L3) | |
| 2303.4 2303.5 | Apply B frequence Apply st | ode plot cy doma tate spac | t, Pola in.(L3 e mod | r & N) lel for | yquist a give s) witl | plot c en phy h Prog | concep rsical s gram (PSOs | ots to a system Outco | analyz | e the o | control | l syster | ns in tions. Specif | (L3) ic | |
| 2303.4 2303.5 | Apply B frequence Apply st ng of Cou | ode plot cy doma tate spac rse Out | t, Pola in.(L3) re mod | r & N) lel for | yquist a give s) with Outco | plot c en phy h Prog omes (PO | concep vsical s gram (PSOs | ots to a system Outco | nalyz a and s omes (| e the o solve t POs) | control he stat & Pro | e equa | ns in tions. (Specif PS | (L3) ic 50 | |
| 2303.4 2303.5 Mappi Cos | Apply B frequence Apply st ng of Cou | ode plot cy doma tate spac rse Out | t, Pola in.(L3) te mod comes | r & N) lel for s (COs | yquist a give s) witl | plot c en phy h Prog | concep rsical s gram (PSOs | ots to a system Outco | analyz | e the o | control | e equa | ns in tions. (Specif PS 1 | (L3) ic | |
| 2303.4 2303.5 Mappi | Apply B frequence Apply st ng of Cou 1 3 | ode plot cy doma tate spac rse Out | t, Pola in.(L3) te mod comes 3 3 | r & N) lel for | yquist a give s) with Outco | plot c en phy h Prog omes (PO | concep vsical s gram (PSOs | ots to a system Outco | nalyz a and s omes (| e the o solve t POs) | control he stat & Pro | e equa | ns in tions. (Specif PS | (L3) ic 50 | |
| 2303.4 2303.5 Mappi Cos | Apply B frequence Apply st ng of Cou | ode plot cy doma tate spac rse Out | t, Pola in.(L3) te mod comes | r & N) lel for s (COs | yquist a give s) with Outco | en phy n Prog omes PO | concep rsical s gram (PSOs | ots to a system Outco | nalyz a and s omes (| e the o solve t POs) | control he stat & Pro | e equa | ns in tions. (Specif PS 1 | (L3) ic 50 2 | |
| 2303.4 2303.5 Mappi Cos 2303.1 | Apply B frequence Apply st ng of Cou 1 3 | code plot ey doma tate spac rse Out 2 3 | t, Pola in.(L3) te mod comes 3 3 | r & N) lel for ; (CO: 4 2 | yquist a give s) with Outco | en phy h Prog omes PO 6 - | rsical s gram (PSOs 7 - | ots to a system Outco) 8 - | analyz a and s omes (9 - | e the observe the | control he stat & Pro 11 - | e equa | ns in tions. (Specif PS 1 3 | (L3) ic SO 2 2 2 | |
| 2303.4 2303.5 Mappi Cos 2303.1 2303.2 | Apply B frequence Apply st ng of Cou 1 3 3 | cy doma tate space rse Out | t, Pola in.(L3) re mod comes 3 3 2 | r & N) lel for s (COs 4 2 | yquist a give s) with Outco | en phy h Prog omes PO 6 - | rsical s gram (PSOs 7 - | ots to a system Outco) 8 - | analyz a and s omes (9 - | e the observe the | control he stat & Pro 11 - | e equa | ns in tions. (Specif PS 1 3 3 | (L3) ic 50 2 2 2 2 | |
| 2303.4 2303.5 Mappi Cos 2303.1 2303.2 2303.3 | Apply B frequence Apply st ng of Cou 1 3 3 3 | Zero Zero 3 3 | t, Pola in.(L3) te mod comes 3 3 2 3 | r & N) lel for s (COs 4 2 2 2 | yquist a give s) with Outco | en phy h Prog omes PO 6 - | rsical s gram (PSOs 7 - | ots to a system Outco s) - - - | analyz a and s omes (9 - | e the observe the | control he stat & Pro 11 | system are equa ogram 12 2 2 1 | ns in tions. (Specif 1 3 3 3 3 | (L3) ic SO 2 2 2 | |

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| | × | NH-16, Kadanuthala, Bogole Mandal, Kavali- 524 142, S.P.S.R. Nellore, A.P.) DEPARTMENT OF ELECTRONICS & | | | | | | | | | | | | | |
| RAMIREDDY SUBB. ENGINEERING | ARAMI REDDY COLLEGE | | | | | | | | | | ERIN | | | | |
| Engineering E Through Inc | | CC | OURS | E OU | TCO | MES | & MA | PPIN | IG OI | F COs | with | POs & | PSOs | | |
| | | SEM: II-II Reg: R15 A | | | | | | | | | | | 2020 | 0 | |
| Course | Code: | Course LABO | | | CTRO | DNIC | CIRC | CUIT | ANA | LYSIS | 5 I | L T | Р | С | |
| 15A | 04404 | Pre-req | uisite: | | | | | | | | - | - | 24 | 12 | |
| | | | 0 | COUR | SE O | UTC | OMES | 5 (CO | s) | | | | | | |
| CO No. | COURS | E OUT | COM | E | | | | | | | | | | | |
| 4404.1 | Analyze simulatio | | | | 0 | - | lifiers | at lo | w, mio | d and | high 1 | frequen | cies u | sing | |
| 4404.2 | Analyze | the tran | sistor | oscilla | ators u | ising s | imula | tion so | oftwar | e and | Hardv | vare.(L4 | 4) | | |
| 4404.3 | Determin | ne the ef | ficien | cies o | f pow | er amp | olifiers | s using | g simu | lation | softw | are.(L5 |) | | |
| 4404.4 | Analyze ware.(L4 | - | ncy re | espons | se of | tuned | ampli | ifiers | using | hardv | vare a | nd mul | tisim | soft | |
| Mappir | ng of Cou | rse Out | comes | | | | gram (PSOs | | omes (| POs) | & Pro | gram S | Specif | ic | |
| Cos | | | | | | PO | | | | | | | PS | 60 | |
| 005 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | |
| 4404.1 | 3 | 3 | 2 | 1 | 2 | - | - | 1 | 1 | 1 | 3 | 1 | 2 | 1 | |
| 4404.2 | 3 | 3 | 2 | 1 | 2 | - | - | 1 | 1 | 1 | 3 | 1 | 3 | 1 | |
| 4404.3 | 3 | 2 | 1 | 1 | 1 | - | - | 1 | 1 | 1 | 3 | 1 | 2 | 1 | |
| 4404.4 | 3 | 3 | 2 | 1 | 2 | - | - | 1 | 1 | 1 | 3 | 1 | 3 | 1 | |
| Avg | 3 | 3 | 2 | 1 | 2 | - | - | 1 | 1 | 1 | 3 | 1 | 3 | 1 | |
| 3/2/1 India | cates Stren | gth of C | Correla | ation. (| 3-Hig | h, 2-M | Iediun | n and | 1-Lov | 7 | | | | | |

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| | | (Approved by AICTE, Affiliated to JNTUA. An ISO 9001: 2015 Certified Institution. NH-16, Kadanuthala, Bogole Mandal, Kavali- 524 142, S.P.S.R. Nellore, A.P.) | | | | | | | | | | | | | | |
| | 2 | | | DEF | PAR | FME | NT (|)F E | LEC | TRO | NICS | 5& | | | | |
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| Course | Code: | Course SYSTI | | | | | | ICAT | ION | | I | L T | Р | C | | |
| 154 | A04405 | Pre-req | uisite: | | | | | | | | - | - | 24 | 12 | | |
| | | | C | COUR | SE O | UTC | OMES | 5 (CO | s) | | | | | | | |
| CO No. | COURS | E OUT | СОМ | E | | | | | | | | | | | | |
| 4405.1 | Analyze | behavio | our of a | analog | g mod | ulatio | ns syst | tems i | n the t | ime d | omain | .(L4) | | | | |
| 4405.2 | Analyze | behavio | our of | pulse | modul | lations | s syste | ms in | the tir | ne do | main.(| L4) | | | | |
| 4405.3 | Illustrate | e the cha | racter | istics | of rad | io rece | eiver a | ind an | tenna | measu | iremer | nts(L2) | | | | |
| Mappii | ng of Cou | rse Out | comes | | | h Prog omes (| - | | omes (| POs) | & Pro | gram (| Specif | ic | | |
| Cos | | | | | | РО | | | | | | | PS | 50 | | |
| COS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | | |
| 4405.1 | 3 | 3 | 1 | 1 | | | | 1 | 1 | 1 | 3 | 1 | 1 | 1 | | |
| 4405.2 | 3 | 3 | 1 | 1 | | | | 1 | 1 | 1 | 3 | 1 | 1 | 1 | | |
| 4405.3 | 3 | 2 | 1 | 1 | | | | 1 | 1 | 1 | 3 | 1 | 1 | 1 | | |
| Avg | 3 | 3 | 1 | 1 | | | | 1 | 1 | 1 | 3 | 1 | 1 | 1 | | |
| 3/2/1 Indi | cates Strer | ngth of C | Correla | tion. | 3-Hig | h, 2-M | Iediun | n and | 1-Low | 7 | | | | | | |

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| Course | Code: | Course | Name: | Com | prehe | ensive | Onlin | e Exa | mina | tion-I | L | Т | Р | C |
| 15 | A04406 | Pre-rec | uisite: | | | | | | | | - | - | 24 | 12 |
| | | | C | COUR | SE O | UTC | OMES | S (CO | s) | | | | | |
| CO No. | COURS | SE OUT | COM | E | | | | | | | | | | |
| 4406.1 | Acquire | fundam | ental e | engine | ering | know | ledge(| L1). | | | | | | |
| 4406.2 | Demons | strate the | abilit | y to na | avigat | e skill | s and | online | learn | ing(L2 | 2). | | | |
| 4406.3 | Apply th | ne conce | pt of p | oroble | m-solv | ving a | bility | in con | npetiti | ive exa | ums(L3 |). | | |
| Mappi | ng of Cou | rse Out | comes | | s) with Outco | | - | | omes (| (POs) | & Pro | gram S | Specif | ic |
| | | | | | | PO | | | | | | | PS | 50 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| Cos | | | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Cos 4406.1 | 2 | 1 | | | | | | | | - | | - | - | |
| | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - | - |
| 4406.1 | 2 | - | - | - | - | - | - | 1 | - | - | - | - | - | - |



DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CO'S AND PO'S MAPPING

JNTUA-R15 REGULATION

INDEX

List of all courses offered by the institution for the regulation R15, JNTUA

| S.No | Course Code | Course Name | Year & Sem |
|------|----------------|---|------------|
| 1 | 15A04511 | Computer Organization | |
| 2 | 15A04501 | Antennas and Wave Propagation | |
| 3 | 15A04502 | Digital Communication Systems | |
| 4 | 15A04503 | Linear Integrated Circuits and Applications | |
| 5 | 15A04504 | Digital System Design | III-I Sem |
| 6 | 15A04505 | Linux Programming & Scripting (MOOCS-I) | |
| 7 | 15A04507 | IC Applications Laboratory | |
| 8 | 15A04508 | Digital Communication Systems Laboratory | |
| 9 | 15A99501 | Audit course – Social Values & Ethics | |
| | | | |
| 10 | 15A52301 | Managerial Economics and Financial Analysis | |
| 11 | 15A04601 | Microprocessors & Microcontrollers | |
| 12 | 15A04602 | Electronic Measurements and Instrumentation | |
| 13 | 15A04603 | Digital Signal Processing | |
| 14 | 15A04604 | VLSI Design | |
| 15 | 15A04605 | MATLAB Programming. (CBCC-I) | III-II Sem |
| 16 | 15A04607 | Microprocessors & Microcontrollers Laboratory | III-II Sem |
| 17 | 15A04608 | Digital Signal Processing Laboratory | |
| 18 | 15A52602 | Advanced English Language Communication | |
| | | Skills (AELCS) Laboratory | |
| 19 | 15A02608 | Comprehensive Online Examination - II | |
| 20 | 15A52301 | Managerial Economics and Financial Analysis | |

III B.Tech, I Sem ECE Cos and pos mapping (R15-JNTUA)

| (na. | | ł | RAM | IREL | DDÝ S | SUB | | AMI LLE(| - | DÝ Đ | NGIN | IEERI | NG | |
|-------------------|--------------|--------------|--------------|----------|----------------|--------------|------------|--------------|-------------|--------|--------------------------|----------------------|-------------------|-----|
| 1 | | | | | | | d to JN | TUA. A | n ISO 90 | | | ed Institut | | |
| | × | | | | | | | | | | <u>.S.R. Nel</u> DNIC | lore, A.P.) |) | |
| RAMIREDDY SUBE | SARAMI REDDY | | | | | | | | - | | ERI | | | |
| Engineering | Excellence | COI | IRSE | | | | | | | | | POs d | e PS(|)s |
| Through In | novation | | | | | ILD | | | | | | | | |
| Course | Cadar | SE Course | M: | III-I | putor | Orgo | | eg: R | 15 | | | <u>: 2020</u> 7 T | -2021 P | C |
| | | | | | puter | Olga | mzati | | | | 3 | | г 0 | 3 |
| 15A04 | 4511 | Prerequ | | | | | | | | | • | | U | 5 |
| GON | GOVE | | | | SE O | UTC | OME | S (CC |) s) | | | | | |
| CO No. | COURS | | | | | • | | | | | | | | |
| 4511 1 | Analyze | | ent f | unctio | onal | units, | bus | struc | ture | and | addres | ssing r | nodes | in |
| 4511.1 | compute | er(L4). | | | | | | | | | | | | |
| | Explain | the fun | ctions | lunit | s of tl | he nro | Cesso | r such |) as re | nister | file a | nd AI I | $I(\mathbf{I} 2)$ | |
| 4511.2 | Елріаш | the full | ction | li uiiit | 5 01 11 | | 100350 | 1 Suci | 1 45 10 | gister | me a | | J(L2) | • |
| | Differen | tiate th | e use | of m | ain m | emor | y, cac | he me | emory | and | virtua | l memo | ory in | the |
| 4511.3 | compute | er systei | m(L2) |). | | - | | | - | | | | - | |
| | - | - | | | | | | | | | | | | |
| 4511.4 | Explain | the inpu | ut/out | put in | terfac | es & | memo | ory or | ganiz | ation(| L2). | | | |
| | Apply | the c | oncer | ots o | of th | ne p | ipelin | ing | and | basic | c ch | aracteri | stics | of |
| 4511.5 | multipro | | - | | | 1 | 1 | U | | | | | | |
| | | | () | | | | | | | | | | | |
| Map | oing of Co | ourse C | Jutco | | | | <u> </u> | | | mes (| POs) | & Pro | gram | |
| | 1 | | | Spec | ific C | Jutco | | PSOs |) | | | | r . | |
| Cos | | | - | | | PO | r | | | 1.0 | | | PS | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4511.1 | 3 | 3 | 1 | 1 | - | - | - | - | - | - | - | 1 | 1 | 1 |
| 4511.2 | 3 | 3 | 1 | 1 | - | - | - | - | - | - | - | 1 | 1 | 1 |
| 4511.3 | 3 | 3 | 1 | 1 | - | - | - | - | - | - | - | 1 | 1 | 1 |
| 4511.4 4511.5 | 3 | 3 | 1 | 1 | - | - | - | - | - | - | - | 1 | 1 | 1 |
| AVG | 3 | 3 | 1 | 1 | - | - | - | - | - | - | - | 1 1 | 1 | 1 |
| 3/2/1 Indi | _ | - | | latio | | ligh 3 | - 3 Mod | - lium (| - nd 1 | | - | 1 | 1 | |
| <i>3/2/</i> 1 mai | cales Sire | ingui OI | COIF | | 1. 3 -E | ngn, s | o-iviec | iiuiii č | ulu I- | LOW | | | | |

| 1.24 | | | | | | | | | | | | OLLEGE | | • |
|--------------------------------------|---------------------|------------------|------------------|-----------------------|--------------------|----------|--------------|----------------------------|----------------------------|-----------------------|------------------------|-----------------------------|---------|-----------|
| | | | 16, Kao | danutł | nala, B | ogole | Ins Manda | stitutio al, Kav | on. vali- 52 | 24 142 | , S.P.S | 2015 Co .R. Nello | ore, A. | |
| RAMIREDOY SUBBAI | RAMI REDDY | | DEPA | ARTM | ENT (| OF EL | | RONIC INEEF | | D COI | MMUN | VICATI | ON | |
| Engineering Ex Through Inno | cellence | | COU | RSE (| OUTC | OMES | | | | COs | with P | Os & PS | Os | |
| Through Third | | YEAR | &SEN | /:III-I | | | R | eg: R1 | 5 | | AY: | 2020-20 | 021 | |
| Course | Code: | Course | Name | e: Ante | ennas | and W | ave P | ropaga | ation | |] | T | Р | С |
| 15A04 | 4501 | Prerequ | isite: N | None | | | | | | | | 3 1 | 0 | 3 |
| | | | | COUI | RSE O | UTCC | MES | (COs) | | | | | | |
| CO No. | COURS | E OUTC | OME | | | | | | | | | | | |
| 4501.1 | Explain | the basic | es of a | ntenna | a parar | neters | & rad | iation | patter | rn(L2) | • | | | |
| 4501.2 | Design | VHF, UI | IF and | l Micro | owave | anten | nas(L | 6). | | | | | | |
| 4501.3 | Analyze antennas | | structio | on of 1 | nicro | strip, 1 | flat she | eets, c | orner | and pa | raboli | c reflect | tor | |
| 4501.4 | Design t perform | | | ays & | Make | use of | f anter | ina me | easure | ments | to ass | ess ante | nna's | |
| 4501.5 | Explain atmosph | | | | - | | | | space | & me | chanis | m of the | e | |
| Mapping of (PSOs) | f Course O | utcomes | (COs) | with l | Progra | m Ou | tcomes | s (POs |) & P r | ogran | ı Speci | fic Outo | comes | |
| | | | | | | РО | | | | | | | P | ~ ~ |
| Car | | | | | | | | | | | | | | SO |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| Cos 4501.1 | 1 3 | 2 3 | 3 3 | 4 2 | 5 | | | 8 | 9 | 10 2 | 11 | 12 - | | |
| | | | | - | 5 - 2 | | | 8 - - | 9 - - | | 11 - - | 12 - - | | |
| 4501.1 | 3 | 3 | 3 | 2 | - | | | 8 - - - | 9 - - - | 2 | 11 - - | 12 - - | | |
| 4501.1 4501.2 | 3 | 3 | 3 | 2 | - 2 | | | 8 - - - | 9 - - - | 2 | 11 - - - | 12 - - - | | |
| 4501.1 4501.2 4501.3 | 3 3 3 | 3 3 3 | 3 2 3 | 2 2 2 | - 2 2 | | | 8 - - - - | 9 - - - - | 2 2 2 | 11 - - - - | 12 - - - - - | | |
| 4501.1 4501.2 4501.3 4501.4 | 3 3 3 3 | 3 3 3 3 | 3 2 3 3 | 2 2 2 2 2 | - 2 2 | | | 8 - - - - - | 9 - - - - - | 2 2 2 2 2 | 11 - - - - | 12 - - - - - | | |

| | | | | | | | | | | | Certified .R. Nello | Institution | 1. | |
|---------------------------|------------------------|-------------------------|---------|---------------|----------|----------------|------------------|--------------|--------|----------|------------------------|-------------|--------|-----|
| | 2 | DEP | | | | | | | | | | UNIC | CATI | ON |
| | ARAMI REDDY COLLEGE | | | | | | NGI | | | | | | | |
| Engineering Through In | | C | OURS | SE OU | JTCO | MES | & M A | APPIN | IG OI | F COs | with] | POs & | PSOs | |
| | | YEA | R &SI | E M:II | [-I | | F | Reg: R | 15 | | AY: | 2020-20 | 21 | |
| Course | Code: | Course | Name: | Digita | l Com | munic | ation | Syster | ns | | Ι | J T | Р | C |
| 15A0 | 4502 | Pre-rec | uisite: | EMTL | <u>_</u> | | | | | | 3 | 3 1 | 0 | 3 |
| | | | (| COUR | RSE O | UTC | OMES | 5 (CO | s) | | | | | |
| CO No. | | SE OUT | | | | | | | | | | | | |
| 4502.1 | | he funda tion tech | | | - | | | | | ong w | ith dif | ferent c | oding | anc |
| 4502.2 | Differen | ntiate th s(L2) | e bas | ic pr | inciple | es of | basel | band | and | passba | nd di | gital n | nodula | tio |
| 4502.3 | Employ | the Geo | metric | Repre | esenta | tion of | Signa | als in S | Signal | Space | (L2). | | | |
| 4502.4 | | e the diff obability | | | | k dem | odulat | ion fo | r band | l pass (| data tra | ansmiss | ion an | d |
| 4502.5 | Apply d | ifferent | channe | el enco | oding t | echnie | ques fo | or erro | r dete | ction a | and con | rection | (L3) | |
| Марр | ing of Co | urse Ou | tcome | s (CO | | h Prog omes | | | mes (| POs) | & Pro | gram S | pecifi | с |
| | | | | | | РО | 1 | | | | | | PS | 50 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| | 3 | 3 | 1 | 1 | 1 | 1 | - | - | - | 1 | - | - | - | 1 |
| 4502.1 | | | 1 | 1 | 1 | 1 | - | - | - | 1 | - | - | - | 1 |
| 4502.1 4502.2 | 3 | 3 | | | | <u> </u> | - | - | - | 1 | - | - | - | 1 |
| | 3 | 3 | 1 | 1 | 1 | 1 | | | 1 | Î. | | | | |
| 4502.2 | | | 1 1 | 1 1 | 1 | 1 | - | - | - | 1 | - | - | - | 1 |
| 4502.2 4502.3 | 3 | 3 | | | | | - | - | - | 1 | - | - | - | 1 |

| RAMIREDDY SUBBARAMI REDDY |
|---------------------------|

ENGINEERING COLLEGE

Engineering Excellence

RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUA. An ISO 9001: 2015 Certified Institution. NH-16, Kadanuthala, Bogole Mandal, Kavali- 524 142, S.P.S.R. Nellore, A.P.)

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

COURSE OUTCOMES & MAPPING OF COs with POs & PSOs

| Through Innovation | | | | | | |
|--------------------|---|------------------|--------------|--------|-----|---|
| | YEAR &SEM:III-I | Reg: R15 | AY: 2 | 020-20 |)21 | |
| Course Code: | Course Name: Linear Integra Applications | ted Circuits and | L | Т | Р | С |
| 15A04503 | Prerequisite: None | | 3 | 1 | 0 | 3 |
| | COURSE OUT | COMES (COs) | | | | |

| CO No. | COURSE OUTCOME |
|--------|--|
| 4503.1 | Explain the construction and characteristics of the operational-amplifiers(L2). |
| 4503.2 | Analyze the feedback and its effect on the performance of op-amp(L4). |
| 4503.3 | Develop knowledge on some linear applications of Op-amp and on the design of active filters using Op-amps(L6). |
| 4503.4 | Design various waveform generators using Op-amp, 555 Timer and PLL(L6). |

| 4503.5 Analyze data converter (ADC and DAC) Circuits using Op amps() |
|--|
|--|

Mapping of Course Outcomes (COs) with Program Outcomes (POs) & Program Specific Outcomes (PSOs)

| 60 | | | | | | PO | | | | | | | PS | 0 |
|-------------------|---|---|---|---|---|----|---|---|---|----|----|----|----|---|
| COs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4503.1 | 3 | 2 | 2 | - | 2 | - | - | - | - | 3 | 2 | 2 | 3 | - |
| 4503.2 | 3 | 2 | 2 | - | 2 | - | - | - | - | 3 | 2 | 2 | 3 | - |
| 4503.3 | 3 | 2 | 2 | - | 2 | - | - | - | - | 3 | 2 | 2 | 3 | - |
| ECEDEPT 4503.4 | 3 | 2 | 2 | - | 2 | - | - | - | - | 3 | 2 | 2 | 3 | - |
| 4503.5 | 3 | 2 | 2 | - | 2 | - | - | - | - | 3 | 2 | 2 | 3 | - |
| AVG | 3 | 2 | 2 | - | 2 | - | - | - | - | 3 | 2 | 2 | 3 | - |

| | | | · • • | • | · | / | | | | | Certified | | n. | |
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| AMIREDDY SUBB | ARAMI REDDY | | | | | | NGI | | | | | | | |
| Engineering Through In | | C | OURS | SE OU | JTCO | MES | & M A | APPIN | IG OI | F COs | with l | POs & | PSOs | |
| Through the | | YEA | R &SF | EM:III | [-I | | R | leg: R | 15 | | AY: | 2020-20 | 021 | |
| Course | Code: | Course | Name: | Digita | al Syst | tem D | esign | | | 1 | Ι | , T | Р | C |
| 15A0 | 4504 | Pre-req | uisite: | None | | | | | | | 3 | 1 | 0 | 3 |
| | | | (| COUR | SE O | UTC | OMES | G (CO | s) | | | | | |
| CO No. | COURS | E OUT | COM | E | | | | | | | | | | |
| 4504.1 | Construc | t the log | gic circ | cuits u | sing d | ifferei | nt type | s of lo | ogic fa | milies | (L6). | | | |
| 4504.2 | Develop | VHDI | nrogra | ms fo | r digit | al circ | nits(I | 6) | | | | | | |
| 4304.2 | - | | 1 0 | | Ŭ | | | | | | | | | |
| 1 = 0 : - | | 1 • | 1 | | | | | 1 | wite . | | · • | \sim | | |
| 4504.3 | Design | - | lemen | it vari | lous c | ombir | ationa | u circ | uns u | sing | Dasic I | C stru | ctures | an |
| 4504.3 | Design VHDL(I | - | lemen | it vari | ious c | ombir | ationa | | uns u | Ising | Dasic I | C stru | ctures | and |
| 4504.3 | - | L6). | | | | | | | | | | | | |
| | VHDL(I | .6). Ind impl | | | | | | | | | | | | |
| 4504.4 | VHDL(I Design a VHDL(I | _6). Ind impl _6). | ement | variou | us sequ | uentia | l circu | its usi | ng usi | ng bas | sic IC s | tructur | es and | |
| | VHDL(I Design a | L6). Ind impl L6). VHDL | ement progr | variou | us sequ | uentia | l circu | its usi | ng usi | ng bas | sic IC s | tructur | es and | |
| 4504.4 | VHDL(I Design a VHDL(I Develop | L6). Ind impl L6). VHDL HDL(L6 | ement progr). | variou rams f | us sequ for van | uentia rious h Pro g | l circu comple | its usi ex cor Outco | ng usi mbina | ng bas tional | sic IC s | tructur equent | es and | cuit |
| 4504.4 4504.5 Mapp | VHDL(I Design a VHDL(I Develop using VH | L6). Ind impl L6). VHDL HDL(L6 | ement progr). | variou rams f | us sequ for van | uentia rious h Pro g | l circu comple gram ((PSOs | its usi ex cor Outco | ng usi mbina | ng bas tional | sic IC s | tructur equent | res and ial cir | cuit |
| 4504.4 4504.5 | VHDL(I Design a VHDL(I Develop using VH | L6). Ind impl L6). VHDL HDL(L6 | ement progr). | variou rams f | us sequ for van | uentia rious h Prog omes | l circu comple gram ((PSOs | its usi ex cor Outco | ng usi mbina | ng bas tional | sic IC s | tructur equent | res and ial cir | cuit |
| 4504.4 4504.5 Mapp | VHDL(I Design a VHDL(I Develop using VH ing of Cou | L6). Ind impl L6). VHDL HDL(L6 UTSE Out | ement progr). | variou rams f | us sequiritaria se | uentia rious h Prog omes PO | l circu comple gram ((PSOs | its usi ex cor Outco | ng usi mbina mes (| ng bas tional POs) | and S | tructur equent gram S | res and ial cirt | cuit |
| 4504.4 4504.5 Mapp Cos | VHDL(I Design a VHDL(I Develop using VI ing of Cou | L6). Ind impl L6). VHDL HDL(L6 Irse Out | ement progr). Comes | variou rams f s (CO) 4 | us sequ for var s) with Outco 5 | uentia rious h Prog omes PO | l circu comple gram ((PSOs | its usi ex cor Outco | ng usi mbina mes (9 | ng bas tional POs) | sic IC s and S & Prog 11 | tructur equent gram S | res and ial cirt | cuit |
| 4504.4 4504.5 Mapp Cos 4504.1 | VHDL(I Design a VHDL(I Develop using VH ing of Cou 1 1 1 | 26). Ind impl 26). VHDL IDL(L6 Irse Out 2 - - | ement progr). COME: 3 | variou rams f s (CO) 4 - | is sequences of the seq | uentia rious h Prog omes PO | l circu comple gram ((PSOs | its usi ex cor Outco | ng usi mbina mes (9 1 | ng bas tional POs) | and S & Prog 11 2 2 | tructur equent gram § 12 - - | res and ial cirt | cuit c SO 2 3 |
| 4504.4 4504.5 Mapp Cos 4504.1 4504.2 4504.3 | VHDL(I Design a VHDL(I Develop using VH ing of Cou 1 1 1 1 1 | 26). Ind impl 26). VHDL HDL(L6 Irse Out 2 - 2 2 | ement progr). Comes 3 - 2 | variou rams f s (CO) 4 - - | is sequences of the seq | uentia rious h Prog omes PO | l circu comple gram ((PSOs | its usi ex cor Outco | ng usi mbina mes (9 1 1 | ng bas tional POs) | sic IC s and S & Prog 11 2 2 2 | tructur equent gram S 12 - - 2 | res and ial cirt Specifi P: 1 - | cuit c SO 3 3 3 3 |
| 4504.4 4504.5 Mapp Cos 4504.1 4504.2 | VHDL(I Design a VHDL(I Develop using VH ing of Cou 1 1 1 | 26). Ind impl 26). VHDL IDL(L6 Irse Out 2 - - | ement progr). COME: 3 | variou rams f s (CO) 4 - 2 | is sequences of the seq | uentia rious h Prog omes PO | l circu comple gram ((PSOs | its usi ex con Outco :) 8 - - - | ng usi mbina mes (9 1 1 1 | ng bas tional POs) 10 - - | and S & Prog 11 2 2 | tructur equent gram § 12 - - | res and ial cirt Specifi PS 1 - 1 | cuit c SO 2 3 3 |

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| | | | | H-16, Ka | adanutha | ala, Bogo | ole Mand | lal, Kava | di- 524 1 | 42, S.P.S | S.R. Nello | l Instituti ore, A.P.) | o n. | |
| <u> </u> | ARAMI REDDY | | | | | | | | | | NICS | | | |
| ENGINEERING | COLLEGE | C | MIRS | | | | | | | | ERIN with | NG POs & | PSO | 2 |
| Engineering Through Ini | | | R &SI | | | | | Reg: R | | | | 2020-2 | | , |
| Course | Code | Course | | | | arom | | | | | | | P | (|
| 15A0 | | Pre-rec | | | X I I U | grann | inng | a su | Ihrm | 5 | | | - | |
| | | | • | COU | RSE O | UTCO | OMES | (COs) | | | | | | |
| CO No. | COUR | SE OUT | | | | | | | | | | | | |
| 4505.1 | | | | | | | | •1 • • • • | | | | | | |
| | Underst | and basic | Linux | comma | ands a | nd usa | ge of f | lle ope | eration | s. | | | | |
| 4505.2 | Explain | _inux net | workin | g servi | ces. | | | | | | | | | |
| 4505.3 | Use bas | c Perl scr | ipting. | | | | | | | | | | | |
| 4505 4 | | | | | | | | | | | | | | |
| 4505.4 | Underst | and widg | et impl | ement | tation | using T | cl/Tk. | | | | | | | |
| 4505.4 | | and widg | | | | | | using P | ython | | | | | |
| 4505.5 | | and contr | ol flow | / and e | xcepti s) witl | on har h Proş | ndling (gram | Outco | | | & Pro | ogram | Specif | ĩc |
| 4505.5 | Underst | and contr | ol flow | / and e | xcepti s) witl | on har | ndling o gram (PSOs | Outco | | | & Pro | ogram | | ic SO |
| 4505.5 | Underst | and contr | ol flow | / and e | xcepti s) witl | on har h Prog omes (| ndling o gram (PSOs | Outco | | | & Pro | ogram 12 | | |
| 4505.5 Mappi | Underst | and contr | ol flow | v and e | s) with Outco | on har h Prog omes (PO | ndling (gram (PSOs | Outco s) | omes (| POs) | | | PS | 50 |
| 4505.5 Mappin Cos 4505.1 | Underst ng of Cou 1 3 | and contr arse Out 2 3 | comes 3 3 | 4 2 | s) with Outco 5 | on har h Prog omes (PO | ndling (gram (PSOs | Outco s) | omes (| POs) | | 12 | PS 1 2 | 50 |
| 4505.5 Mappin Cos 4505.1 4505.2 | Underst ng of Cou 1 3 3 | and contr and contr | comes 3 3 2 | 4 2 2 | s) with Outco 5 2 2 | on har h Prog omes (PO | ndling (gram (PSOs | Outco s) | omes (| POs) | | 12 2 2 | PS 1 2 2 | 50 |
| 4505.5 Mappin Cos 4505.1 | Underst ng of Cou 1 3 | and contr arse Out 2 3 | comes 3 3 | 4 2 | s) with Outco 5 2 | on har h Prog omes (PO | ndling (gram (PSOs | Outco s) | omes (| POs) | | 12 2 | PS 1 2 | 50 |
| 4505.5 Mappin Cos 4505.1 4505.2 | Underst ng of Cou 1 3 3 | and contr and contr | comes 3 3 2 | 4 2 2 | s) with Outco 5 2 2 | on har h Prog omes (PO | ndling (gram (PSOs | Outco s) | omes (| POs) | | 12 2 2 | PS 1 2 2 | SO |
| 4505.5 Mappin Cos 4505.1 4505.2 4505.3 | Underst ng of Cou 1 3 3 3 | and contr and contr | comes 3 3 2 3 | 4 2 3 | s) with Outco 5 2 2 3 | on har h Prog omes PO 6 | ram (PSOs 7 - - | 8 - - - | 9 - - | POs) 10 | | 12 2 2 2 | PS 1 2 2 2 | 50 |

| 1.24 | | | | | | | | | YEN | | | | | |
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| RAMIREDDY SUBB ENGINEERING | ARAMI REDDY COLLEGE | ~ | | | | UNI | | | | | | | | |
| Engineering I Through Inc | | CO | JURS | E OU | TCO | MES | & MA | PPIN | IG OI | f COs | with | POs & | & PSO | S |
| | | YEA | R &SI | E M:II | [-I | | R | eg: R | 15 | | AY | : 2020-2 | 2021 | |
| Course 15A0 | | Course | Name: | IC A | pplica | ations | Labo | rator | y | | | LT | Р | C |
| | | | C | COUR | SE O | UTCO | OMES | 6 (CO: | s) | | | | | |
| CO No. | COURS | SE OUT | COM | Έ | | | | | | | | | | |
| 4507.1 | Design amp(L6) | U | re fee | dback | amp | lifiers | and | analyz | ze the | eir cha | aracte | ristics | using | Op- |
| 4507.2 | Design 1 | nultivib | rator, | integra | ator, d | lifferei | ntiator | using | g Op-a | mp(L | 6). | | | |
| 4507.3 | Design a | active fil | ters ai | nd fun | ction | genera | itors a | nd usi | ng Op | o-amp | (L6). | | | |
| 4507.4 | Design | VCO, A | GC, P | LL, A | VC ar | nd regi | ulators | s using | g linea | r ICs(| L6). | | | |
| 4507.1 | Design amp(L6) | U | e fee | dback | amp | lifiers | and | analyz | ze the | eir cha | aracte | ristics | using | Op |
| | - · · · | | | | | | | Outco | omes (| POs) | & Pr | ogram | Speci | fic |
| Марріі | ng of Cou | rse Out | comes | | - | h Prog omes (| - | | | | | | | |
| | | rse Out | comes | | - | - | (PSOs | | | | | | P | SO |
| Mappin Cos | | rse Out | comes 3 | | - | omes | (PSOs | | 9 | 10 | 11 | 12 | P 1 | SO 2 |
| | ng of Cou | | | | Outco | omes (PO | (PSOs | ;) | 9 | 10 | 11 2 | 12 2 | | 2 |
| Cos | ng of Cou | 2 | 3 | | Outco | PO 6 | (PSOs | ;) | 9 - - | | | | | 2 |
| Cos 4507.1 | ng of Cou | 2 2 | 3 2 | 4 | Outco | PO 6 - | (PSO s 7 - | s) 8 - | 9 - - | 1 | 2 | 2 | 1 | 2 2 2 |
| Cos 4507.1 4507.2 | ng of Cou 1 3 3 | 2 2 2 | 3 2 2 | 4 | Outco 5 2 2 | PO 6 - | (PSO s 7 - - | ;) 8 - - | - | 1 3 | 2 2 | 2 2 | - | 2 2 2 3 |
| Cos 4507.1 4507.2 4507.3 | ng of Cou 1 3 3 3 | 2 2 2 2 2 | 3 2 2 2 2 | | Outco 5 2 2 2 2 | PO 6 - | (PSOs 7 - - | ;) 8 - - - | - | 1 3 2 | 2 2 2 | 2 2 2 2 | 1 - - - | |

| | | RAI | AIRE | DDY | SUB | BAR | AMI I | REDI | DY EI | IGIN | EERI | N G CO | LLE | <u>ie</u> |
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| and a | 5 | | | | | | | | | | | d Institutio ore, A.P.) | on. | |
| | | | | | | / 0 | | | | | | AND | | |
| | 2 | | | | | | | | | | ERIN | | | |
| RAMIREDDY SUBE ENGINEERING | ARAMI REDDY | C | OURS | E OU | TCO | MES | & M A | APPIN | | F CO | s with | POs & | PSOs | 5 |
| Engineering Through In | | YEAR | &SEI | M:III- | I | | R | eg: Ri | 15 | | AY: | 2020-2 | 021 | |
| Course | Code: | Course Labor | | : Digit | al Co | mmu | nicati | on Sy | stems | |] | LT | Р | C |
| 15A0 | 4508 | Prereq | uisite: | None | | | | | | | | - - | 4 | 2 |
| | | | (| COUR | SE O | UTC | OME | S (CO | s) | | | • | • | |
| CO No. | COUR | SE OUI | COM | Έ | | | | | | | | | | |
| 4508.1 | analyze | Time di | vision | multi | plexin | ig and | demu | ltiplex | king te | echniq | ues(L4 | 4). | | |
| 4508.2 | Analyze | e the PC | M, DP | CM, I | DM, A | DCM | lusing | , hard | ware a | &softv | vare(L | <i>A</i>). | | |
| 4508.3 | Analyze | e the diff | erent | shift k | eying | techn | iques | using | hardw | are & | softwa | are(L4). | | |
| 4508.4 | Analyze | e the QA | M usi | ng sig | nal sp | ace an | nalysis | (L4) | | | | | | |
| Mapping Outcome | | e Outco | mes (| COs) | with I | Progra | am O | utcom | es (P | Os) & | Prog | ram Sp | ecific | |
| | | | | | | РО |) | | | | | | PS | 50 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| | 2 | 1 | 2 | 1 | - | - | - | - | 2 | 2 | - | - | 1 | |
| 4508.1 | | | | | | | | | | | | | | |
| 4508.1 4508.2 | 2 | 3 | 1 | 1 | - | - | - | - | 2 | 2 | - | - | 1 | |
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| 4508.2 | | | | | - | - | - | - | | | - | • | | |

| 124 | See. | RAM | | | | | | | | | | | | | |
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| | | | × II | • | | / | ed to JN ble Mand | | | | | | | n. | |
| st. | 2 | | | | | | NT C | | | | | | | | |
| ENGINEERING | COLLEGE | 00 | | | | | | | | | | | | DCO | |
| Engineering Through Inc | | | JUKS | EOU | ICO | MES | & MA | PPIN | IG OI | | s with | PC | Js & | PSUS | 5 |
| | | YEA | R &SI | EM:II | [-I | | R | eg: R | 15 | | AY: | : 20 | 20-20 | 21 | |
| Course | Code: | Course | Name | : Audi | it cou | rse – S | Social | Valu | es & 1 | Ethics | | Ĺ | Т | Р | 0 |
| 15A9 | 9501 | Pre-rec | uisite: | None | | | | | | | • | 3 | 1 | 0 | 3 |
| | | | C | COUR | SE O | UTC | OMES | 5 (CO | s) | | | | | | |
| CO No. | COURS | E OUT | COM | E | | | | | | | | | | | |
| 9501.1 | Develop | the cap | abilit | y of s | haping | g then | nselve | s in tł | ne soc | iety & | z deve | elop | the | roles | an |
| | responsi | bility of | NSS | activi | ty(L6) |). | | | | | | | | | |
| 9501.2 | Explain | the feat | ures of | fcons | titutio | n of I | ndia(I | 2) | | | | | | | |
|)301.2 | Explain | the reat | | | inuno | 11 01 1 | nuna(L | | | | | | | | |
| 9501.3 | Explain | the dam | 1 | | | | | | | | | | | | |
| | Explain | the deve | elopm | ent of | the so | ociety | aroun | d then | n and | organi | izatioı | n th | ey w | ork.(I | _2) |
| 9501.4 | Develop | | • | | | | | | | 0 | | | • | ork.(I | .2) |
| | Develop | themse | lves in | nto pro | ofessio | onals o | & follo | ow pro | ofessio | onal et | thics(l | L6) | • | | |
| 9501.4 9501.1 | Develop Develop | themse the cap | lves in | nto pro | ofessio haping | onals of g then | & follo | ow pro | ofessio | onal et | thics(l | L6) | • | | |
| | Develop | themse the cap | lves in | nto pro | ofessio haping | onals of g then | & follo | ow pro | ofessio | onal et | thics(l | L6) | • | | |
| 9501.1 | Develop Develop | themse the cap bility of | lves in pabilit <u>;</u> NSS | nto pro y of si activit | ofessio haping ty(L6) s) witl | g then). | & follonselve | ow pro s in th Outco | ofessione soc | onal et iety & | thics(I | L6) elop | b the | roles | an |
| 9501.1 | Develop Develop responsi | themse the cap bility of | lves in pabilit <u>;</u> NSS | nto pro y of si activit | ofessio haping ty(L6) s) witl | g then). h Proj omes | & follo nselves gram ((PSOs | ow pro s in th Outco | ofessione soc | onal et iety & | thics(I | L6) elop | b the | roles | and |
| 9501.1 | Develop Develop responsi ng of Cour | themse the cap bility of se Out | lves in pability NSS | nto pro y of si activit | ofession haping ty(L6) s) with Oute | g then). h Prog omes PO | & follo nselves gram ((PSOs | ow pro s in th Outcos | ofessione soc | iety & | thics(I z deve & Pr | L6) elop | the ram S | roles Specif PS | an fic |
| 9501.1 Mappin Cos | Develop Develop responsi | themse the cap bility of | lves in pabilit <u>;</u> NSS | nto pro y of si activit | ofessio haping ty(L6) s) witl | g then). h Proj omes | & follo nselves gram ((PSOs | ow pro s in th Outco | ofessione soc | onal et iety & | thics(I | L6) elop | b the | roles Specif PS 1 | an fic |
| 9501.1 Mappin | Develop Develop responsi ng of Cour | themse the cap bility of se Out | lves in pability NSS | nto pro y of si activit | ofession haping ty(L6) s) with Outco | g then). h Prog omes PO | & follo nselves gram ((PSOs | ow pro s in th Outcos | ofessione soc | iety & | thics(I z deve & Pr | L6) elop | the ram S | roles Specif PS | an fic |
| 9501.1 Mappin Cos | Develop Develop responsi ng of Cour | themse the cap bility of se Out | lves in pability NSS | nto pro y of si activit | ofession haping ty(L6) s) with Outco | onals of them on them on the them on the theorem of the theoremoon of the theorem of the theorem of the theorem of the theorem | & follo nselves gram (PSOs | ow prosent of the second secon | ofessione soc | iety & | thics(I z deve & Pr | L6) elop | | roles Specif PS 1 | an fic |
| 9501.1 Mappin Cos 9501.1 9501.2 | Develop Develop responsi ng of Cour 1 - | themse the cap bility of rse Oute | lves in pabilit; NSS comes 3 - | nto pro y of si activit s (CO: | ofession haping ty(L6) s) with Outco | ponals of them of the program of the | & follo nselve (PSOs 7 1 1 | ow pros s in th Outcos s) 8 3 2 | ofessione soc | iety & POs) 10 - | thics(I z deve & Pr 11 - | L6) elop | • the cam § 12 2 1 | roles Specif PS 1 1 1 | an fic |
| 9501.1 Mappin Cos 9501.1 9501.2 9501.3 | Develop Develop responsi ng of Cour 1 - | themse the cap bility of rse Outo 2 - - | lves in pabilit; NSS comes 3 - | nto pro y of si activit s (CO: | ofession haping ty(L6) s) with Outco | onals of them of the program of the | & follo nselves gram ((PSOs 7 1 | ow pro s in th Outco s) 8 3 | ofessione soc | iety & POs) 10 - | thics(I z deve & Pr 11 - | L6) elop | . the ram S 12 2 | roles Specif PS 1 1 1 1 | an fic |
| 9501.1 Mappin Cos 9501.1 9501.2 | Develop Develop responsi ng of Cour 1 - | themse the cap bility of rse Outo 2 - - | lves in pabilit; NSS comes 3 - | nto pro y of si activit s (CO: | ofession haping ty(L6) s) with Outco | ponals of them of the program of the | & follo nselve (PSOs 7 1 1 | ow pros s in th Outcos s) 8 3 2 | ofessione soc | iety & POs) 10 - | thics(I z deve & Pr 11 - | L6) elop | • the cam § 12 2 1 | roles Specif PS 1 1 1 | an iic |
| 9501.1 Mappin Cos 9501.1 9501.2 9501.3 | Develop Develop responsi ng of Cour 1 - | themse the cap bility of rse Outo 2 - - | lves in pabilit; NSS comes 3 - | nto pro y of si activit s (CO: | ofession haping ty(L6) s) with Oute | ponals of them of the program of the | & follo nselves (PSOs 7 1 1 1 1 | ow pro s in th Outcos 3 2 3 3 3 3 | ofessione soc | iety & POs) 10 - | thics(I z deve & Pr 11 - | L6) elop | the the tam § 12 2 1 2 2 2 | roles Specif PS 1 1 1 1 | an fic |
| 9501.1 Mappin Cos 9501.1 9501.2 9501.3 9501.4 | Develop Develop responsi ng of Coun 1 - - - | themse the cap bility of rse Outo 2 - - - - | lves in pabilit NSS comes 3 - - | to provide the provide the provide the provident of the p | ofession haping ty(L6) s) with Outco 5 - - - - | ponals of them of the program of the | & follo nselves (PSOs 7 1 1 1 | ow prosing the second s | ofessione soc pmes (9 - - - | ponal et iety & POs) 10 - - - | thics(I z deve & Pr 11 - - - | L6) elop | the the the the the the the the | roles Specif PS 1 1 1 1 1 1 | an fic |

III B.Tech, II Sem ECE Cos and pos mapping (R15-JNTUA)

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| RAMIREDDY SUBBA ENGINEERING | RAMI REDDY COLLEGE | | | | | E | NGI | NEE | RINC | r J | | | | |
| Engineering E Through Inn | | 0 | COUR | SE OI | UTCO | MES | & M A | APPIN | IG OF | r COs | with I | POs & 1 | PSOs | |
| | | S | EM: I | II-II | | | R | eg: R | 15 | | AY: | 2020-2 | 2021 | |
| Course | Code: | Course Analys | | Mana | gerial | Econ | omics | and F | Financ | ial |] | T | Р | С |
| 15A5 | 2301 | Pre-req | uisite:] | None | | | | | | | | 3 1 | 0 | 3 |
| | | | (| COUR | RSE O | UTC | OMES | G (COs | ;) | | I | | | 4 |
| CO No. | COURS | E OUT | | | | | | | <u> </u> | | | | | |
| 2301.1 | Analyze | the cons | umer b | ehavio | or with | n regar | d to th | eir pro | duct c | or servi | ices an | d measu | ire den | nand |
| | of a parti | cular pro | oduct o | or serv | rices by | y apply | ying v | arious | metho | ods in g | given s | situatior | n(L4). | |
| 2301.2 | Compare | concept | t of pro | oductio | on & c | ost an | alysis(| L4). | | | | | | |
| 2301.3 | Determin | e the pr | ice of a | a prod | uct or | servic | es in g | iven n | narket | condit | tion(L | 5). | | |
| 2301.4 | Interpret | the fina | ncial a | ccount | ting ar | nd the | financ | ial rati | os(L2) |). | | | | |
| 2301.5 | Summari | ze Capit | al and | its typ | bes and | d budg | et tech | nnique | s(L2). | | | | | |
| Марр | oing of Co | urse Ou | tcome | s (CO | | h Prog omes (| | | mes (l | POs) & | & Prog | gram Sj | pecific | |
| | | | | | Oute | PO | |) | | | | | PS | 50 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 2301.1 | 2 | - | - | - | 2 | 1 | - | - | - | _ | - | 1 | - | - |
| 2301.2 | 3 | - | 1 | - | - | 2 | - | - | - | - | - | 2 | 2 | 2 |
| 2301.3 | 2 | - | - | - | - | 1 | - | - | - | - | - | 1 | - | - |
| 2301.4 | 2 | - | - | - | 2 | 1 | - | 2 | - | - | - | 1 | - | - |
| 2301.5 | 2 | - | 1 | - | 2 | 1 | - | - | - | - | - | 1 | - | - |
| AVG | 2 | - | 1 | - | 2 | 1 | - | 2 | - | - | - | 1 | 2 | 2 |
| 3/2/1 Indic | ates Streng | gth of Co | orrelati | ion. 3- | High, | 2-Mec | lium a | nd 1-L | LOW | | | | | |

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| RAMIREDDY SUBBAI ENGINEERING C | | | ~~~ | | | | | NEE | | | | | ~ ~ ~ | |
| Engineering Ex Through Inno | | | COU | RSE (| DUTC | OMES | 5 & M | APPIN | IG OF | 'COs | with P | Os & P | SOs | |
| | | | EM: I | | | | | leg: R1 | | | AY: | 2020-20 | - | |
| Course | Code: | Course 1 | Name: I | Microp | orocess | sors & | Micro | ocontro | ollers | |] | L T | P | C |
| 15A0 | 4601 | Pre-requ | isite: N | IONE | | | | | | | | | 4 | 2 |
| | | | | COU | RSE C | OUTC | OMES | (COs) |) | | | | | |
| CO No. | COURSE | E OUTC | OME | | | | | | | | | | | |
| 4601.1 | Explain th | ne concej | ots of I | ntel x8 | 6 serie | es of pr | ocesso | rs(L2) | | | | | | |
| 4601.2 | Apply the the 8086 | - | | | g mode | es, inst | ructior | set an | d asse | mbler | directiv | ves for p | orogram | ming |
| 4601.3 | Explain th | ne concej | ots of N | ASP 43 | 30 low | power | micro | contro | ller(L2 |) | | | | |
| 4601.4 | Analyze t | he conce | pts of i | interru | pts, lov | v powe | er mod | es and | RTC o | of MSP | 2430(L | <i>A</i>). | | |
| 4601.5 | Apply the | differen | t interf | acing p | protoco | ols to in | mplem | ent rea | l time | applica | tions u | using MS | SP430(1 | _3). |
| Mappin | ng of Course | e Outcor | nes (C | Os) wi | ith Pro | ogram (PSO) | | mes (I | POs) & | z Prog | ram Sj | pecific (| Dutcom | ies |
| ~ | | | | | | PO | | | | | | | PS | 50 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4601.1 | 2 | 3 | 1 | 2 | 1 | 1 | - | - | - | 1 | - | 1 | 2 | 1 |
| 4601.2 | 2 | 3 | 1 | 2 | 1 | 1 | - | - | - | 1 | - | 1 | 2 | 1 |
| 4601.3 | 2 | 3 | 1 | 2 | 1 | 1 | - | - | - | 1 | - | 1 | 2 | 1 |
| 4601.4 | 2 | 3 | 1 | 2 | 1 | 1 | - | - | - | 1 | - | 1 | 2 | 1 |
| 4601.5 | 2 | 3 | 1 | 2 | 1 | 1 | - | - | - | 1 | - | 1 | 2 | 1 |
| AVG | 2 | 3 | 1 | 2 | 1 | 1 | - | - | - | 1 | - | 1 | 2 | 1 |
| 3/2/1 Indica | ates Strengt | h of Cor | elatior | n. 3-Hig | gh, 2-N | Aediun | n and 1 | -Low | | | | | | |

| | | RA | MIRE | LDDY | SUB | BAR | ₹ MI ł | REDD | YEN | GINE | ÆRIN | G CO | LLEG | E |
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| | | | | | | | | | | | Certified R. Nellor | Institution | 1. | |
| RAMIREDDY SUBBA | RAMI REDDY College | DEP | | / | | F EL | ЕСТ | | ICS | & CC | | UNIC | ATI(|)N |
| Engineering En Through Inne | | C | COUR | SE OU | UTCO | MES | & M A | APPIN | IG OI | F COs | with F | Os & | PSOs | |
| | | S | EM: I | II-II | | | R | leg: R | 15 | | AY: | 2020-2 | 2021 | |
| Course | Code: | Course Instru | | | ronic] | Measu | ireme | nts an | d | | Ι | T | Р | С |
| 15A04 | 4602 | Pre-req | uisite: | NONE | , | | | | | | - | - | 4 | 2 |
| | | | | COUR | RSE O | UTC | OMES | 6 (COs | ;) | | | | | |
| CO No. | COURS | | | | | | | | | | | | | |
| 4602.1 | Explain t | he perfo | ormanc | e char | acteria | stics o | f AC a | & Dc r | neters | used i | n instr | umenta | tion(L | 2). |
| 4602.2 | Explain measurer | | | ion, p | rincipl | le and | worl | king o | of CR | O and | l time | period | l &vo | ltage |
| 4602.3 | Explain f | function | genera | ators, | wave a | analyz | ers, lo | gic ana | alyzer | s and s | pectru | m anal | yzers(I | |
| 4602.4 | Analyze Q meter, | | | | | s for tl | heir ap | plicati | ion in | measu | rement | and al | so exp | lain |
| 4602.5 | Explain t | he princ | iples i | nvolve | ed in s | ensors | s & tra | nsduce | ers(L2 |). | | | | |
| Марр | ing of Cou | ırse Ou | tcome | s (CO | | h Prog omes (| | | mes (l | POs) & | & Prog | ram S | pecific | |
| Cos | | | | | | PO |) | | | | | | PS | 50 |
| COS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4602.1 | 3 | 2 | 1 | - | - | - | - | - | - | 1 | - | 2 | 3 | 2 |
| 4602.2 | 3 | 1 | 2 | - | - | - | - | - | - | 1 | - | 2 | 3 | 1 |
| 4602.3 | 2 | 1 | 2 | - | - | - | - | - | - | 1 | - | 1 | 2 | 1 |
| 4602.4 | 2 | 3 | 2 | - | - | - | - | - | - | 1 | - | 1 | 2 | 3 |
| AVG | 3 | 1 | 2 | - | - | - | - | - | - | 1 | - | 2 | 3 | 1 |
| 3/2/1 Indic | ates Streng | gth of C | orrelat | ion. 3- | -High, | 2-Me | dium a | and 1-l | Low | | | | | |

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| | | | | | | | | | | | Certified .R. Nellor | | 1. | |
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| RAMIREDDY SUBB/ ENGINEERING | ARAMI REDDY COLLEGE | | | | | Ε | NGI | NEE | RIN(| J | | | | |
| Engineering E Through Inn | | C | OURS | SE OU | JTCO | MES | & M A | PPIN | IG OI | F COs | with F | Os & | PSOs | |
| | | S | EM: I | II-II | | | R | eg: R | 15 | | AY: | 2020-2 | 2021 | |
| Course | Code: | Course | Name: | Digit | al Sig | nal Pr | ocessi | ng | | 1 | L | Т | Р | С |
| 15A04 | 4603 | Pre-req | uisite: | | | | | | | | - | - | 24 | 12 |
| | 1000 | | (| COUR | SE O | UTC | OMES | G (CO | s) | | | | | |
| CO No. | COURS | E OUT | | | | | | | , | | | | | |
| 4603.1 | Analyze | discrete | time s | signals | s and s | system | is in ti | me do | main a | and fre | equency | / doma | in(L4) | |
| 4603.2 | Calculat techniqu | | er tran | sform | for d | liscrete | e time | signa | ıls by | using | variou | s trans | sforma | tion |
| 4603.3 | Develop | structur | res for | realiza | ation o | of disc | rete ti | me FI | R and | IIR sy | vstems(| L6). | | |
| 4603.4 | Design of | of linear | phase | FIR a | nd IIR | filter | s by va | arious | techn | iques(| L6). | | | |
| 4603.5 | Explain | basic co | ncepts | of int | erpola | tion a | nd dec | imatio | on(L2) |). | | | | |
| Маррі | ing of Cou | irse Out | tcome | s (CO | - | h Prog omes (| - | | omes (| POs) | & Prog | gram S | pecifi | с |
| ~ | | | | | | PO | | / | | | | | PS | 50 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4603.1 | 1 | 2 | 2 | 2 | - | - | - | - | - | - | - | 1 | 2 | 1 |
| 4603.2 | 1 | 1 | 1 | 1 | - | - | - | - | - | - | - | 1 | 2 | 1 |
| 4603.3 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - | 1 | 1 | 2 |
| 4603.4 | 1 | 1 | 2 | 2 | - | - | - | - | - | - | - | 1 | 2 | 2 |
| 4603.5 | 2 | 1 | 2 | 2 | - | - | - | - | - | - | - | 1 | 1 | 1 |
| AVG | 1 | 1 | 2 | 2 | - | - 1, 2-Me | - | - | - | - | - | 1 | 2 | 1 |

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| and a | 2 | | | | | | | | | 01: 2015 42, S.P.S | | | | | |
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| RAMIREDDY SUBB. ENGINEERING | ARAMI RED DY COLLEGE | (| COUR | SE O | UTCC | | | | | | with] | POs | & P | SOs | |
| Engineering f Through Inc | | S | EM: I | II-II | | | R | eg: R | 15 | | AY | : 20 | 20-20 | 021 | |
| Course | Code: | Course | Name: | VLSI | Desig | n | | | | |] | L | Т | Р | C |
| 15A0 | 4604 | Pre-req | uisite: | | | | | | | | | - | - | 24 | 12 |
| | | | (| COU | RSE O | OUTC | OMES | G (COs | s) | | | | | | |
| CO No. | COURS | E OUT | | | | | | | , | | | | | | |
| 4604.1 | Explain | about IC | fabrica | ation a | and relation | ation b | etwee | n diffe | erent p | aramet | ters of | MO | SFE | T shov | wing |
| | its chara | cteristics | (L2). | | | | | | | | | | | | |
| | | | | _ | | | | | | | | | | | |
| 4604.2 | Apply la | | | | | | | | iagran | ns of lo | ogic ci | rcui | ts an | d esti | mat |
| | sheet res | sistance, | area ca | ipacita | ince ar | nd dela | iys(L3 |). | | | | | | | |
| 4604.3 | Design of | ligital sv | stem a | t oate | level a | and nh | vsical | level() | [6] | | | | | | |
| -005 | Design | iigitai sy | stem a | i gaic | | ind ph | ysicai | | LU). | | | | | | |
| 4604.4 | Design of | lifferent | sub sys | stems | using | variou | s VLS | I desig | gn styl | les(L6) |). | | | | |
| 16015 | F 1 ' | 1 (171 | | 1 0 4 | | <u> </u> | | · (T (|) | | | | | | |
| 4604.5 | Explain | about EI | JA too | ls & te | esting | of log | IC CITCI | lits(L | 2). | | | | | | |
| Map | ping of Co | ourse Ou | tcome | s (CO | s) wit | h Pros | gram | Outco | mes () | POs) & | & Pros | grar | n Sp | ecific | |
| - - | | | | | | omes | | | | | · · · · · | | | | |
| Cos | | | | _ | - | PO | | | | | - | - | | PS | 50 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 1 | 12 | 1 | 2 |
| 4604.1 | 3 | - | - | - | - | - | - | - | - | - | - | | 1 | - | 2 |
| 4604.2 | | | | | _ | _ | _ | _ | _ | _ | | | | | 2 |
| 4004.2 | 3 | 2 | 1 | 1 | - | - | - | - | - | - | - | | 1 | - | 2 |
| 4604.3 | 3 | 3 | 3 | 2 | - | - | - | - | - | - | - | | 1 | - | |
| | 3 | 3 | 5 | | | | | | | | | | T | | 3 |
| 4604.4 | 3 | 3 | 3 | 2 | - | - | - | - | - | - | - | | 1 | - | 2 |
| 4604.5 | | | _ | - | | _ | | | - | _ | - | | | | 3 |
| +004.J | 3 | 2 | - | - | 1 | - | - | - | - | - | - | | 1 | - | |
| | 5 | | | | | | | | | | | | | | 2 |
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| RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE |
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RAMIREDDY SUBBARAMI REDDY ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUA. An ISO 9001: 2015 Certified Institution. NH-16, Kadanuthala, Bogole Mandal, Kavali- 524 142, S.P.S.R. Nellore, A.P.)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

| Engineering I Through Inc | | CC | URS | E OU | TCO | MES | & MA | PPIN | IG OI | F COs | s with | POs | & PSO | S |
|------------------------------|-------------------|------------|------------|-----------|---------|---------|---------------|--------------|---------|---------|----------|---------|---------|------|
| Through the | ioretroa | S | EM: I | II-II | | | R | eg: R | 15 | | AY | : 2020 |)-2021 | |
| Course | Code: | Course | Name | : MA] | ГLAB | Prog | ramn | ning | | | | L T | | С |
| 15A04 | 4605 | Pre-rec | uisite: | NIL | | | | | | | | 3 1 | 0 | 3 |
| | | | C | COUR | SE O | UTC | OME | 5 (CO | s) | | | | | |
| CO No. | COURS | SE OUI | COM | IE | | | | | | | | | | |
| 4605.1 | Underst | and the | MATI | LAB I | Deskto | op, cor | nmano | d winc | low n | nenu 8 | k tools | s (L2). | | |
| 4605.2 | Write th | e MATI | LAB p | orogra | mming | g for a | arrays | and fu | inctio | ns and | l files(| L2). | | |
| 4605.3 | Analyze | e In-built | t (or) ι | iser de | efine f | unctic | ons, M | athem | atical | funct | ions ir | n MAT | LAB. | (L4) |
| 4605.4 | Design Loops & | | | | sing d | liffere | nt log | ical va | riable | es, con | dition | al stat | ements | , |
| 4605.5 | Implem | ent real | time e | xampl | es for | matri | x met | hods ı | ising] | MATI | LAB(I | | | |
| Mappin | g of Cou | rse Out | comes | | 1 - C | | gram (PSOs | | omes | (POs) | & Pr | ogran | ı Speci | fic |
| Cos | | | | | | РО | I | | | | | | P | SO |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4605.1 | 3 | _ | - | - | - | - | - | - | - | - | - | 1 | - | _ |
| 4605.2 | 3 | - | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1 | - | _ |
| 4605.3 | 3 | - | - | - | - | - | - | _ | - | - | - | 1 | - | - |
| 4605.4 | 3 | 2 | 3 | 2 | - | _ | - | - | _ | - | _ | 2 | - | 2 |
| 4605.5 | 3 | 3 | 3 | 3 | - | _ | _ | _ | - | _ | _ | 2 | - | 2 |
| AVG | 3 | 3 | 3 | 3 | - | - | - | - | - | - | - | 2 | - | 2 |
| 3/2/1 Indi | cates Stre | ngth of (| Correl | ation. | 3-Hig | sh, 2-N | Aediu | m and | 1-Lo | W | | | | |

| (see | | RA | MIRE | DDY | SUB | BAR | AMI I | REDD | YEN | GIN | ÆRIN | ie coi | TEG | E |
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| | RAMI REDDY | DEP | | | | F EL | ECT | RON | ICS | & C(| | UNIC | ATIC |)N |
| ENGINEERING | | | | | | | | NEE | | | | | | |
| Engineering E Through Inn | | C | OUR | SE OU | JTCO | MES | & M A | APPIN | IG OI | COs | with l | POs & l | PSOs | |
| | | S | EM: I | II-II | | | R | eg: R | 15 | | AY: | 2020-2 | 021 | |
| Course | Cadar | Course | Name: | Micro | oproce | essors | & Mi | croco | ntroll | ers | I | | Р | С |
| Course | Code: | Labor | atory | | | | | | | | 1 | · I | r | C |
| 15A04 | 4607 | Pre-req | uisite: | | | | | | | | - | · - | 24 | 12 |
| | | | (| COUR | RSE O | UTC | OMES | G (COs | s) | | 1 | | 1 | |
| CO No. | COURS | E OUT | COM | E | | | | | | | | | | |
| 4607.1 | Write 808 | 36 asser | nbly la | inguag | ge prog | grams(| (L2). | | | | | | | |
| 4607.2 | Make us | e of p | rograi | nmab | le per | riphera | al dev | vices | and t | heir i | nterfac | ing in | assen | nbly |
| | programm | - | U | | 1 | 1 | | | | | | U | | 5 |
| | | | | | | | | | | | | | | |
| 4607.3 | Make use | | | | | | ing de | vices | in CC | Studi | o and s | simulate | progr | ams |
| | using em | bedded | C for I | MSP 4 | 430(L3 | 3). | | | | | | | | |
| Mapp | ing of Cou | rse Out | tcome | s (CO | | | - | | mes (| POs) | & Prog | gram Sj | pecific | |
| | 1 | | | | Outc | omes | (PSOs | 3) | | | | | 1 | |
| Cos | | | | | | PO | | | | | | | PS | 0 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4607.1 | 2 | 1 | 2 | 1 | 2 | - | - | - | 1 | 1 | 1 | 2 | 1 | 1 |
| 4607.2 | 2 | 1 | 2 | 1 | <i>L</i> | | | | 1 | 1 | 1 | 2 | 1 | |
| 4007.2 | 2 | 1 | 2 | 1 | 2 | - | - | - | 1 | 1 | 1 | 2 | 1 | 1 |
| 4607.3 | | <u> </u> | 2 | | | - | - | - | 4 | - | 1 | 0 | 2 | 2 |
| | 2 2 | 2 | 2 | 2 | 2 | | | | 1 | 1 | 1 | $\frac{2}{2}$ | 1 | |
| AVG | 2 | 2 | 2 | 1 | 2 | - | - | - | 1 | 1 | 1 | 2 | 1 | 1 |
| | 3/2/1 | Indicat | es Stre | ength o | of Cor | relatio | n. 3-H | ligh, 2 | -Medi | um an | d 1-Lo | W | | |

| | | RAN | IIREI | DDY | SUBE | BAR | ¥MI I | REDD | oy en | IGINI | EERI | N G CO | LLEC | iE |
|-------------------------------|-----------------------|----------|---------|--------|--------|----------------|------------------|--------------|--------|--------|---------|-------------------|--------|------|
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| ST. | \geq | | IN. | | | | | | | | NICS | ore, A.P.) 5 & | | |
| RAMIREDDY SUBB ENGINEERING | ARAMI REDBY | | | CO | MM | UNI | CAT | ION | ENG | INE | ERIN | IG | | |
| Engineering I Through Inc | Excellence | C | DURS | E OU | TCO | MES | & M A | PPIN | IG OI | F COs | with | POs & | PSOs | |
| Through the | 1042(1011 | S | EM: I | II-II | | | R | eg: R | 15 | | AY | : 2020-2 | 2021 | |
| Course | Code: | Course | Namel | Digita | l Sign | al Pro | ocessi | ng La | borat | ory | Ι | T | Р | С |
| 15A0 | 4608 | Pre-rec | uisite: | | | | | | | | - | • - | 24 | 12 |
| | | | C | COUR | SE O | UTC | OME | S (CO | s) | | L | 1 | | 1 |
| CO No. | COURS | E OUT | COM | E | | | | | | | | | | |
| 4608.1 | Analyze | discrete | e time | signal | s & sy | ystems | s using | g MA | ГLAB | (L4). | | | | |
| 4608.2 | Design & | k imple | ment I | IR & | FIR fi | lters f | or diff | erent | specif | ïcatio | ns usir | ng MAT | LAB | L6) |
| 4608.3 | Analyze code cor | | | | | systen | ns usii | ng flo | ating | point | DSP p | processo | or kit | with |
| 4608.4 | Design & studio (C | - | | IR & I | FIR fi | lters u | ising I | OSP p | rocess | or kit | with c | ode cor | npose | ſ |
| Mappii | ng of Cou | rse Out | comes | - | | h Prog omes | - | | omes (| (POs) | & Pro | ogram S | Specif | ic |
| Cos | | | | | | PO | 1 | | | | | | PS | 0 |
| CUS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4608.1 | 3 | 3 | 1 | | 1 | - | - | 1 | 1 | 1 | 3 | 1 | 2 | 1 |
| 4608.2 | 3 | 3 | 3 | 1 | 1 | - | - | 1 | 1 | 1 | 3 | 1 | 3 | 2 |
| | | | | | 2 | - | - | 1 | 1 | 1 | 3 | 1 | 2 | |
| 4608.3 | 3 | 3 | 2 | 1 | 2 | | | - | | | | - | | 1 |
| 4608.3 4608.4 | 3 3 | 3 3 | 2 3 | 1 | 2 | - | - | 1 | 1 | 1 | 3 | 1 | 3 | 1 |

| | | RAN | IIREI | DDY 9 | SUBE | BAR | ¥MI f | REDD | YEN | GIN | ZERIN | ie co | LLEC | iE |
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| RAMIREDDY SUBB ENGINEERING | ARAMI REDDY | | | | | | | | | | ERIN | | | |
| Engineering I Through Ini | | CO | DURS | E OU | TCO | MES | & MA | APPIN | IG OI | F COs | with 1 | POs & | PSOs | \$ |
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| Course | Code: | Course Comm | | | | | | | atory | | L | Т | Р | С |
| 15A5 | 2602 | Pre-req | uisite: | | | | | | | | - | - | 24 | 12 |
| | | | C | COUR | SE O | UTC | OMES | S (CO | s) | | <u>.</u> | | - | |
| CO No. | COUR | SE OUT | COM | E | | | | | | | | | | |
| 2602.1 | Develop | o commu | nicati | on ski | lls thr | ough c | compr | ehens | ive an | d voca | ıbulary | (L6). | | |
| 2602.2 | Apply v | vriting sk | cills in | prepa | ring r | esume | e, ema | il and | techn | ical re | ports(I | .3) | | |
| 2602.3 | Build p | resentatio | on skil | ls thro | ough p | oster | and or | ral(L2 |). | | | | | |
| 2602.4 | Analyze | the stuc | lents f | or job | skills | and p | rofess | ional | develo | opmen | t activi | ties(L4 | 4). | |
| 2602.5 | Develop | o manage | ement | skills | and a | nalyze | probl | em so | lving | techni | ques(L | 6). | | |
| Mappi | ng of Cou | rse Out | comes | | | h Prog omes (| | | omes (| POs) | & Pro | gram S | Specif | ic |
| Cos | | | | | | РО | | / | | | | | PS | 50 |
| CUS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 2602.1 | - | - | - | - | - | - | - | 1 | 2 | 3 | 3 | 1 | - | - |
| 2602.2 | - | - | - | - | - | - | - | 1 | 2 | 3 | 3 | 1 | - | - |
| 2602.3 | - | - | - | - | - | - | - | 1 | 2 | 3 | 3 | 1 | - | - |
| 2602.4 | - | - | - | - | - | - | - | 1 | 3 | 3 | 3 | 1 | - | - |
| 2602.5 | - | - | - | - | - | - | - | 1 | 2 | 3 | 3 | 1 | - | - |
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| ENGINEERING | | C | OURS | | | | | | | INE F COs | | IG POs & | PSOs | } |
| Through In | novation | S | EM: I | II-II | | | R | eg: R | 15 | | AY | : 2020-2 | 2021 | |
| Course | Code: | Course | Name: | Com | prehe | ensive | Onlin | e Exa | mina | tion-I | ΙΙ | L T | Р | C |
| 15A0 | 4609 | Pre-req | uisite: | | | | | | | | - | - | 24 | 12 |
| | | | C | COUR | SE O | UTC | OMES | 5 (CO | s) | | | | | |
| CO No. | COURS | E OUT | СОМ | Έ | | | | | | | | | | |
| 1 400 4 | | | | | | | | | | | | | | |
| 4609.1 | Acquire | fundam | ental e | engine | ering | know] | ledge(| L1). | | | | | | |
| 4609.1 | Acquire Demons | | | C | C | | Ū, | , | learn | ing(L2 | 2). | | | |
| | 1 | trate the | abilit | y to na | avigat | e skill | s and | online | | U. | · | 3). | | |
| 4609.2 4609.3 | Demons | trate the | abilit pt of p | y to na | avigato m-solv s) with | e skill ving a h Pro g | s and o | online in con Outco | npetiti | ve exa | ims(L3 | | Specif | ic |
| 4609.2 4609.3 Mappi | Demons Apply th | trate the | abilit pt of p | y to na | avigato m-solv s) with | e skill ving a h Pro g | s and o bility i gram ((PSOs | online in con Outco | npetiti | ve exa | ims(L3 | | Specif PS | |
| 4609.2 4609.3 | Demons Apply th | trate the | abilit pt of p | y to na | avigato m-solv s) with | e skill ving a h Prog omes (| s and o bility i gram ((PSOs | online in con Outco | npetiti | ve exa | ims(L3 | | • | |
| 4609.2 4609.3 Mappi | Demons Apply th ng of Cou | trate the e conce rse Out | abilit pt of p | y to na | avigato m-solv s) with Outco | e skill ving a h Prog omes PO | s and o bility i gram ((PSOs | online in con Outco | npetiti o <mark>mes (</mark> | ve exa | ums(L3 | ogram S | PS | 50 |
| 4609.2 4609.3 Mappi Cos | Demons Apply th ng of Cou | trate the conce | abilit pt of p | y to na | avigato m-solv s) with Outco | e skill ving a h Prog omes PO | s and o bility i gram ((PSOs | online in con Outco i) 8 | npetiti o <mark>mes (</mark> | ve exa | ums(L3 | ogram S | PS | 50 |
| 4609.2 4609.3 Mappi Cos 4609.1 | Demons Apply th ng of Cou 1 2 | trate the conce | ability pt of p comes 3 - | y to na probles s (COs 4 - | avigato m-solv s) with Outco | e skill ving a h Prog pomes PO 6 - | s and bility i gram ((PSOs 7 - | online in con Outco i) 8 1 | npetiti o <mark>mes (</mark> | ve exa | 11 - | ogram S | PS 1 - | 50 |



DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CO'S AND PO'S MAPPING

JNTUA-R15 REGULATION

INDEX

List of all courses offered by the institution for the regulation R15, JNTUA

| S.No | Course Code | Course Name | Year & Sem |
|------|----------------|---|------------------|
| 1 | 15A04701 | Optical Fiber Communication | |
| 2 | 15A04702 | Embedded system | |
| 3 | 15A04703 | Microwave engineering | |
| 4 | 15A04704 | Data communication and networks | |
| 5 | 15A04705 | Radar systems | IV-I Sem |
| 6 | 15A047016 | Digital image processing | |
| 7 | 15A04711 | Microwave and optical fiber communication | |
| | | laboratory | |
| 8 | 15A04712 | VLSI & Embedded systems laboratory | |
| | | | |
| 9 | 15A04802 | Low Power VLSI Circuits & Systems | |
| 10 | 15A04804 | RF Integrated Circuits | |
| 11 | 15A04805 | Comprehensive Viva Voce | IV-II Sem |
| 12 | 15A04806 | Technical Seminar | |
| 13 | 15A04807 | Project Work | |

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| ENGINEERIN | | COU | | | | | | | | | EERI | NG h POs | & P9 | SOs |
| Through In | | | | | | | | | | | | | | |
| | | | M : | IV-I | | | | eg: R | | | | : 2021 | 1 | |
| Course | Code: | Course | e Nam | e: OPT | FICAL | , FIBE | R CON | AMUN | VICAT | ION | | | P | C |
| 15A04 | 4701 | Prereq | uisite | None | e | | | | | | 3 | 1 | 0 | 3 |
| | | | CC | OURS | SE O | UTC | OME | S (CO | Os) | | | | | |
| CO No. | COUR | SE OU | тсо | ME | | | | | | | | | | |
| 4701.1 | Analyze | e the pe | rform | nance | of di | gital a | and ar | nalog | optic | al fib | er syst | ems (I | 3TL4 |) |
| 4701.2 | Evaluat | e the sy | /stem | band | width | n, nois | se bit | rate c | of dig | ital fi | ber sys | stem (l | BTL5 |) |
| 4701.3 | Evaluat | e the sy | stem | link | loss, d | distor | tion (| BTL5 | 5) | | | | | |
| 4701.4 | Underst | and the | e char | acteri | stics | of fib | er sou | urces | and d | letecto | ors (B' | TL2) | | |
| 4701.5 | Design | and con | nduct | expe | rimen | its and | d anal | yses | the re | sults | (BTLe | 5) | | |
| Mappi | ng of Co | urse O | utcon | nes ((| COs) | with | Prog | ram | Outc | omes | (POs) | & Pr | ograi | m |
| | 1 | | | Speci | ific O | utco | mes (| PSOs | s) | | | | | |
| Cos | | | | | | PO |) | | | | | | PS | 60 |
| 008 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4701.1 | 3 | 3 | 3 | - | - | - | - | 1 | - | - | - | 1 | 2 | 2 |
| 4701.2 | 3 | 2 | 2 | - | - | - | - | 1 | - | - | - | 1 | 2 | 2 |
| 4701.3 | 3 | 2 | 1 | - | _ | - | _ | 1 | - | - | - | 1 | 2 | 1 |
| 4701.4 | 3 | 2 | 2 | - | - | - | - | 1 | - | - | _ | 1 | 1 | 1 |
| 4701.5 | 3 | 2 | 1 | - | - | - | - | 1 | - | - | - | 1 | 2 | 1 |
| AVG | 3 | 2 | 2 | - | - | - | - | 1 | - | - | - | 1 | 2 | 1 |
| 3/2/1 Ind | icates Str | ength c | of Cor | relati | on. 3- | -High | , 3-M | lediur | n and | 1-Lo | W | | | |

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| LAMIREDDY SUBB | ARAMI REDBY | | | | | | ECTR | | CS AN | | | NICATI | | |
| Engineering I Through Inc | | | COUI | RSE O | UTCO | OMES | & M A | APPIN | IG OF | COs | with PO | Os & P | SOs | |
| | | YEAR | &SEN | M:IV- | [| | R | eg: R1 | 5 | | AY: | 2021-2 | 022 | |
| Course | e Code: | Cours | e Nam | e: EM | BEDD | ED SY | STEN | 1 | | | I | T | Р | C |
| 15A0 | 4702 | Prereq | uisite:] | None | | | | | | | 3 | 1 | 0 | 3 |
| | | | | COUF | RSE O | UTCC | MES | (COs) | | | | | | |
| CO No. | COURS | E OUT(| COME | | | | | | | | | | | |
| 4702.1 | Design of (L6) | f embedo | ded sys | stems l | eading | to 32- | bit app | olicatio | on deve | lopme | ent. | | | |
| 4702.2 | Understa ensuring | | | | • | cepts t (L2 | | nect dig | gital as | well a | is analo | og senso | ors whi | le |
| 4702.3 | impleme | nt the pro | otocols | used b | by mic | rocont | roller t | o com | munica | ate wit | h exteri | nal sens | ors and | d |
| 1702.0 | actuators | | | | - | | | | | | | | | |
| 4702.4 | | in real w | vorld. | Networ | king (I | | | | | | | | | |
| | actuators | in real w | vorld. edded N | | | L2) | | | | | | | | |
| 4702.4 4702.5 Mapping (| actuators Understa Understa | in real v nd Embe | vorld. edded N edded N | Networ | king a | L2) nd IoT | ' conce | pts bas | sed up | on con | nected | MCUs | | |
| 4702.4 4702.5 Mapping ((PSOs) | actuators Understa Understa (L2) | in real v nd Embe | vorld. edded N edded N | Networ | king a | L2) nd IoT | ' conce utcom | pts bas | sed up | on con | nected | MCUs | itcome | |
| 4702.4 4702.5 Mapping o | actuators Understa Understa (L2) | in real v nd Embe | vorld. edded N edded N | Networ | king a | L2) nd IoT ram O | ' conce utcom | pts bas | sed up | on con | nected | MCUs | itcome | 28 |
| 4702.4 4702.5 Mapping ((PSOs) | actuators Understa (L2) | in real v nd Embe | vorld. edded N edded N s (COs | Networ | king a Progr | L2) nd IoT ram O PO | ' conce | epts bas es (PO | sed up () & I | on con Progra | nected m Spec | MCUs cific Ou | itcome PS | es 50 2 |
| 4702.4 4702.5 Mapping o (PSOs) Cos | actuators Understa (L2) f Course (1 | in real v nd Embe nd Embe | vorld. edded N edded N s (COs 3 | Vetwor with 4 | king a Progr | L2) nd IoT ram O PO 6 | conce utcom | epts bas es (PC | sed up () & I () & I | on con Progra | nected m Spec | MCUs cific Ou 12 | Itcome PS 1 | es 50 2 3 |
| 4702.4 4702.5 Mapping o (PSOs) Cos 4702.1 | actuators Understa (L2) Course (| in real v nd Embe nd Embe | vorld. edded N edded N s (COs 3 2 | Networ with 4 - | king a Progr 5 - | L2) nd IoT ram O PO 6 - | conce utcom | epts bas es (PC 8 1 | sed up ()()()()()()()()()()()()()()()()()()() | on con Progra 10 | nected m Spec | MCUs cific Ou 12 1 | Itcome PS 1 1 | es 50 2 3 3 |
| 4702.4 4702.5 Mapping o (PSOs) Cos 4702.1 4702.2 | actuators Understa (L2) f Course (| in real v nd Embe nd Embe | vorld. edded N edded N s (COs 3 2 2 2 | Vetwor) with 4 | king a Progr 5 | L2) nd IoT ram O PO 6 - | 7 - | epts bas es (PO 8 1 1 | sed up () () () () () () () () () () () () () | on con rogra 10 1 2 | nected m Spec | MCUs cific Ou 12 1 | P P 1 1 1 | es SO |
| 4702.4 4702.5 Mapping ((PSOs) Cos 4702.1 4702.2 4702.3 | actuators Understa Understa (L2) of Course (1 3 3 3 3 | in real v nd Embe nd Embe | vorld. edded N edded N s (COs 3 2 2 2 2 | Vetwor 4 - - - | king a Progr 5 | L2) nd IoT am O PO 6 - - | [•] conce utcom 7 - - | epts bas es (PO 8 1 1 1 | sed up s) & I 9 - - - | on con Progra 10 1 2 2 | nected m Spec | MCUs cific Ou 12 1 1 1 | 1tcome PS 1 1 1 1 | es 50 2 3 3 3 3 |

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| RAMIREDDY SUBB ENGINEERING | ARAMI REDDY | | | | | | | | | | ERIN | | | |
| Engineering I Through Ini | | C | DURS | E OU | TCO | MES | & MA | PPIN | IG OI | F COs | with | POs & | PSOs | |
| | | S | EM: | IV-I | | | R | eg: R | 15 | | AY: | : 2021-2 | 2022 | |
| Course | Code: | Course | Name: | MICR | OWAV | /E ENG | GINEE | RING | | | Ι | L T | Р | C |
| 15A0 | 4703 | Pre-rec | uisite: | EMTI | | | | | | | 3 | 3 1 | 0 | 3 |
| | | | C | COUR | SE O | UTCO | OMES | G (CO | s) | | | | | |
| CO No. | COURS | E OUT | COM | E | | | | | | | | | | |
| 4703.1 | Analyze | the way | veguid | es usii | ng wa | ve equ | ations | s. (L4) | | | | | | |
| 4703.2 | Describe | e the cha | racter | istics | of mic | croway | ve circ | uits th | rough | S-Pa | aramet | ers. (L2 | 2) | |
| 4703.3 | Analyze | various | micro | owave | Oscill | lators | & Am | plifie | rs. (L4 |) | | | | |
| 4703.4 | Analyze | various | micro | owave | comp | onents | s. (L4) |) | | | | | | |
| 4703.5 | Explain | various | metho | ds of | micro | | | | | • | | | | |
| +103.J | F | | | u b 01 1 | mero | wave | measu | remer | nts. (L | 2) | | | | |
| | ng of Cou | | | (COs | s) with | n Prog | gram (| Outco | | | & Pro | ogram S | Specif | ic |
| Mappir | - | | | (COs | s) with | n Prog | gram ((PSOs | Outco | | | & Pro | ogram S | Specif PS | |
| | - | | | (COs | s) with | n Prog omes (| gram ((PSOs | Outco | | | <mark>& Pro</mark> | ogram S | - | |
| Mappin | ng of Cou | rse Out | comes | s (COs | s) with Outco | n Prog omes (PO | gram ((PSOs | Outco | omes (| POs) | | | PS | 50 2 |
| Mappin Cos | ng of Cour | rse Out | comes 3 | 4 (COs | s) with Outco | n Prog omes (PO | gram ((PSOs | Outco | omes (| POs) 10 | | 12 | PS 1 | 5 0 2 2 |
| Mappin Cos 4703.1 | ng of Cour | rse Out 2 2 | 3 | 4 2 | s) with Outco | n Prog omes (PO | gram ((PSOs | Outco) 8 1 | omes (| POs) 10 1 | | 12 1 | PS 1 1 | 2 2 2 2 |
| Mappin Cos 4703.1 4703.2 | 1 3 3 | 2 2 2 2 | 3 1 1 | 4 2 1 | s) with Outco | n Prog omes (PO | gram ((PSOs | Outco (i) 8 1 1 | omes (| POs) 10 1 1 | | 12 1 1 1 | PS 1 1 | 50 2 2 2 2 2 |
| Mappin Cos 4703.1 4703.2 4703.3 | 1 3 3 3 | 2 2 2 2 2 2 | 3 1 1 1 | 4 2 1 1 | s) with Outco 5 - - | n Prog omes (PO 6 - - | gram ((PSOs 7 - - | Outco) 8 1 1 1 | omes (| POs) 10 1 1 1 1 | - | 12 1 1 1 1 | P S 1 1 1 1 | 0 |

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| LAMIREDDY SUBB ENGINEERING | SARAMI REDDY | | | | | | | | | INE | | | | |
| Engineering I Through Inc | | CO | JURS | E OU | TCO | MES | & MA | APPIN | GO | COs | with | POs 8 | z PSOs | 8 |
| | | Class | & Sen | n: I | V-I | | R | eg: R | 15 | | AY: | 2021 | -2022 | |
| Course | e Code: | Course | Name: | DATA | COM | MUNI | CATIO | NS & N | JETW(| ORKIN | G L | , T | Р | C |
| 15A0 | 4704 | Prerequ | uisite: I | None | | | | | | | 3 | 1 | 0 | 3 |
| | | | | COUF | RSE O | UTCO | OMES | (COs) | | | | | | |
| CO No. | COURS | SE OUT | COM | E | | | | | | | | | | |
| 4704.1 | Understand app | | | | | + | - | | etwoi | KIII <u>6</u> , <u>1</u> | | 013, u | enneer | uree |
| 4704.2 | Discuss protocol | 1 | | | - | 0, | witchi | ng and | d tran | smissi | on me | edia ir | netwo | orks |
| | | | | | | | | | | | | | | |
| 4704.3 | Demons | trate the | multi | ple ac | cess n | nethod | ls, IEE | EE star | ndards | , Ether | rnet (I | .5) | | |
| 4704.3 4704.4 | Demons Design i | | | • | | | | | | | ` | | s (L4) | |
| | | ssues re | lated t | o netw | vork la | ayer ro | outing | algo | rithm | s, Inter | met pr | otocol | | |
| 4704.4 4704.5 | Design i | ssues re the vari | lated t | o netw pes of (COs | vork la crypt | ayer ro ograp n Pro g | outing hy and | algo 1 netw <mark>Outco</mark> | rithm ork se | s, Inter ecurity | net pr techn | otocol | (L4) | ïc |
| 4704.4 4704.5 Mappin | Design i Analyze | ssues re the vari | lated t | o netw pes of (COs | vork la crypt | ayer ro ograp n Pro g | buting hy and gram ((PSOs | algo 1 netw <mark>Outco</mark> | rithm ork se | s, Inter ecurity | net pr techn | otocol | (L4) Specif | ic SO |
| 4704.4 4704.5 | Design i Analyze | ssues re the vari | lated t | o netw pes of (COs | vork la crypt | ayer ro cograp n Prog omes (| buting hy and gram ((PSOs | algo 1 netw <mark>Outco</mark> | rithm ork se | s, Inter ecurity | net pr techn | otocol | (L4) Specif | |
| 4704.4 4704.5 Mappin | Design i Analyze | ssues re the vari | lated t ious ty comes | o netw pes of (COs | vork la crypt) with Outco | ayer ro ograp n Prog omes (PO | buting hy and gram ((PSOs | algo 1 netw Outco | rithm: ork se mes (| s, Inter ecurity POs) | net pr techn & Pro | otocol iques gram | (L4) Specif | 50 |
| 4704.4 4704.5 Mappin COs | Design i Analyze ng of Cou | ssues re the vari rse Out | lated t ious ty comes | o netw pes of (COs | vork la crypt) with Outco | ayer ro cograp n Prog omes (PO 6 | buting hy and gram ((PSOs) 7 | algo d netw Outco ;) 8 | rithma ork se mes (9 | s, Inter ecurity POs) | net pr techn & Pro 11 | otocol iques gram 12 | (L4) Specif PS 1 | 50 |
| 4704.4 4704.5 Mappin COs 4704.1 | Design i Analyze ng of Cou | the varies of th | lated t ious ty comes 3 - | o netw pes of (COs 4 | vork la crypt) with Outco | ayer ro cograp n Prog omes (PO 6 - | buting hy and gram ((PSOs 7 - | algo 1 netw Outco ;) 8 - | rithma ork se mes (9 - | s, Inter ecurity POs) a 10 | net pr techn & Pro 11 | otocol iques gram 12 1 | (L4) Specif PS 1 1 | 50 |
| 4704.4 4704.5 Mappin COs 4704.1 4704.2 | Design i Analyze ng of Cou 1 3 3 | ssues re the vari rse Out 2 2 2 | lated t ious ty comes 3 - | o netw pes of (COs 4 | vork la crypt) with Outco | ayer ro cograp n Prog omes (PO 6 - | buting hy and gram ((PSOs 7 - | algo 1 netw Outco ;) 8 - | rithma ork se mes (9 - | s, Inter ecurity POs) a 10 | net pr techn & Pro 11 | otocol iques gram 12 1 1 | (L4) Specif PS 1 1 1 | 50 |
| 4704.4 4704.5 Mappin cos 4704.1 4704.2 4704.3 | Design i Analyze ng of Cou 1 3 3 3 | the variation of the va | ated t ious ty comes 3 - - - | • netw pes of (COs 4 - - | vork la crypt) with Outco | ayer ro cograp n Prog omes (PO 6 - - | puting hy and gram (PSOs 7 - - | algo d netw Outco ;) 8 - - - | rithma ork se mes (9 - | s, Inter ecurity POs) a 10 | net pr techn & Pro 11 - - | otocol iques gram 12 1 1 1 | (L4) Specif PS 1 1 1 2 | 50 |

| | DURS EM: 1 Name: juisite: COM undam ne diff | H-16, Ka DEI CO E OU IV-I : RADA MICR MICR COUR IE ientals | Adamutha PAR MM TCO AR SYS OWAV SE O | ala, Bog FME UNI MES STEMS /ES UTC analys /een C | ole Mando NT (CAT: & MA R S OMES is of ra | lal, Kava DF E ION PPIN eg: R | s) | 42, s.p.s TRO INE TOS | Certified S.R. Nello NICS ERIN With AY: 1 3 dar. (I | re, A. & IG POs : 202 | P.) | PSOs | C 3 |
|--|---|---|--|---|---|---|---|---|---|---|---|--|--|
| SE OUT A Radar fu erstand th calculate | DURS EM: 1 Name: Juisite: C C COM undam ne diff | DEI CO E OU IV-I : RADA MICR MICR COUR IE mentals | PAR MM TCO AR SYS OWAV SE O | FME UNIO MES STEMS /ES UTCO unalys /een C | NT C CAT & MA R S OMES is of ra | DF E ION PPIN eg: R | LEC' ENG G OI 15 s) | TRO INE COs | NICS ERIN With AY: 1 3 | 5 & IG POs 202 | 8 &] 21-2 T | 022 P | С |
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| Course Pre-req SE OUT n Radar fu erstand th calculate | Name: juisite: COM undam ne diff | RADA MICRO COUR Enentals | OWAV SE O and a betw | VES UTCO analys veen C | S OMES is of ra | S (CO) | s) gnals. | | 3 | 2 } | T | Р | |
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| SE OUT n Radar fu erstand th calculate | COM COM undam ne diff | COUR IE Dentals Ference | SE O and a betw | UTC malys een C | is of ra W rad | adar si | gnals. | | | | 1 | 0 | 3 |
| n Radar fu erstand th calculate | COM undam ne diff | IE nentals Terence | and a a betw | analys veen C | is of ra W rad | adar si | gnals. | | dar. (I | 2) | | | |
| n Radar fu erstand th calculate | undam ne diff | entals erence | e betw | veen C | W rad | | - | | dar. (I | 2) | | | |
| erstand th | ne diff | erence | e betw | veen C | W rad | | - | | dar. (I | 2) | | | |
| calculate | | | | | | lar and | I FM (| CW ra | dar. (L | 2) | | | |
| | e the b | lind s | need a | nd M | | | | | | .2) | | | |
| identify | | | | | TI rad | ar par | amete | rs. (L3 | 3) | | | | |
| 14011011 | the tra | acking | of the | e targe | et usin | g vario | ous tra | acking | radars | s. (L | 4) | | |
| y the diffe | erence | types | of rac | lar rec | ceivers | s. (L1) | | | | | | | |
| irse Out | comes | | | | | | omes (| POs) | & Pro | gra | m S | pecifi | ic |
| | | | | | | / | | | | | | PS | 0 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 2 | 1 | 2 |
| 2 | 1 | - | - | - | - | - | - | - | - | - | | 2 | - |
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| 3 | 1 | - | - | - | - | - | - | - | 1 | 1 | | 2 | - |
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| RAMIREDDY SUBB ENGINEERING | ARAMI REDDY COLLEGE | | | | | | | ION | | | | | | |
| Engineering I Through Inc | | C | DURS | E OU | TCO | MES | & MA | PPIN | IG OI | F COs | with | POs & | PSOs | • |
| | | S | EM: | IV-I | | | R | eg: R | 15 | | AY | : 2021-2 | 2022 | |
| Course | Code: | Course | Name: | DIGIT | TAL IM | IAGE F | PROCE | SSING | r | | Ι | L T | Р | С |
| 15A0 | 4708 | Pre-req | uisite: | None | | | | | | | | 3 1 | - | 3 |
| | | | | COUI | RSE O | UTCO | OMES | (COs) | | | | | | |
| CO No. | COURS | E OUT | COM | E | | | | | | | | | | |
| 4708.1 | Understa | and the l | oasic f | undan | nental | s of In | nage I | Proces | sing (| L2) | | | | |
| 4708.2 | Apply va | arious Iı | nage [| Fransf | ormat | ions w | ith th | eir pro | opertie | es(L3) | | | | |
| 4708.3 | Explain | about va | arious | techni | iques | of ima | ige en | hancer | ment i | n diffe | erent d | lomains | (L4) | |
| 4708.4 | Analyze image (I | | ge for | segm | entatio | on and | l Alge | braic a | approa | aches | for res | storation | n of an | L |
| 4708.5 | Classify compres | | | | | nages | and | deterr | mine | variou | ıs Ima | age Foi | rmats | and |
| Марріі | ng of Cou | rse Out | comes | | | n Prog omes (| - | | omes (| (POs) | & Pro | ogram S | Specif | ic |
| Cos | | | _ | | | РО | | | | | | | PS | 50 |
| COS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4708.1 | 3 | 1 | 1 | 2 | 2 | - | - | 1 | - | - | - | - | 3 | 1 |
| 4708.2 | 3 | 2 | 1 | 2 | 3 | - | - | 1 | - | - | - | - | 3 | - |
| 4708.3 | 3 | 2 | | 2 | 2 | - | - | 1 | - | - | 1 | - | 3 | 1 |
| 4708.4 | 3 | 2 | 1 | 2 | 1 | - | - | 1 | - | - | 1 | - | 3 | 1 |
| 4708.5 | 3 | 1 | 1 | 1 | 1 | - | - | 1 | - | - | 1 | - | 3 | 1 |
| AVG | 3 | 2 | 1 | 2 | 2 | - | - | 1 | - | - | 1 | - | 3 | 1 |

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| RAMIREDDY SUBB ENGINEERING | ARAMI REDDY COLLEGE | | | | | | | | | | ERIN | | | |
| Engineering I Through Ini | | CO | DURS | E OU | TCO | MES | & MA | PPIN | IG OI | F COs | with | POs & | PSOs | |
| 10 10 10 1 10 1 | | S | EM: | IV-I | | | R | eg: R | 15 | | AY | : 2021-2 | 2022 | |
| Course 15A0 | | Course COMM | | | | | | ICAL | | | Ι | T | Р | C |
| | | | C | COUR | SE O | UTC | OMES | 5 (CO | s) | | | | | |
| CO No. | COURS | SE OUT | COM | Έ | | | | | | | | | | |
| 4711.1 | Understa | and the o | charac | teristi | cs of I | Reflex | klysti | on an | d GUI | NN di | ode (I | (12) | | |
| 4711.2 | Calculat | e the fre | quenc | y, atte | enuatio | on, VS | SWR t | ising r | nicrov | vave t | ench s | set-up. (| (L4) | |
| 4711.3 | Determi (L5) | ne the p | oarame | eters c | of Mag | gic-Te | e and | Direc | ctional | coup | ler us | ing ben | ch set | e-up. |
| 4711.4 | Understa | and the o | charac | teristi | cs of o | optical | devic | es lik | e LAS | ER ar | nd LEI | D(L2) | | |
| 4711.5 | Design a | and anal | yze an | optic | al fibe | er link | . (L4) | | | | | | | |
| Mappi | ng of Cou | rse Out | comes | | | h Proş omes | - | | omes (| POs) | & Pro | ogram S | Specif | ic |
| C | | | | | | PO | | , | | | | | PS | 50 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4711.1 | 3 | - | 2 | - | - | - | - | - | - | - | - | 2 | - | 2 |
| 4711.2 | 2 | 2 | 2 | - | - | - | - | - | - | - | - | 2 | - | 2 |
| 4711.3 | 3 | 2 | 1 | - | - | - | - | - | - | - | - | 2 | - | 2 |
| 4/11.5 | 5 | | | | 1 | 1 | | | | Ì | 1 | | 1 | - |
| 4711.3 | 3 | 2 | 1 | - | - | - | - | - | - | - | - | 2 | - | 2 |
| | _ | 2 2 | 1 | - | - | - | - | - | - | - | - | 2 2 | - | 2 2 |

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| 1 | | | (App N | roved by H-16. K | AICTE | , Affiliat ala, Bogo | ed to JN de Man | TUA. Aı lal. Kava | n ISO 90 ali- 524 1 | 01: 2015 42. S.P.S | Certifie R. Nell | d Institutio ore, A.P.) | on. | |
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| RAMIREDDY SUBB ENGINEERING | ARAMI REDDY COLLEGE | | | | | | | | | INE | | | | |
| Engineering I Through Inc | | C | DURS | E OU | TCO | MES | & M A | APPIN | IG OI | F COs | with | POs & | PSOs | |
| | | SEM: | IV-I | | | | R | eg: Ri | 15 | | AY | : 2021-2 | 2022 | |
| Course | Code: | Course | Name | VLSI | & EMI | BEDDE | ED SYS | STEM I | LABOR | ATOR | Y I | LT | Р | С |
| 15A0 | 4712 | Prerequ | uisite: | None | | | | | | | | - - | 4 | 2 |
| | | | (| COUR | SE O | UTC | OME | S (CO | s) | | | | | 1 |
| CO No. | COURS | E OUT | | | | | | | | | | | | |
| 4712.1 | Design a | | | | l struc | ture o | f the v | variou | s digit | al inte | grated | l circuit | s(L6) | |
| 4712.2 | Develop simulato | | | - | | | - | | | | - | | | [L5) |
| 4712.3 | Design a microcom | | - | e diffe | erent c | onfigu | uration | ns of i | nterfa | cing m | odule | es of TN | 14C | |
| Mapping Outcomes | | e Outco | mes (| COs) | with I | Progra | am O | utcom | es (P | Os) & | Prog | ram Sp | ecific | |
| C | | | | | | РО | | | | | | | PS | 60 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4712.1 | 3 | - | 3 | 2 | 2 | - | - | - | 1 | 1 | 1 | 1 | 1 | 3 |
| 4712.2 | 3 | - | 3 | 2 | 2 | - | - | - | 1 | 1 | 1 | 1 | 1 | 3 |
| 4712.3 | 3 | - | 3 | 2 | 2 | - | - | - | 1 | 1 | 1 | 1 | 1 | 3 |
| AVG | 3 | - | 1 | 2 | 2 | - | - | - | 1 | 1 | 1 | 1 | 1 | 3 |
| 3/2/1 Indie | cates Strer | igth of C | Correla | | 1 | h, 3-N | Iediur | n and | 1-Lov | V | I | | - | <u>.</u> |

IV B.Tech, II Sem ECE Cos and pos mapping (R15-JNTUA)

| | | RAM | IREI | DDY S | SUBE | BARA | ¥MI f | REDD | oy en | IGIN | EERI | NG CO | LLE | SE |
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| | | | (Appr N | oved by H-16, Ka | AICTE, danutha | , Affiliato ala, Bogo | ed to JN le Mand | ΓUA. Aı al, Kava | n ISO 90 ali- 524 1 | 01: 2015 42, S.P.S | Certified S.R. Nello | l Institutio ore, A.P.) | ən. | |
| | 2 | | | | | | | | | | NICS | | | |
| ENGINEERING Engineering 1 | COLLEGE | CC | MIRS | | | | | | | | ERIN with | IG POs & | PSO | 2 |
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| 6 | <u>c 1</u> | | EM: I | | DONU | | | eg: R | | | | : 2021-2 | 1 | C |
| Course | | Course | | | | | SI CIRC | UITS | & SYS | TEMS | I 3 | | P 0 | C 3 |
| 15A04 | 4802 | Pre-req | uisite: | VLSI | DESIG | N | | | | | 5 | | U | 3 |
| | | | C | OUR | SE O | UTC | OMES | 5 (CO | s) | | | | | |
| CO No. | COURS | | | | | | | | | | | | | |
| 4802.1 | Describe (L1, L2) | the nee | ed for | low p | ower (| design | and r | ecall t | he fur | idame | ntals c | of MOS | transi | stor |
| 4802.2 | Describe circuits. | | | he M | OS in | verter | chara | acteris | stics a | nd de | sign tl | ne com | binati | onal |
| 4802.3 | Describe (L2, L4) | the sou | irces o | of pov | ver dis | ssipati | on an | d clas | sify v | arious | suppl | y volta | ge sca | ling |
| 4802.4 | Determin | ne vario | us me | thods | of Mi | nimiz | ing Sv | vitche | d Cap | acitan | ce(L5) |) | | |
| 4802.5 | Evaluate | the me | thods | of Mi | nimizi | ing Le | akage | Powe | er (L5 |) | | | | |
| Mappin | g of Cour | se Outo | comes | | | n Prog omes (| - | | omes | (POs) | & Pro | ogram (| Specif | lic |
| Cos | | | | | | PO | | | | | | | PS | 60 |
| 0.05 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4802.1 | 1 | 1 | 2 | 2 | - | 1 | - | 1 | - | - | - | 2 | 1 | 3 |
| 4802.2 | 2 | 1 | 1 | 1 | - | 1 | - | 1 | - | - | - | 2 | 1 | 3 |
| 4802.3 | 2 | 2 | 1 | 2 | - | 1 | - | 1 | - | - | - | 1 | 1 | 3 |

| 4802.4 | 2 | 1 | 1 | 2 | - | 1 | - | - | - | - | - | 1 | 1 | 3 |
|-------------|-------------|----------|---------|--------|-------|--------|-------|-------|-------|---|---|---|---|---|
| 4802.5 | 1 | 1 | 1 | 1 | 2 | 1 | - | - | - | - | - | 2 | 1 | 3 |
| AVG | 2 | 1 | 1 | 2 | 2 | 1 | - | 1 | - | - | - | 2 | 1 | 3 |
| 3/2/1 India | cates Stren | gth of C | Correla | ation. | 3-Hig | h, 2-N | Aediu | m and | 1-Lov | W | | | | |

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| | × | | | DEI | PAR | ГМЕ | NT (| DF E | LEC | TRO | NICS | & | | |
| RAMIREDDY SUBB ENGINEERING | ARAMI REDDY COLLEGE | | | | | | | | | | ERIN | | | |
| Engineering I Through Inc | | C | JURS | E OU | TCO | MES | & MA | APPIN | NG OI | F COs | with l | POs & | PSOs | 5 |
| | | S | EM: I | V-II | | | R | eg: R | 15 | | AY: | 2021-2 | 2022 | |
| Course | Code: | Course | Name | RF IN | TEGR | ATED | CIRCI | UTS | | | L | Т | Р | C |
| 15A0 | 4804 | Pre-rec | uisite: | CMOS | 5 DESI | GN | | | | | 3 | 1 | 0 | 3 |
| | | | (| COUR | SE O | UTC | OME | S (CO | s) | | • | | | |
| CO No. | COUR | SE OUI | COM | E | | | | | | | | | | |
| 4804.1 | Underst | and the | structu | re of | radio | freque | ncy sy | ystem. | (L2) | | | | | |
| 4804.2 | Analyze | e the ban | dwidt | h estir | nation | techr | iques | and ri | se tim | e and | delay t | ime (L | 4) | |
| 4804.3 | Identify | the low | noise | ampli | fier ar | nd sub | sampl | ing m | ixers] | L2) | | | | |
| 4804.4 | Explain | various | types | of RF | powe | r amp | lifiers | . (L4) | | | | | | |
| 4804.5 | Disting | uish vari | ous fre | equen | cy syn | thesis | techn | iques | (L2) | | | | | |
| Mappi | ng of Cou | irse Out | comes | s (CO | | h Prog omes | - | | omes (| (POs) | & Pro | gram S | Specif | ïc |
| Con | | | | | | PO | | , | | | | | PS | 50 |
| Cos | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4804.1 | 2 | 1 | 2 | 1 | - | - | - | - | - | - | - | - | - | 2 |
| | 2 | 3 | 1 | 1 | - | - | - | - | - | - | - | - | - | 2 |
| 4804.2 | | 1 | 1 | 1 | - | - | - | - | - | - | - | - | - | 2 |
| 4804.2 4804.3 | 2 | | | | | _ | - | - | - | - | - | _ | - | 2 |
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| 4804.3 | | 2 2 | 23 | 1 | - | - | - | - | - | - | - | - | - | 2 |

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| RAMIREDDY SUBE ENGINEERING | ARAMI REDDY | | | | | | | | | | ERIN | | | |
| Engineering Through In | Excellence | CO | DURS | E OU | TCO | MES | & M A | PPIN | IG OI | F COs | with l | POs & | k PSO | S |
| | | S | EM: I | V-II | | | R | eg: R | 15 | | AY: | 2021 | -2022 | |
| Course | Code: | Course | Name: | COM | PREHE | ENSIVE | E VIVA | VOCE | 3 | | L | T | Р | С |
| 15A0 | 4805 | Pre-req | uisite: | NONI | Ξ | | | | | | - | - | 4 | 2 |
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| | | | C | COUR | SE O | UTC | OMES | S (CO | s) | | | | | |
| CO No. | COURS | E OUT | COM | E | | | | | | | | | | |
| 4805.1 | Recall th | e funda | menta | ls of r | nather | natics | , scier | nce an | d Eng | ineerii | ng(L1) | | | |
| | | | | | | | | | | | | | | |
| 4805.2 | Relate c professio | - | | | erstand | ding o | of tech | nique | es app | licable | e to th | eir o | wn are | a of |
| 4805.2 | | onal prac | ctice(I | | | | | - | | | | | | |
| 4805.3 | professio | onal prac | ctice(I | L2) | on ski s) witl | lls and h Prog | l Build gram | d conf | idence | e to fac | ce the i | ntervi | ews(L | 6) |
| 4805.3 | profession Develop | onal prac | ctice(I | L2) | on ski s) witl | lls and h Prog omes | l Build gram (PSOs | d conf | idence | e to fac | ce the i | ntervi | ews(L Speci | 6) f <mark>ic</mark> |
| 4805.3 Mappi | profession Develop | onal prac | ctice(I | L2) | on ski s) witl | lls and h Prog | l Build gram (PSOs | d conf | idence | e to fac | ce the i | ntervi | ews(L Speci | 6) |
| 4805.3 | profession Develop | onal prac | ctice(I | L2) | on ski s) witl | lls and h Prog omes | l Build gram (PSOs | d conf | idence | e to fac | ce the i | ntervi | ews(L Speci | 6) fic |
| 4805.3 Mappi | profession Develop ng of Court | their Co | ctice(I | .2) nicatio | on ski s) with Outco | lls and h Prog omes PO | d Build gram (PSOs | d conf Outco s) | idence | e to fac POs) | ce the i | intervi gram | ews(L Specif | 6) fic SO |
| 4805.3 Mappin Cos 4805.1 4805.2 | profession Develop ng of Court | their Co cse Outo | ctice(I | .2) nicatio | on ski s) with Outco | lls and h Prog omes PO | d Build gram (PSOs | d conf Outco s) 8 | idence | e to fac POs) | ce the i | intervi gram | ews(L Special P(1 | 6) Fic SO 2 |
| 4805.3 Mappin Cos 4805.1 | profession Develop ng of Court 1 1 | their Corse Outo | ctice(I | .2) nications (COs | on ski s) with Outco | lls and h Prog omes PO | d Build gram (PSOs | 1 conf Outco 5) 8 1 | idence | e to fac POs) 10 1 | ce the i & Pro 11 - | intervi gram | ews(L Specif P: 1 2 | 6) fic SO 2 2 |

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| | ×. | | 11 | | | | | | LEC' | | | | | |
| RAMIREDDY SUBB/ ENGINEERING | ARAMI REDDY COLLEGE | | | | | | | | ENG | | | | | |
| Engineering E Through Inn | | C | DURS | E OU | TCO | MES | & MA | PPIN | IG OI | F COs | with | POs & | : PSOs | |
| | | S | EM: I | V-II | | | R | eg: R | 15 | | AY | : 2021- | 2022 | |
| Course | Code: | Course | Name: | TECH | NICAI | L SEM | NAR | | | | 1 | T | Р | С |
| 15A04 | 4806 | Pre-req | uisite: | NONI | Ŧ | | | | | | | | 4 | 2 |
| | | | C | COUR | SE O | UTC | OMES | 5 (CO | s) | | | | | |
| CO No. | COURS | E OUT | COM | E | | | | | | | | | | |
| 10061 | Develop | | | | | -orien | ted fie | ld wit | h abil | ity to a | search | the lite | erature | and |
| 480 6 .1 | brief rep | ort prep | aratio | n. (L4 |) | | | | | | | | | |
| 4806.2 | Develop | the skil | ls, cor | npeter | ncies a | ind po | ints of | view | neede | d by p | orofess | sionals | in the f | field |
| | most clo | sely rela | ated to | the c | ourse(| L5) | | | | | | | | |
| 4806.3 | Develop | the di | scussi | on ar | nd cri | tical | thinki | ng ab | out to | opics | of cu | irrent | intellec | tual |
| | importar | | | | | | | U | | 1 | | | | |
| 4806.4 | Develop | the inte | rperso | onal & | comr | nunica | ation s | kills a | nd aw | arene | ss. (Le | 5) | | |
| | - | | • | | | | | | ina av | urene | ы. (| | | |
| 4806.5 | Develop | present | ation s | skills. | (L6) | | | | | | | | | |
| Mappir | ng of Cou | rse Out | comes | s (CO | | | | | omes (| POs) | & Pro | ogram | Specif | ic |
| | | | | | Outco | | | 5) | | | | | | |
| Cos | | | 1 | | | PO | 1 | | | | | | PS | 50 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 |
| 4806.1 | 1 | - | - | - | - | - | - | 1 | 2 | 3 | - | - | 2 | 2 |
| 4806.2 | 2 | - | - | - | - | - | - | 1 | 2 | 2 | - | - | 2 | 2 |
| 4806.3 | 2 | _ | _ | - | _ | _ | _ | | 2 | 3 | _ | _ | 2 | 2 |
| 1000.2 | 2 | | | | | | | 1 | 2 | 3 | | | | 2 |
| 100 | | - | - | - | - | - | - | 1 | 2 | 3 | - | - | 2 | |
| 4806.4 | 1 | | | | | | | | | | | | | 2 |
| 4806.4 4806.5 | | - | - | - | - | - | - | 1 | 2 | 2 | - | - | 2 | |
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| 6.11 | C | | | | | | | | | | | | | |
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| AMIREDDY SUBB | ARAMI REDDY | | | CO | MM | UNI | CATI | ION I | ENG | INE | ERIN | IG | | |
| Engineering Through In | Excellence | CO | DURS | E OU | TCO | MES | & MA | PPIN | GO | F COs | with | POs & | z PSOs | 5 |
| Through the | | S | EM: I | V-II | | | R | eg: R | 15 | | AY: | : 2021- | 2022 | |
| Course | Code: | Course | Name: | PROJI | ECT W | ORK | | | | 1 | I | T | Р | C |
| 15A0 | 4807 | Pre-req | uisite: | | | | | | | | - | - | 24 | 12 |
| | | | C | OUR | SE O | UTCO | OMES | G (CO | 5) | | | | | |
| CO No. | COURS | E OUT | | | | | | | - | | | | | |
| | Identify | | | | e litera | ature s | survey | and a | nalyz | e engi | neerin | ng proł | olems. | (L1 |
| 4807.1 | L4) | - | | | | | · | | · | U | | 01 | | |
| | | | | | | | | | | | | | | |
| 4807.2 | Apply t | he theo | retical | cond | cepts | to so | lve in | dustri | al pro | oblem | s with | n tean | work | and |
| 4807.2 | Apply t multidis | | | | - | to so | lve in | dustri | al pro | oblem | s with | n tean | nwork | and |
| 4807.2 | | ciplinar | y appro | oach(I | _3) | | | | - | | | | | |
| | multidis | ciplinary system | y appro | oach(I | _3) | | | | - | | | | | |
| | multidis Design | ciplinary system o ation. (I | y appro compo _6) | oach(I | L3) | cquire | s the | need | for pu | iblic ł | nealth | and er | ivironi | |
| 4807.3 4807.4 | multidis Design s consider Form a t | system of ation. (I | y appro compo _6) carryi | onent ng the | L3) that ac | cquire ect and | s the | need orm do | for pu | iblic h | nealth | and er | vironi (L6) | men |
| 4807.3 4807.4 | multidis Design s consider | system of ation. (I | y appro compo _6) carryi | onent onent onent of the onent of the one of | L3) that ac proje s) with | cquire ect and | s the | need orm do Outco | for pu | iblic h | nealth | and er | vironi (L6) | men |
| 4807.3 4807.4 Mappi | multidis Design s consider Form a t | system of ation. (I | y appro compo _6) carryi | onent onent onent of the onent of the one of | L3) that ac proje s) with | cquire ect and | s the l perfo gram ((PSOs | need orm do Outco | for pu | iblic h | nealth | and er | (L6) Specif | men |
| 4807.3 4807.4 | multidis Design s consider Form a t | system of ation. (I | y appro compo _6) carryi | onent onent onent of the onent of the one of | L3) that ac proje s) with | cquire ect and n Prog omes (| s the l perfo gram ((PSOs | need orm do Outco | for pu | iblic h | nealth | and er | (L6) Specif | nen ïic SO |
| 4807.3 4807.4 Mappi | multidis Design s consider Form a t ng of Court 1 | system of ation. (I eam for rse Out | y appro compo _6) carryi comes | onent in the constant of the c | (L3) that a proje b) with Outco | cquire ect and Prog PO | s the l perfo gram ((PSOs | need orm do Outco) | for pu ocume mes (| Iblic h | nealth n effec & Pro | and er tively. p <mark>gram</mark> | (L6) Specif | men ic SO |
| 4807.3 4807.4 Mappin Cos | multidis Design s consider Form a t ng of Cou | ciplinary system of ation. (I eam for rse Out 2 3 | y appro compo L6) carryi comes 3 2 | ng the (COs | (L3) that ac proje s) with Outco 5 - | cquire ect and prog omes (PO 6 - | s the l perfo gram ((PSOs 7 | need orm do Outco) 8 2 | for pu for pu mes (9 3 | blic h ntation POs) | nealth n effec & Pro 11 - | and er stively. ogram 12 1 | (L6) Specif | men ic 50 2 |
| 4807.3 4807.4 Mappin Cos 4807.1 4807.2 | multidis multidis Design s consider Form a t ng of Court 1 3 3 3 | ciplinary system of ation. (I eam for rse Out 3 1 | y appro compo L6) carryi comes 3 2 2 2 | onent in the constant of the c | (L3) that a proje b) with Outco | cquire ect and Prog PO | s the l perfo gram ((PSOs 7 | need orm do Outco) 8 2 2 2 | for pu ocume: mes (9 | hblic h ntation POs) 10 2 2 | nealth n effec & Pro | and er tively. ogram 12 1 1 | (L6) Specif 1 2 2 | men ic 50 2 |
| 4807.3 4807.4 Mappin Cos 4807.1 4807.2 4807.3 | multidis Design s consider Form a t ng of Cou | ciplinary system of ation. (I eam for rse Out 2 3 | y appro compo L6) carryi comes 3 2 | ng the (COs | (L3) that ac proje s) with Outco 5 - | cquire ect and prog omes (PO 6 - | s the l perfo gram ((PSOs 7 | need orm do Outco) 8 2 | for pu for pu mes (9 3 | blic h ntation POs) | nealth n effec & Pro 11 - | and er stively. ogram 12 1 | (L6) Specif PS 1 2 | men iic 50 2 2 2 |
| 4807.3 4807.4 Mappin Cos 4807.1 4807.2 | multidis multidis Design s consider Form a t ng of Court 1 3 3 3 | ciplinary system of ation. (I eam for rse Out 3 1 | y appro compo L6) carryi comes 3 2 2 2 | ng the (COs | -3) that ac proje s) with Outco 5 - 1 | cquire ect and Prog PO 6 - 1 | s the l perfo gram ((PSOs 7 | need orm do Outco) 8 2 2 2 | for pu boumes mes (9 3 3 | hblic h ntation POs) 10 2 2 | nealth n effec & Pro 11 - 3 | and er tively. ogram 12 1 1 | (L6) Specif 1 2 2 | nen ⁻ |